

WEDA MW

NY REDI & REGIONAL DREDGING MANAGEMENT PLAN

March 2021



Bright ideas. Sustainable change.

AGENDA

01 Introductions

02 Purpose

03 About Ramboll

04 NY State Resiliency and Economic Development Initiative (REDI)

05 Lake Ontario Regional Dredging Management Plan (RDMP)

06 Discussion

MEET YOUR PRESENTERS



Jim Davis, PE

- Federal & Public Sector Program Manager
- Former US Army Corps of Engineers District Commander



Tony Eallonardo, PhD

- Senior Ecologist
- REDI Project Manager

RAMBOLL AT A GLANCE

ENVIRONMENT & HEALTH

WATER

ENERGY

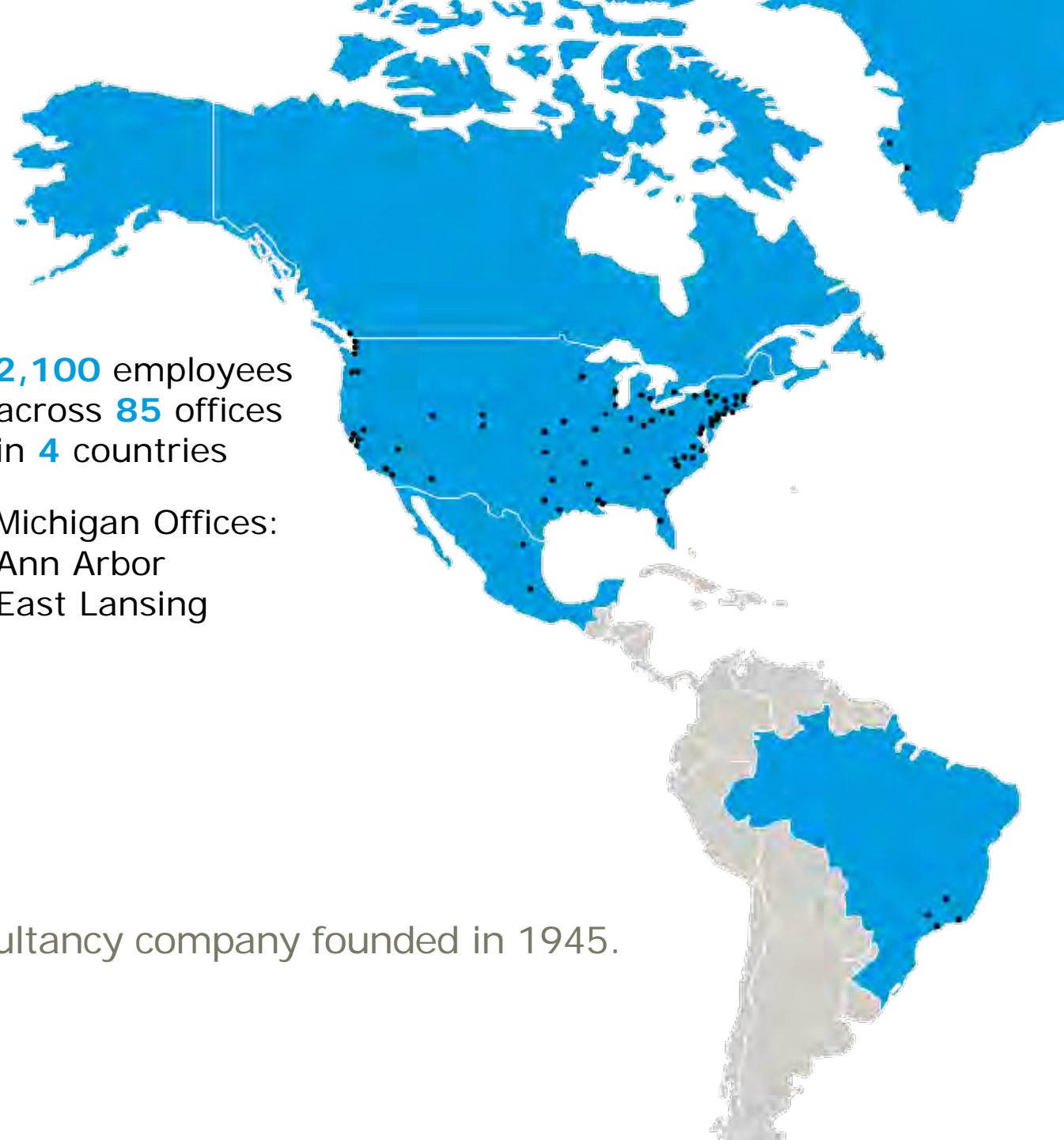
ADVANCED MANUFACTURING

2,100 employees
across 85 offices
in 4 countries

Michigan Offices:
Ann Arbor
East Lansing

Leading engineering, design and consultancy company founded in 1945.

