

# Proposed Lake Ontario National Marine Sanctuary Draft Management Plan



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Cover photo: Divers swim around the wreck of the *St. Peter*. Photo: NOAA

## Draft Management Plan for Proposed Lake Ontario National Marine Sanctuary

Management plans are sanctuary-specific planning and management documents used by all national marine sanctuaries. They identify immediate, midrange, and long-term challenges and opportunities, and outline future activities. A management plan describes resource protection; research; education and outreach programs that guide sanctuary operations; specifies how a sanctuary should best protect its resources; and describes sanctuary regulations if appropriate. The draft management plan for the proposed Lake Ontario National Marine Sanctuary outlines the goals and range of activities that would be necessary to achieve the vision of the sanctuary.

NOAA's first management plans developed for new sanctuaries typically consist of broad goals and strategies. While the following draft management plan includes significantly more detail than what was included in the initial management plans for other national marine sanctuaries, NOAA recognizes that it takes several years to integrate the sanctuary into communities, explore opportunities for partnerships, and determine more specific priorities. The management plan is intended to adapt over time as the sanctuary implements elements of the plan. Management plans are created with input from the Sanctuary Advisory Council, the general public, local governments, state and federal agencies, other stakeholders, and in consultation with Indigenous nations and tribes who have interest in the management and operation of the proposed sanctuary.

The proposed Lake Ontario National Marine Sanctuary draft management plan consists of five action plans:

1. Sanctuary Operations
2. Research and Monitoring
3. Education and Outreach
4. Tourism and Economic Development
5. Resource Protection

### **Requirements**

For each of the action plans, NOAA's ability to fully implement the management plan would be dependent on the realities of funding and other resources over the initial five-year period. For each of these action plans, implementation would also be dependent on continued collaboration with the state of New York, as well as federal funding, grants, donations, staffing, and contributions from partners.

## Action Plans

### Sanctuary Operations Action Plan

#### **Description**

The purpose of this action plan is to create sanctuary infrastructure and program support to ensure effective implementation of the management plan. Managing nationally significant resources requires appropriate facilities and vessels; trained personnel and volunteers; funding and partnerships; and specialized equipment. NOAA's priority after designation would be to develop effective and sustainable infrastructure.

NOAA's Office of National Marine Sanctuaries (ONMS), the state of New York, and local communities would work together to support the functions of the sanctuary. NOAA and New York state would enter into a Memorandum of Agreement (MOA). The purpose of the MOA is to provide a mechanism for coordinating the efforts of NOAA and the state to meet the common commitment to protect and manage sanctuary resources.

The Sanctuary Advisory Council is also an essential component of the management plan. Advisory council members represent the sanctuary community's different interests, including local government, education, maritime history and interpretation, fishing, diving, tourism, economic development, industry, and the community-at-large. Advisory council members serve as liaisons between their constituents and sanctuary leadership, keeping sanctuary staff informed of issues and concerns while performing outreach to their respective constituents on the sanctuary's behalf.

All national marine sanctuaries benefit greatly from partnerships between NOAA and nongovernmental organizations, private businesses, education and cultural institutions, community groups, private citizens, tribal governments, and local, state, and federal agencies. NOAA would develop these partnerships at Lake Ontario National Marine Sanctuary to create or improve upon a number of essential capacities, including research vessels and equipment, administrative space, law enforcement, and education and outreach programs.

#### **Goal**

Ensure sanctuary operations and administrative capabilities are sufficient to effectively, efficiently, and safely implement the sanctuary's mission.

#### **Objectives**

- Ensure necessary sanctuary infrastructure (e.g., office space, research vessels), staffing, and administration.
- Create a "NOAA presence" within sanctuary communities.
- Secure resources to support sanctuary operations and programs.
- Enhance program support through partnerships and volunteers.
- Create a "Friends" group as a partner to the sanctuary.

