

Great Lakes Advisory Board (GLAB) Virtual conference – October 29th, 2020

Welcoming Remarks from EPA



► Welcome from EPA



CO-CHAIR INTRODUCTORY REMARKS AND MEMBER ROLL CALL



Great Lakes Advisory Board

Theme 1: Legacy Phosphorus

Theme 2: Excess Nutrients

Background Information

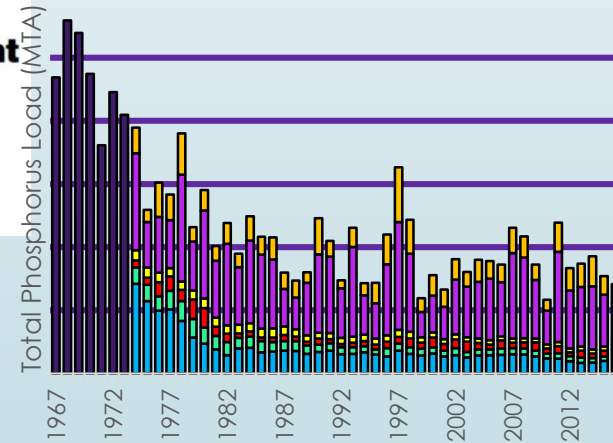
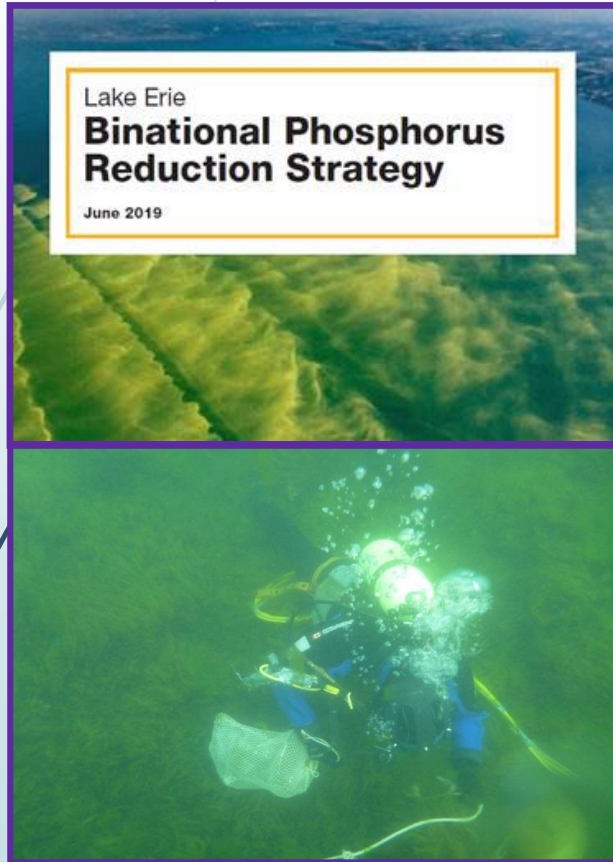


Nutrient Reduction Efforts in Lake Erie

Santina Wortman, USEPA Great Lakes National
Program Office

Presentation to the:
Great Lakes Advisory Board
October 29, 2020

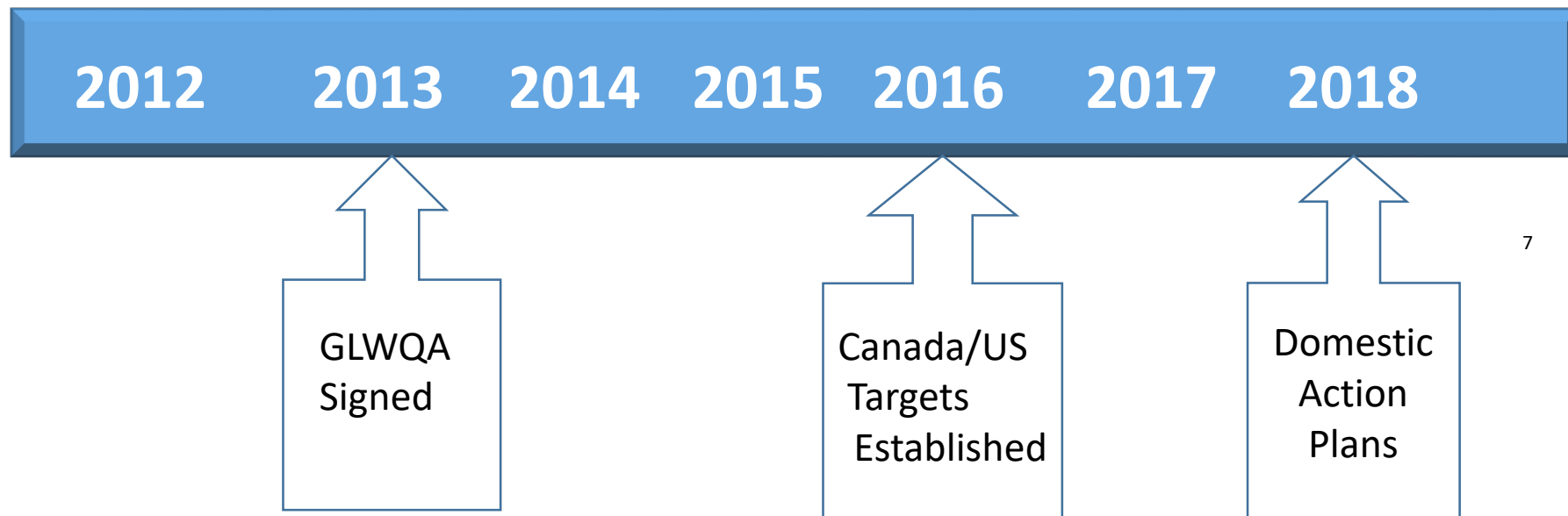
Lake Erie nutrient reduction is a high priority under GLWQA and GLRI



Setting targets was just the beginning...