RAMBOLL



PURPOSE

Provide an overview of the New York State Lake Ontario Resiliency and Economic Development Initiative (REDI).

Highlight the Lake Ontario Regional Dredging Management Plan (RDMP)

LAKE ONTARIO RESILIENCY AND ECONOMIC DEVELOPMENT INITIATIVE (REDI)



RAMBOLL



Multi-agency task force charged with developing a plan to make the waterfronts of Lake Ontario and the St. Lawrence River more resilient while strengthening the region's local economies.

STRATEGIES



Strong top-down leadership from Governor's office, state agencies and Ramboll



Empowered bottom-up identification of issues, project development and prioritization



Holistic thinking

- Shoreline processes
 - Economic opportunities
-



REDI STRUCTURE

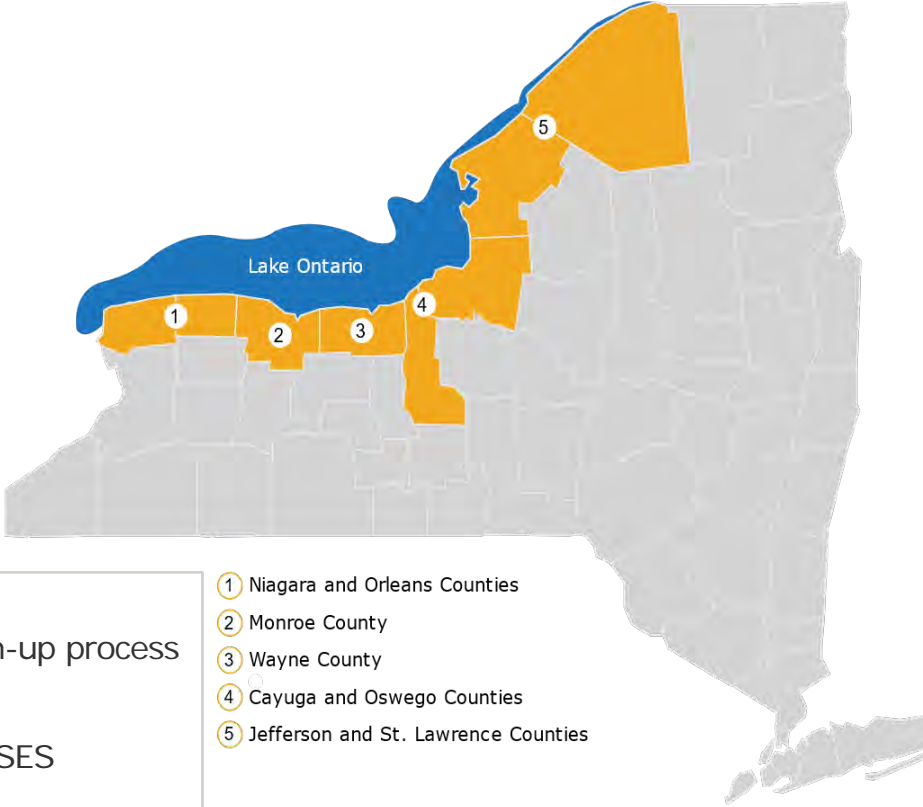
Governor's
Office

REDI
Commission

REDI Regions
(5)