## **Strategies**

**STRATEGY SO-1: Identify staff and office needs to support sanctuary operations, resource protection, education and outreach, and research programs.**

**Activity 1.1:** Identify and fill appropriate staffing requirements at the sanctuary.

**Activity 1.2:** Provide staff with opportunities and resources for professional development and training.

**STRATEGY SO-2: Develop infrastructure and a “NOAA presence” within communities that supports the sanctuary’s mission and programs.**

**Activity 2.1:** Conduct an infrastructure needs study for the sanctuary.

- a. Gather input from communities, the state, and other stakeholders that recognizes, leverages, and complements local and statewide assets, including office and community meeting spaces.
- b. Ensure that the study includes creating a “NOAA presence” in each community, to include infrastructure, research, education, outreach, exhibits, and engagement opportunities.

**STRATEGY SO-3: Maintain the Lake Ontario National Marine Sanctuary Advisory Council.**

**Activity 3.1:** Provide support, resources, and guidance to help the advisory council engage and educate the public about sanctuary management issues and ensure they are a respected voice in the community.

**STRATEGY SO-4: Establish a sanctuary volunteer program.**

**Activity 4.1:** Attract, train, use, recognize, and retain volunteers to support and enhance sanctuary programs, including the development of a volunteer diving program.

**Activity 4.2:** Develop a volunteer handbook, consistent with national guidance, that outlines policies and opportunities for volunteers to help support the goals and purposes of the sanctuary.

## **Research and Monitoring Action Plan**

### **Description**

The purpose of this action plan is to outline the sanctuary’s research and monitoring objectives and priorities. Sanctuary research is conducted in support of resource protection, resource management, and education initiatives. The action plan is intended to guide the sanctuary, as well as encourage and guide archaeological and multidisciplinary research by sanctuary partners. The process of inventorying, assessing, and monitoring directly meets mandates for federal agencies under Section 110 of the National Historic Preservation Act (NHPA).

### **Background**

Research and monitoring programs are integral to documenting, characterizing, managing, and protecting national marine sanctuary resources. Sanctuary staff will conduct, support, promote, and coordinate all research with an aim toward sanctuary characterization and resource

management. Characterization is the process through which sanctuary resources are inventoried, located, documented, analyzed, and ultimately interpreted within a broader cultural, historical, and archaeological context. Management is an active process involving identification of threats and disturbances to a resource and implementation of strategies that ameliorate or negate these processes. The ultimate goal of cultural resource management is resource preservation for both current and future generations. Knowledge acquired through research is used to evaluate existing management practices, identify emerging threats, and inform future management decisions. Research products will also form the foundation of outreach materials aimed at educating the public about the importance of the Great Lakes and their history.

Characterization and monitoring of sanctuary resources will continue with historical research to build on the inventory of known and potential underwater cultural resources located in and around the sanctuary. Physically locating underwater cultural resource sites is the next step in sanctuary characterization. Resource documentation is then conducted to provide baseline data that evaluate the current state of preservation and identify threats and disturbances present to sites, such as invasive mussels, ice and anchor damage, looting, and other intentional and unintentional human impacts. Finally, a monitoring program will be implemented to periodically assess resource change and implement mitigation or stabilization strategies, as well as drive research questions and inform management actions and regulatory review over time.

### **Goal**

Protect the sanctuary resources and maritime landscape by inventorying, locating, documenting, assessing, managing, and interpreting the sanctuary's archaeological, historical, and cultural resources.

### **Objectives**

- Characterize the sanctuary's underwater cultural resources.
- Study the relationship between the underwater resources, the culture, and activities of the area.
- Develop and encourage collaborative research programs to meet the sanctuary's ongoing management needs.
- Develop a monitoring program and site database to take inventory of and understand resources and threats, and feed information into system-wide databases.
- Consistent with the Sanctuary Use, Characterization, Assessment and Research (SUCAR) program, develop estimates of human use by activity within sanctuary waters.
- Use research findings to inform sanctuary condition reports.

### **Strategies**

**STRATEGY R-1: Characterize the sanctuary's underwater cultural resources and cultural landscape features.**

**Activity 1.1:** Conduct historical and archival research on underwater cultural resources and cultural landscape features in the sanctuary.

- a. Continue to compile historical documentation relevant to sanctuary resources, including primary and secondary historical documents, ethnographic resources, folklore, vessel

enrollment and registration documents, court records, insurance files, and regional newspapers.