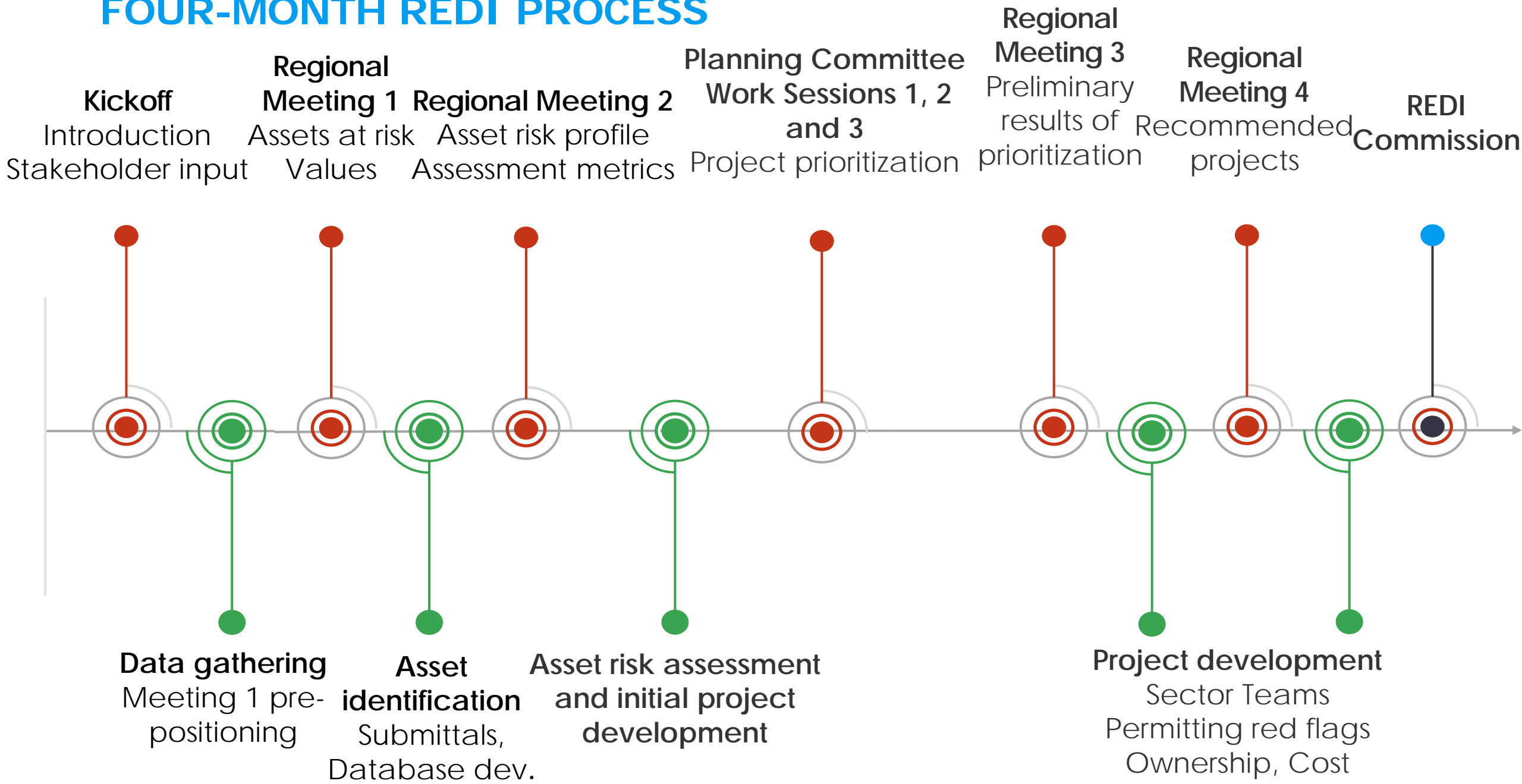
- State commissioners from 10 agencies
- Co-lead by NYSDEC and Empire State Development (ESD)

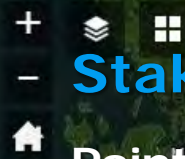
- **Planning Team**
 - Evaluate project proposals and coordinate bottom-up process
 - Regional Leads (state agency and Ramboll)
 - NYS Agency Representatives from DEC, ESD, DHSES
 - Governor's Representative
 - REDI Commissioner
 - Additional state agency and Ramboll staff
- **Planning Committees**
 - Local elected officials and representatives
 - Solicit input from stakeholders, identify and prioritize projects with assistance of Planning Team
- **Planning Stakeholders**
 - Additional local elected officials and representatives
 - Provide input on assets at risk, values, priorities and potential projects



- ① Niagara and Orleans Counties
- ② Monroe County
- ③ Wayne County
- ④ Cayuga and Oswego Counties
- ⑤ Jefferson and St. Lawrence Counties

FOUR-MONTH REDI PROCESS





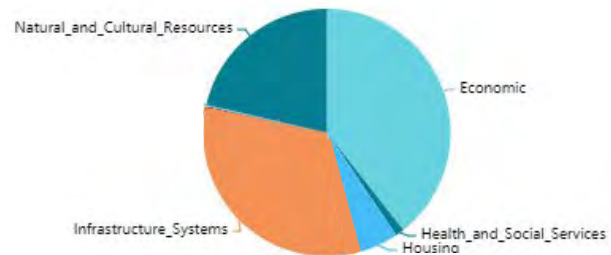
Stakeholder engagement summary

Points indicate locations of 532 assets at risk



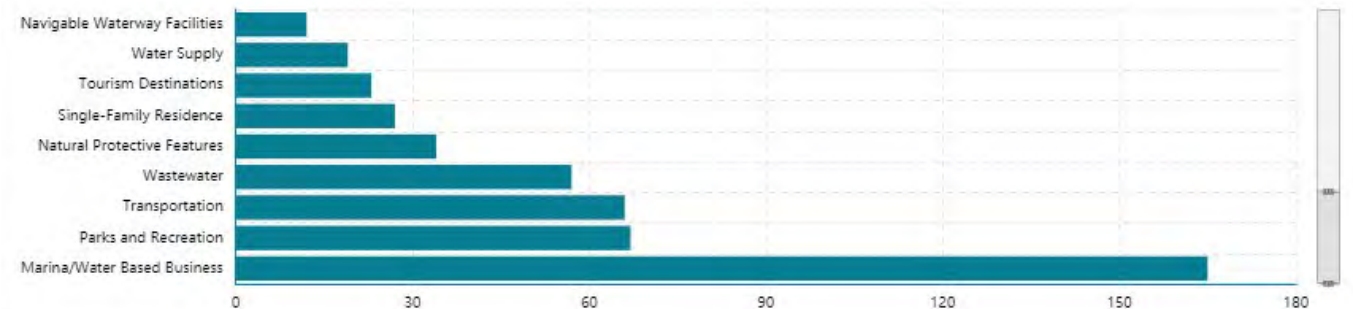
Asset Class Chart

At Risk Assets Submitted by the Planning Stakeholders



Asset Sub-Category Chart

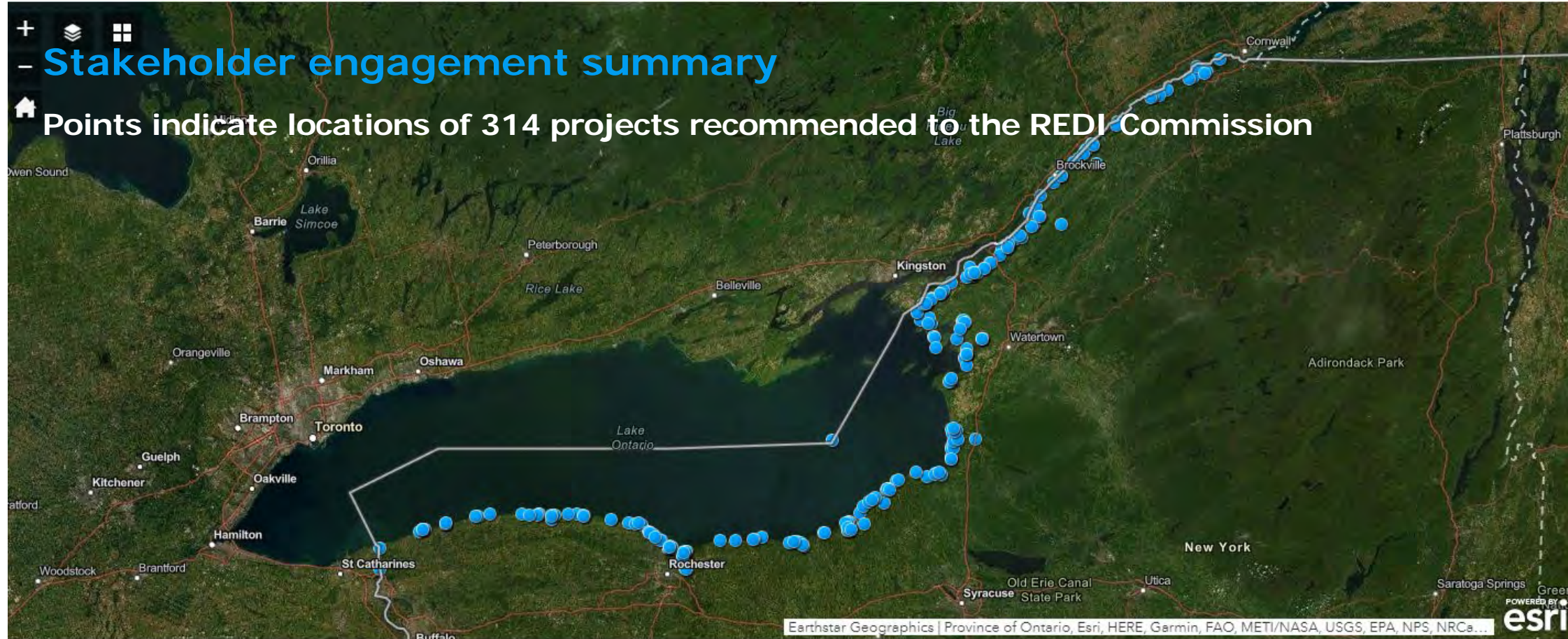
At Risk Asset Subclasses Submitted by the Planning Stakeholders