- b. Assess the condition of underwater cultural resources, including human or environmental factors that influence this condition to inform decision-making and resource protection strategies.
- c. Maintain records and databases on known and potential shipwrecks and other underwater cultural resources within the sanctuary.
- d. Coordinate archival research and databases with private and public entities and individuals with an interest in studying sanctuary resources.
- e. Complete and publish a maritime cultural landscape survey.
- f. Coordinate and consult with Indigenous nations and communities to identify potential research priorities and identify historic properties, including cultural landscapes.
- g. Submit National Register of Historic Places nominations; explore a National Register of Historic Places district or multiple property nomination.

**Activity 1.2:** Conduct systematic archaeological surveys to locate and identify underwater cultural resources and landscape features in the sanctuary.

- a. Define survey requirements for site characterization in compliance with the Federal Archaeology Program (FAP), NHPA, and ONMS guidance.
- b. Conduct surveys and mapping using remote sensing, divers, ROVs, and video as required; leverage NOAA network and other partners for vessel, equipment, and personnel.
- c. Encourage and facilitate partner participation in survey work.
- d. Disseminate research results to professional and public audiences following guidance on release of sensitive information.

**Activity 1.3:** Prioritize archaeological documentation of identified underwater cultural resources to establish baseline data for long-term monitoring.

- a. In collaboration with stakeholders, determine priorities for archaeological research and documentation.
- b. Complete baseline documentation of underwater cultural resources, including site plans, underwater video, still imagery, and photomosaics.
- c. Partner with citizen science groups for training in monitoring initiatives.
- d. Disseminate research results to professional and public audiences in a timely and accessible manner.

**Activity 1.4:** Develop and implement a long-term monitoring plan to assess and potentially mitigate natural and human impacts on maritime heritage sites, including climate change impacts.

- a. Collect and evaluate existing data to establish baseline data sets.
- b. Establish site-specific requirements for monitoring.
- c. Collect and analyze monitoring data to develop and implement resource stabilization or threat mitigation measures; continue to evaluate monitoring requirements.
- d. Make monitoring results publicly accessible.

- e. Structure monitoring approach with trackable metrics to evaluate efficacy and support 10-year regulatory review process.

**Activity 1.5:** Develop and maintain a sanctuary geographic information system (GIS).

- a. Build and continue to enhance GIS for archaeological, historical, cultural and geographical data management; use GIS for sanctuary resource management; and to increase data sharing among sanctuary co-managers and facilitate public dissemination of information. GIS should integrate with the state of New York’s Cultural Resource Information System.

**Activity 1.6:** Monitor use of sanctuary resources in order to better understand user groups being served, patterns of use, (e.g., cultural, commercial, recreation, science, and education), and the effects of use on the resources.

- a. Develop a plan and implement monitoring programs to inventory and assess baseline conditions and human use, and to track changes over time.
- b. Work with outfitters, dive charters, recreational divers and clubs, and state partners, local businesses, and government agencies to document visitation to the sanctuary and use of the resources.
- c. Develop procedures for users to voluntarily report visitation to the sanctuary and use of the resources.
- d. Explore the use of technologies (e.g., website links, social media, on-site QR codes) to facilitate monitoring and reporting of visitors and uses.

**STRATEGY R-2: Study the relationship between, and context of, underwater resources and regional culture and history, including Indigenous culture and activities; describe the maritime cultural landscape and heritage of shipwrecks**

**Activity 2.1:** Conduct historical and archival research on the connection between sanctuary resources and the culture and activities of the area.

- a. Study and compile historical documentation relevant to sanctuary resources, emphasizing the relationship of cultural resources, natural resources, and local communities.
- b. Inventory, catalogue, and coordinate the compilation of existing heritage knowledge and research from private and public groups and individuals interested in partnering with sanctuary research efforts; identify and fill gaps in this knowledge; establish a central location where communities can access this research.
- c. Evaluate connections to places like the Erie Canalway Heritage Corridor (part of the National Park System) and other areas that have a strong focus on maritime heritage.

**STRATEGY R-3: Develop partnerships with local, state, national, Indigenous nations, and international researchers and organizations to enhance sanctuary research programs and support broader Great Lakes conservation efforts.**

**Activity 3.1:** Develop partnerships that accelerate characterization of the sanctuary’s underwater cultural resources using new technologies.



**Activity 3.2:** Develop partnerships with multidisciplinary researchers and organizations to facilitate characterization of the sanctuary’s natural environment and accelerate broader conservation efforts.

**Activity 3.3:** In support of sanctuary condition reports and the National Marine Sanctuary Sentinel Site initiative:

- a. Develop observation infrastructure and capabilities to have the new sanctuary serve as a National Marine Sanctuary Sentinel Site
- b. Facilitate the study of Great Lakes ecology, including the study of climate change, invasive species, lake biology, geology, and water quality; and
- c. Study and track the social and economic impact of the sanctuary and its resources and the services they provide to the public.

**Activity 3.4:** Establish partnerships with local educational institutions to establish underwater research programs and curriculums that build capacity and encourage the next generation of researchers and conservationists.

**Activity 3.5:** Consult with Indigenous communities to conduct collaborative research.

**Activity 3.6:** Build international relationships and investigate partnership opportunities for United States-Canada collaboration on preservation initiatives.

**Activity 3.7:** Build relationships with archival institutions and repositories to preserve historical and archival Lake Ontario materials.

- a. Seek out opportunities to acquire historical and archival materials following establishment of collections and accession guidance.
- b. Partner with archival institutions and repositories to store these materials and make them accessible to the public.

**STRATEGY R-4: Develop citizen science research programs and educational opportunities.**

**Activity 4.1:** Establish citizen science research programs for research, monitoring, and resource characterization.

- a. Recruit and train volunteers to assist sanctuary staff with research projects.
- b. Establish a training program or adopt an existing maritime archaeology training course to provide local training opportunities for certified divers.
- c. Train volunteer teams to undertake periodic monitoring of beaches to look for shipwrecks washing up on shore or becoming exposed on beaches due to flooding.
- d. Develop assessment protocols for newly located shipwrecks.

**Activity 4.2:** Work with partner institutions, organizations, and Indigenous communities to establish research opportunities for students.

## Education and Outreach Action Plan

### ***Description***

The purpose of this action plan is to enhance public awareness, understanding, and stewardship of sanctuary resources, Lake Ontario, the St. Lawrence River, the Great Lakes, and the ocean. Education and outreach activities would focus on the historical significance of these underwater resources on culture and activities in the area, including Indigenous cultures and activities.

### ***Background***

Sanctuary education and outreach programs are designed to raise public awareness about the sanctuary; to inspire stewardship of the resources and surrounding environment; to increase knowledge about Lake Ontario and Great Lakes maritime heritage; and to promote Great Lakes and ocean literacy. Education and outreach includes both formal and informal programs for learners of all ages, including students, teachers, local residents (both full-time and seasonal), visitors, and other constituents.

The sanctuary will use education and outreach efforts to address specific priority issues identified in the management plan. Education is essential to achieving the sanctuary's management objectives and will be used to both complement and promote resource protection and research programs.

### ***Goal***

Provide innovative, technology-driven, authentic and place-based educational and outreach opportunities that promote learning, understanding, appreciation, and involvement in the protection and stewardship of sanctuary resources, Lake Ontario, the Great Lakes, and the ocean.

### ***Objectives***

- Provide leadership in assessing educational interests of residents, visitors, K-12 schools and higher education, including local, regional, statewide, national, and international educational institutions.
- Develop and integrate existing ONMS education and outreach programs that complement and promote sanctuary resource protection, research, and stewardship.
- In collaboration with key partners, develop and implement education programs that promote awareness and understanding of sanctuary resources, Lake Ontario's maritime heritage, and the maritime cultural landscape.
- Develop and implement education programs and partnerships that promote awareness and interaction with the National Marine Sanctuary System and NOAA.
- Encourage the involvement of volunteers to foster understanding and participation in the protection and stewardship of sanctuary resources.
- Engage and provide educational opportunities to all communities surrounding the sanctuary, including underserved communities and Indigenous nations and tribes.