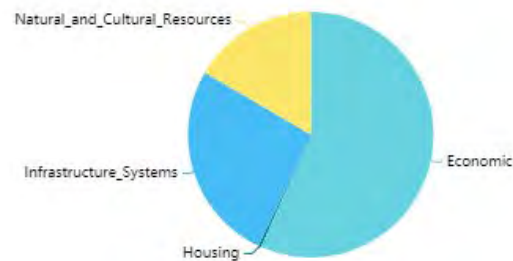
– Stakeholder engagement summary

🏠 Points indicate locations of 314 projects recommended to the REDI Commission



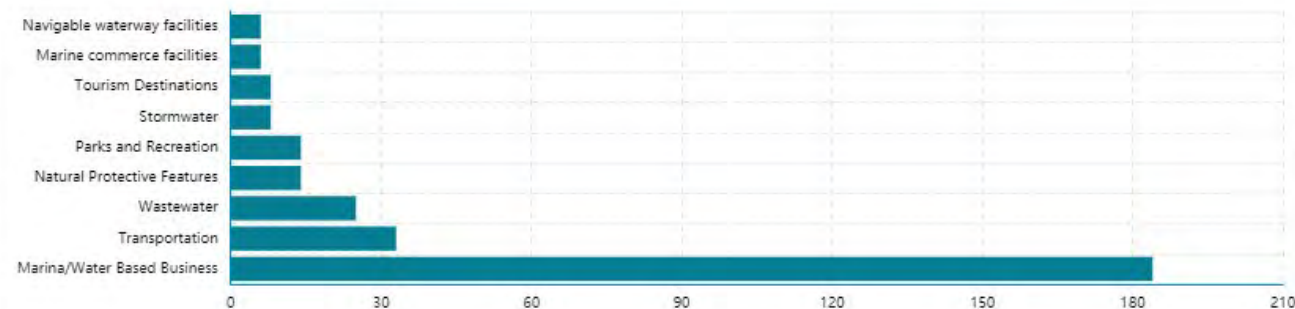
Asset Class Chart

At Risk Assets Submitted by the Planning Stakeholders

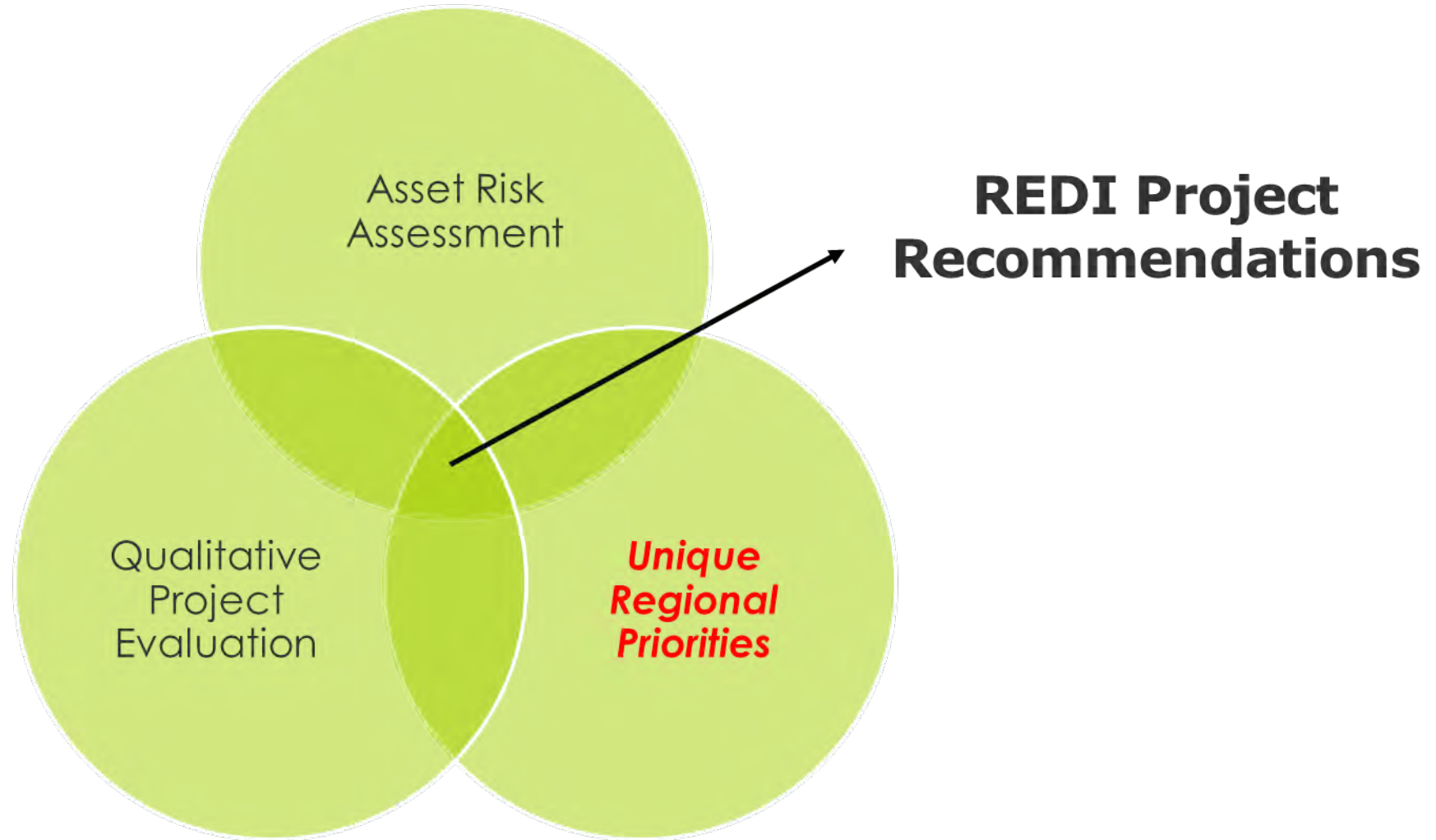


Asset Sub-Category Chart

At Risk Asset Subclasses Submitted by the Planning Stakeholders



PROCESS FOR SCREENING + EVALUATING PROJECTS



ASSET AND PROJECT EVALUATION

Asset Risk Assessment

- ➔ **Damage Potential** - Helps identify assets with elevated potential for storm damage or presence of erodible soils that could lead to damage during its design life
-

- ➔ **Health and Safety**
 - Contribution to life safety
 - Critical facility for public health and safety
-

- ➔ **Value** - Value of asset to the community (community value)
-

- ➔ **Protective Features** - Environmental protective features, such as dunes, bluffs, and stabilizing vegetation associated with the asset
-

- ➔ **Adaptability** - Capacity of the asset to adapt

Qualitative Project Evaluation

- ➔ **Feasibility of Implementation**
 - Permittable/Permit readiness
 - Support/Capacity of Owner to implement
-

- ➔ **Durability** - Long term solution
-

- ➔ **Scale of Protection** - Multiple asset coverage
-

- ➔ **Cost**
 - Cost Proportionate to REDI funding
 - Ability to make match
-

- ➔ **Economic Development** - Positive impact/additional or immediate benefit to economic systems

FINAL COMMISSION RECOMMENDATIONS

State funded 132 projects

- Local match 5%
- Public marina and waterfront businesses
- Minimum allotment per county

Separate funding mechanisms for private businesses and homeowners

Regional/coordinated dredging efforts

- Includes all 8 REDI counties
- Sustainably maintain safe navigation channels to harbors and bay (20 harbor channels)



ONGOING NEXT STEPS

- REDI program continues to become more decentralized while ***maintaining vital aspects of centralized structure, process and support to local project owners***
- All projects shift to local project owners and procured firms (local procurement policies apply)
- Quarterly status reports
- 60% and 90% design milestones
- Permitting
- Final IFC designs
- Procurement and construction
- Centralized riprap pricing program (to leverage volume-based pricing)
- Regional Dredging Program (low water is part of resiliency too)
- Funding limits run for three years, with invoices paid to local project owners on a 95% reimbursement basis

REGIONAL DREDGING MANAGEMENT PLAN (RDMP)

PROBLEM STATEMENT

- US Army Corps of Engineers (USACE) Operation & Maintenance (O&M) Funds insufficient to meet needs of harbor access channels
- Historically low tonnage commercial harbors & recreational harbors do not get USACE O&M
- These harbors need alternate means to maintain infrastructure
- Local government and private support sporadic and inconsistent
- Typical challenges for dredging project
 - Funding
 - Contracting/Oversight/Expertise
 - Permitting
 - Engineering/Surveying
 - Dredge Material Disposal

NEW YORK LAKE ONTARIO REGION DREDGE MANAGEMENT PLAN (RDMP)

- Original study and plan developed in 2000, funded by New York Dept of State & Communities
- Plan updated in 2014
- RDMP concept of the includes:
 - County of Orleans (Lead), Niagara, Monroe, Wayne, Cayuga, Oswego,
 - City of Oswego, Town of Genesee
 - 19 Ports & Harbors covered
- Goal of the RDMP
 - Develop a plan to provide regular and dependable dredging maintenance of channels
 - Identify dredging needs, economic benefits of regular dredging program, costs & funding mechanisms
 - Investigate potential inter-municipal cooperation
 - Identify dredging priorities, and scheduling, permitting
 - Investigate alternatives for ownership, control and operation for dredge equipment

REGIONAL DREDGING MANAGEMENT PLAN STUDY

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LAKE ONTARIO HARBORS IN RDMP



Figure 1: Harbor Locations

LAKE ONTARIO RDMP RECOMMENDATIONS

- Form a regional public authority, not-for-profit corporation (Local Development Corporation-LDC)
- The LDC would focus on dredging operations
- Leverage an economy of scale, management functions, personnel, equipment, flexibility to contract work to private entities
- Perform public or quasi public functions on behalf of multiple government jurisdictions
- Staffed by management, engineering capability, authority to contract professional and dredging services

RDMP SCHEDULE/TIMELINE

- Stand up of organization over three-year period
- Year 1
 - Leverage state & federal grants to fund first year
 - Form LDC, Board of Directors, hire executive director, contract dredging priority areas
- Year 2
 - Hire engineer, evaluate potential dredge equipment purchase and private dredging
 - Legislation approved for funding local level
- Year 3
 - LDC full operation

REDI ADVANCEMENT OF THE RDMP

- REDI commission elected to have NYS implement first round of dredging in order to lay out technical and permitting foundation for program
- Program extended to 20 sites, in each of the NY counties bordering Lake Ontario
- Goal to dredge 20 sites in two years with a phased approach:
 - Phase 1 – generally year 1. Three sites with existing permits that NYS can work under via MOUs as needed
 - Phase 2 – generally year 2. All remaining sites; permits and full pre-design/design process needed
 - Phase 3 – transition from State to RDC management

PHASE 2 STRATEGIES

- Maintain consistent contact with local stakeholders
- Avoid reinventing the wheel, to the extent possible
 - If warranted, re-use dredging designs from prior/outdated permits
- Engage involved agencies at a regional scale, to the extent possible (e.g., pre-application and pre-filing meetings)
- Keep the sediment in the water where possible (littoral placement generally the selected placement location, beach placement where public lands are available, open-lake and upland placement of impacted sediments)
- Categorize sites according to geography, site parameters (dredging depth, volume removal) and anticipated restricted work periods
 - Categories guide implementation plan and strategic contracting

CONCLUSION

- The local governments along Lake Ontario understood they needed to take responsibility for maintaining their own harbors
- They sought funding and paid for an engineering study, which resulted in a Regional Dredging Management Plan and recommended organizational structure
- The New York State REDI initiative selected the RDMP for funding
- For public organizations, the RDMP may be worth consideration for your harbor/region
- For WEDA dredging community there may be more dredging opportunities along Lake Ontario
- For more information see NY State website: <https://www.governor.ny.gov/programs/lake-ontario-resiliency-and-economic-development-initiative-redi>