## **Strategies**

### **STRATEGY ED-OUTREACH 1: Increase awareness and knowledge of sanctuary resources, Lake Ontario, the Great Lakes, and the ocean through education programs.**

**Activity 1.1:** Conduct an inventory of local, state, and regional educational institutions to identify opportunities for partnerships.

**Activity 1.2:** Develop a plan to offer sanctuary and maritime heritage content to educators, community members, and students.

- a. Work with education and outreach partners and with state and local historical societies to develop a plan that identifies areas to integrate NOAA and sanctuary content into school curricula.
- b. Promote and coordinate consistency of sanctuary education materials with local, county, and state organizations that find an interest in sanctuary programs-
- c. Leverage NOAA's resources to facilitate training sessions and workshops for educators, community members, and students.
- d. Conduct sanctuary-related educational programs for regional schools.

**Activity 1.3:** Facilitate distance and virtual learning with Lake Ontario museums and other locations statewide and nationwide.

- a. Work with ONMS distance learning programs and social media campaigns (e.g., Earth Is Blue) to create, showcase, and distribute curriculum and multimedia content from around NOAA, the sanctuary system, and partner expeditions worldwide (e.g., Nautilus Live).
- b. Collaborate with Thunder Bay and Wisconsin Shipwreck Coast national marine sanctuaries, New York Sea Grant, the State University of New York (SUNY) campuses, New York Coastal Management Program, and other partners on joint distance learning projects.

**Activity 1.4:** Collaborate with nations and tribes, including the Indigenous nations and tribes in the Haudenosaunee Confederacy, to ensure that content on the Haudenosaunee and other Indigenous cultures in upstate New York is incorporated into educational and outreach materials.

**Activity 1.5:** Promote marine technology as a way to enhance STEAMS education (science, technology, engineering, arts, mathematics, and social studies) and possible entrepreneurial economic development opportunities in the region.

- a. Leverage experience and assistance from Thunder Bay and Wisconsin Shipwreck Coast national marine sanctuaries and other marine sanctuaries; foster awareness and participation in the Marine Advanced Technology Education (MATE) Center's remotely operated vehicle competition.
- b. Collaborate with local educators to develop a strategy for engaging mentors and students in the MATE competition and other relevant marine technology learning initiatives.

- c. Work with partners, such as New York Sea Grant and SUNY Oswego, to identify multidisciplinary STEAMS initiatives that would support NOAA science initiatives.

**STRATEGY ED-OUTREACH 2: Increase awareness and knowledge of sanctuary resources, Lake Ontario, the Great Lakes, and the ocean through outreach programs.**

**Activity 2.1:** Develop new or adopt existing maritime heritage education programs, outreach materials, and exhibits for use in museums, visitor centers, and outdoor venues.

- a. Identify areas of collaboration between NOAA, educational and outreach institutions, museums, and visitor centers in sanctuary communities.
- b. Identify funding opportunities that will help establish a sanctuary interpretive presence in local partner venues.
- c. Conduct sanctuary-related presentations at museums, visitor centers, national parks, schools and community colleges, Boys and Girls Clubs, neighborhood centers, chambers of commerce, and other relevant locations within sanctuary communities.
- d. Identify programs and exhibits about ecosystem topics of relevance to the sanctuary and its resources (e.g., SUNY Oswego Meteorology, SUNY College of Environmental Science and Forestry, SUNY Cayuga Community College, Cornell University).

**Activity 2.2:** Develop different types of outreach materials for a variety of users.

- a. Develop interpretive materials for visitors to H. Lee White Museum, historical societies, Fort Ontario State Historic Site, Safe Haven Museum & Education Center, Lighthouse of Lake Ontario, Seaway Trail, Erie Canalway National Heritage Corridor, Port of Oswego, county and state tourism offices, SUNY Oswego, and other institutions of higher learning.
- b. Create interpretive materials for recreational users (e.g., divers, snorkelers, kayakers, fishers, boaters) that encourage the sustainable stewardship of sanctuary resources.
- c. Create virtual 360 dives and related remote experiences in the sanctuary. This virtual reality experience is made possible through technology that produces 360-degree images that are "stitched" together from a series of underwater photos.

**STRATEGY ED-OUTREACH 3: Enhance sanctuary communications to create greater awareness.**

**Activity 3.1:** Develop a communications/implementation master plan for the sanctuary communities.

**Activity 3.2:** Explore potential partnerships with university broadcasting programs and local public broadcast television and radio stations.

**Activity 3.3:** Create and leverage local, regional, and national media contacts to increase awareness about the sanctuary and its programs.

**Activity 3.4:** Develop content for the Lake Ontario National Marine Sanctuary website and social media to provide quality, up-to-date information about the sanctuary.

**Activity 3.5:** Sponsor, organize, and participate in outreach opportunities that promote the sanctuary’s mission and that allow for dissemination of sanctuary information.

- a. Participate in local community events, such as festivals and open houses.
- b. Present at local, regional, and national trade shows, workshops, and conferences targeted at specific impact groups, including divers, resource managers, and maritime history and archaeology professionals.
- c. Hold periodic public roundtables or meetings in each partner county to maintain open communication.

## **Tourism and Economic Development Action Plan**

### ***Description***

The purpose of this action plan is to promote tourism and economic development initiatives in Lake Ontario communities.

### ***Background***

National marine sanctuaries attract visitors who seek places to experience these special underwater treasures and the adjacent coastal communities. Sanctuaries also offer an opportunity for local businesses to support the tourism industry and invest in initiatives that directly or indirectly support the sanctuary.

### ***Goal***

Create an environment that will promote tourism opportunities and support business growth through collaboration with the region’s various cultural and historic resources.

### ***Objectives***

- Engage with local hospitality, tourism, and other related businesses on potential business opportunities associated with the sanctuary.
- Encourage local, county, regional, state, and federal economic development agencies, tourism and outdoor recreation offices, and chambers of commerce to use the sanctuary as an economic development asset and to bring people to the region.
- Ensure, through close and meaningful consultation, that tourism and economic development activities involving the sanctuary are identified and conducted in a way that respects and acknowledges the lands and waters of the Indigenous nations and tribes.

### ***Strategies***

**STRATEGY ECON-1: Identify hospitality, tourism, and other business groups within the region and establish communications and partnership building opportunities.**

**Activity 1.1** Provide training opportunities on how businesses might incorporate the responsible use of the sanctuary into their business plans.

**Activity 1.2** Provide in-person and remote opportunities for local business owners to learn firsthand about the sanctuary.

**Activity 1.3** Help identify opportunities and methods for businesses to include their proximity to the sanctuary in their marketing and branding.

**Activity 1.4:** Provide connections with the NOAA Business Advisory Council and the Business Recognition Program.

**STRATEGY ECON-2: Establish working relationships with economic development agencies and collaborate on strategies to use the sanctuary as a development asset.**

**Activity 2.1** Identify and contact local, county, regional, and state economic development agencies to provide training on what the sanctuary is and the role it can and will play in the region.

**Activity 2.2** Encourage agencies to incorporate the responsible use of the sanctuary into economic development strategies as a tool for development.

**Activity 2.3** Work with economic development agencies to identify potential tools available to assist businesses interested in growing their operations using the sanctuary as an asset, or assisting new business startups resulting from the sanctuary.

**Activity 2.4** Provide communication materials of socioeconomic research of the sanctuary that economic development agencies may use to improve awareness of the sanctuary with local developers, financial institutions, venture capitalists, and others who may assist with business development and startup.

**STRATEGY ECON-3: Establish working relationships with local, regional, and state tourism agencies and chambers of commerce to develop strategies and assets to enhance sustainable tourism opportunities surrounding the sanctuary.**

**Activity 3.1** Contact tourism agencies and chambers of commerce to provide training on the sanctuary and how it will enhance regional marine resources.

**Activity 3.2** Work with the tourism industry and chambers of commerce to see how local tourism businesses might use the sanctuary as a tool to attract more visitors to the region.