THANK YOU

READ MORE ON OUR WEBSITE:
WWW.RAMBOLL.COM

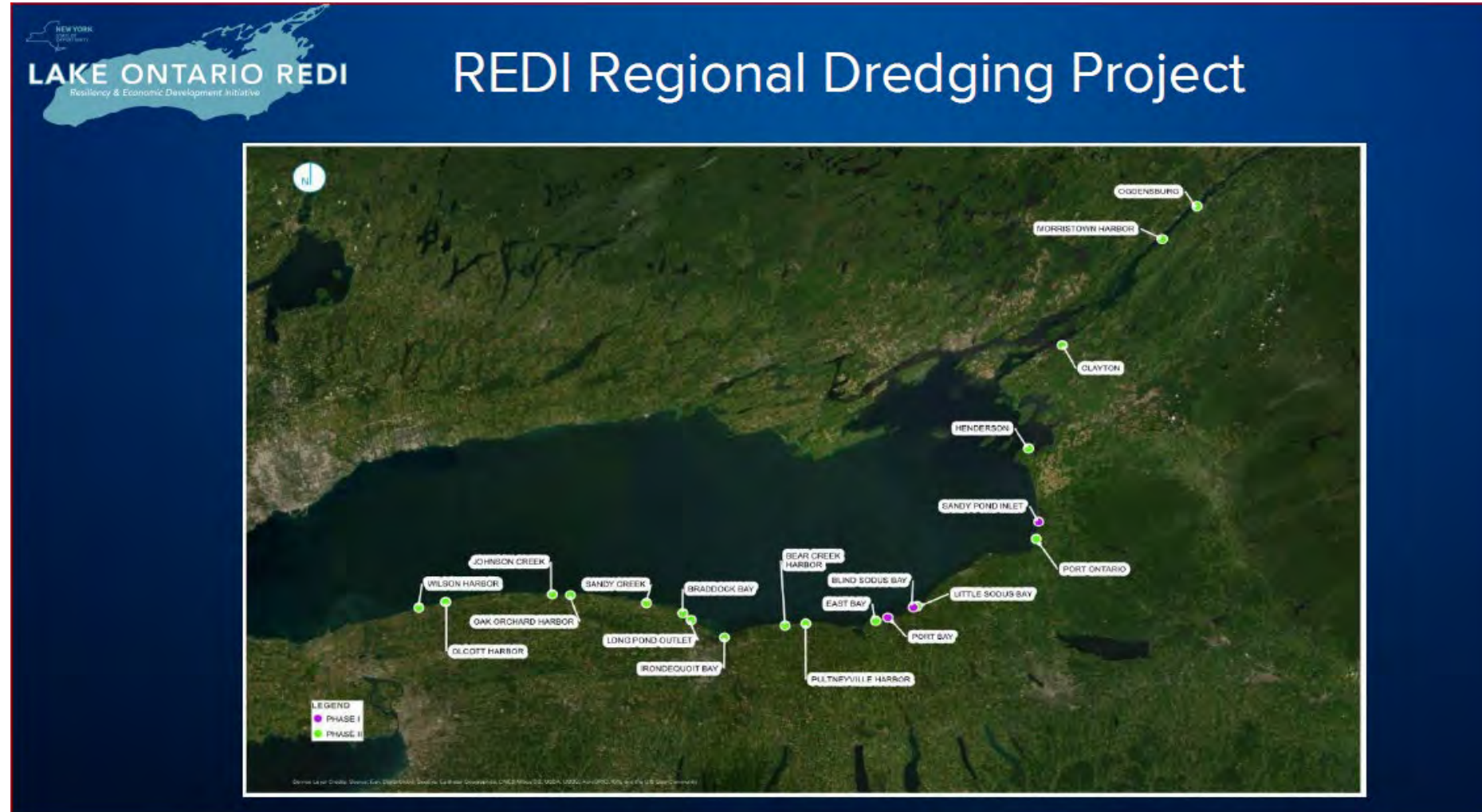
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REDI SELECTION OF RDMP

- The State's initial support for the Regional Dredging Project is designed to give Lake Ontario and St. Lawrence River counties the time needed to develop long-term operational, maintenance, and funding plans to maintain recreational navigation channels in the future. The harbors along the southern shore of Lake Ontario alone are estimated to generate \$94 million in economic activity and support more than 1,350 local jobs.

DREDGING PHASES





Sodus Bay

Extreme bluff erosion; note vegetated bluff to right of photo



Route 97

Severe shoreline erosion – road and buried utilities at risk