**Activity 3.3** Partner with local, regional, and state tourism agencies and chambers of commerce to increase awareness about the sanctuary and promote regional sustainable tourism and economic development strategies.

**Activity 3.4** Partner with New York state to enhance welcome/visitor centers through the addition of interpretive materials and exhibits about the sanctuary.

**Activity 3.5** Encourage sustainable tourism by focusing on places that are authentic, specialized, unique, and homegrown, with unspoiled scenery, locally owned business, historic small towns, and walkable downtowns.

## Resource Protection Action Plan

### ***Description***

The purpose of this action plan is to strengthen resource protection by promoting responsible use of sanctuary resources, developing resource protection-focused outreach and education initiatives, conducting on-water resource protection activities, and enhancing enforcement efforts.

### ***Background***

The sanctuary encourages public access to its resources and strives to balance increased visitation with resource management and preservation. Natural and human processes can threaten the long-term sustainability of New York's maritime heritage resources, including Indigenous cultural heritage resources, shipwrecks and other underwater cultural resources. While the effects of natural and human-caused processes, such as ice or invasive mussel damage on shipwrecks, will be studied using strategies found in the Research and Monitoring Action Plan, the Resource Protection Action Plan is designed to assess and reduce human impacts on sanctuary resources. In practice, the two plans will be highly integrated. Human activities have the greatest potential for harming shipwrecks and other underwater cultural resources. These activities include improper anchoring, inadvertent and intentional diving practices that damage resources, and artifact removal. The two plans will also address longer term impacts, such as understanding, mitigating, and adapting to the effects of climate change on sanctuary resources.

### ***Goal***

Strengthen resource protection in the proposed sanctuary through resource-specific initiatives and compliance with sanctuary regulations, while increasing public access.

### ***Objectives***

- Improve understanding of use patterns and the effects of these uses on the resources.
- Develop a robust shipwreck mooring program and other methods to mitigate anchor impacts and allow for exploration.
- Increase public access and awareness of sanctuary resources while promoting and facilitating responsible use.
- Establish interagency collaboration for enforcement, including on-water and interpretive enforcement, as a resource protection tool.

### ***Strategies***

**STRATEGY RP-1: Establish a shipwreck mooring program/system within the sanctuary.**

**Activity 1.1:** Develop a five-year mooring plan that addresses mooring design and prioritizes mooring deployment with operational plans for installation, redeployment, and maintenance of mooring buoys. These moorings would include buoys and other types of access infrastructure for sites where buoy placement is not advisable, such as in ship traffic lanes.

**Activity 1.2:** Develop best practices for anchoring at sites where moorings are not yet installed or are not feasible, and develop a companion public awareness plan.

**Activity 1.3:** Gather input from the Sanctuary Advisory Council and diver working groups on plans outlined above.

**Activity 1.4:** Work with local dive charter operators and dive clubs to monitor moorings throughout the dive season.

**STRATEGY RP-2: Ensure compliance with sanctuary regulations and other applicable state and federal laws.**

**Activity 2.1:** Ensure sufficient enforcement presence in the sanctuary through partnerships and applicable interagency coordination.

- a. Develop agreements with the U.S. Coast Guard, NOAA Office of Law Enforcement, state agencies, and county and local agencies.
- b. Develop an interagency communication and emergency response plan.
- c. Host workshops on law enforcement as related to maritime heritage resources.
- d. Explore feasibility of using various technologies to monitor the sanctuary.

**Activity 2.2:** Use interpretive enforcement as a tool to inform users about sanctuary regulations.

- a. Provide information to law enforcement personnel on interpretive enforcement and guidelines; develop outreach materials for enforcement officers to distribute while patrolling the sanctuary.
- b. Integrate interpretive enforcement into shoreside signs throughout the sanctuary.
- c. Include informational inserts about the sanctuary in New York boat registration and renewal packets.
- d. Provide U.S. Coast Guard Auxiliary members, marina employees, and other appropriate individuals and organizations with information about sanctuary regulations.

**STRATEGY RP-3: Increase and encourage access and responsible use of sanctuary resources by fostering greater awareness among recreational users.**

**Activity 3.1:** Build capacity for access and responsible use of sanctuary resources by fostering greater awareness among user groups.

**Activity 3.2:** Provide practical information for users, such as shipwreck identification maps and information, access points, regulations, and contact information.

- a. Develop outreach materials and web-based information for users of sanctuary resources.
- b. Explore the use of cell phones and podcasting as a means of providing users interpretive materials at shipwreck sites.
- c. Investigate implementing “certification programs” for local outfitters, businesses, and local activities that actively promote recreational etiquette and stewardship of sanctuary resources (e.g., Florida Keys National Marine Sanctuary’s Blue Star Program).
- d. Provide information to the public about the shipwrecks, sanctuary regulations, and enforcement/emergency contact information at marinas, boat ramps, dive shops, fishing and diving charter operators, dive clubs, recreation activity shows (i.e., Beneath the Sea, Syracuse boat show) parks, other access points, and venues like visitor centers.
- e. Explore and improve public access to sanctuary resources for kayakers and snorkelers.



- f. Evaluate the effectiveness of approaches taken.

**STRATEGY RP-4: Evaluate approaches to protect the wreck of HMS *Ontario* under the National Marine Sanctuaries Act.**

**Activity 4.1:** Develop a plan and feasibility study that outlines a process to include the site of HMS *Ontario* as part of Lake Ontario National Marine Sanctuary at a future time.

- a. Explore developing specific zoning and regulations that might be considered to effectively manage and protect the site of HMS *Ontario*.

**Activity 4.2:** Pursue locating the site of HMS *Ontario*

- a. Coordinate with community stakeholders and independent researchers to collate and manage data associated with HMS *Ontario*.
- b. Develop a research design and proposed survey methodology to locate and characterize HMS *Ontario*.

## Potential Operating Budget

The potential operating budget below is an estimate to show options for activities that can be implemented at varying levels of Congressional appropriations. These scenarios envision the reality of NOAA and its partners increasing sanctuary activities over time; however, NOAA cannot guarantee either of these funding scenarios given the federal appropriations process. The budget for the sanctuary will be contingent on several factors, including the overall operational and construction budgets for ONMS as determined by Congress, and spending priorities determined by ONMS and NOAA.

### **\$250,000 to \$500,000 annually**

NOAA would establish an administrative office, hire a sanctuary superintendent, and support the operation of the Sanctuary Advisory Council. NOAA would provide staff to support programmatic priorities, which may include new hires. The first hires would likely be staff to manage sanctuary operations, develop public outreach and education programs, and conduct maritime archaeology documentation.

NOAA would work with partners to develop a strategic plan for creating a NOAA presence that could include exhibits, education, and outreach. NOAA would start implementing the highest priority elements of the resource protection, education, and research programs as identified in this management plan, focusing on identifying partnerships and evaluating opportunities.

NOAA would facilitate the establishment of a local sanctuary foundation or “Friends” group. NOAA would evaluate the specifications for a sanctuary research vessel and options for how to acquire such a vessel.

### **\$600,000 to \$1 million annually**

At a higher level of funding, NOAA expects to have core staff in place but may need to hire or bring in additional staff to support programmatic priorities. NOAA would expand the research program with additional mapping, characterization, archaeological documentation of known shipwrecks and searching for potential shipwrecks, and enhancing Geographic Information

System capabilities. NOAA would continue to implement the interpretation, recreation, and tourism aspects of the management plan. For the education and outreach program, NOAA and its partners would create more programming for partner venues and pursue science, technology, engineering, art, mathematics, and social studies (STEAMS) and MATE remotely operated vehicle initiatives. NOAA would expand resource protection by installing additional moorings and access as well as establishing a monitoring program. NOAA would initiate a review of the management plan with partners, community, and Sanctuary Advisory Council and begin the sanctuary condition report.

As indicated in the sanctuary nomination, the counties, the state of New York, and a number of local and regional partners demonstrated their interest in contributing to the sanctuary reaching its full potential. Areas of collaboration that will supplement and complement federal funding include research, resource protection, law enforcement, cowriting and obtaining grant funding, marketing, and tourism.



AMERICA'S UNDERWATER TREASURES