The U.S. and Canada committed to:

- ✓ Review, revise and/or develop concentration and loadings objectives for offshore and nearshore waters of Great Lakes **starting with Lake Erie**
- ✓ Establish allocations by country
- ✓ Establish load reduction targets for priority watersheds that have significant or localized impact
- Develop and implement P reduction plans for each country
- ★ ➤ Monitor and report progress, and adaptive management ★



Numerous partners and programs

Great Lakes Water Authority Surpasses State Goal Of Reducing Phosphorus Levels By 40 Percent By 2025



Regional Conservation Partnership Program

Tri-State Effort for Phosphorus Reduction



Western Lake Erie Basin Partnership

Blanchard River

DEMONSTRATION FARMS NETWORK

Save Maumee Riparian Buffer Initiative



Making the ditches streams again

Great Lakes RESTORATION

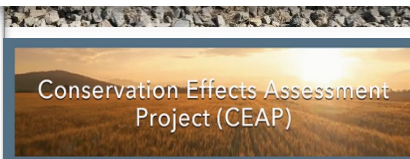


H2Ohio

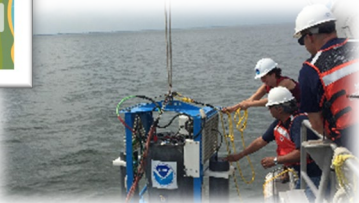
LAKE ERIE ALGAE



USDA Launches \$41 Million Initiative to Improve Water Quality for Western Lake Erie Basin



Conservation Effects Assessment Project (CEAP)

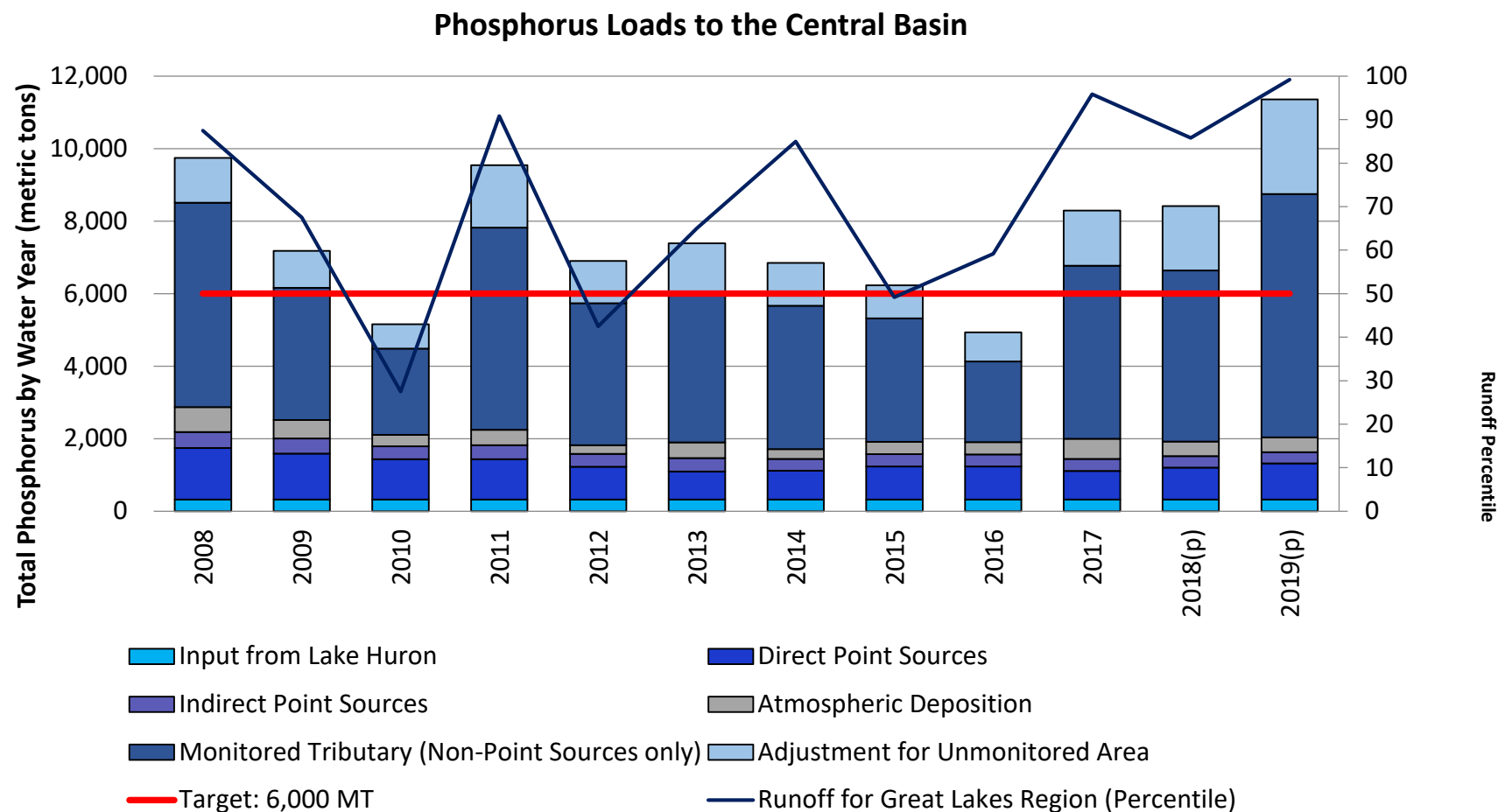


National Center for Water Quality Research
HEIDELBERG UNIVERSITY

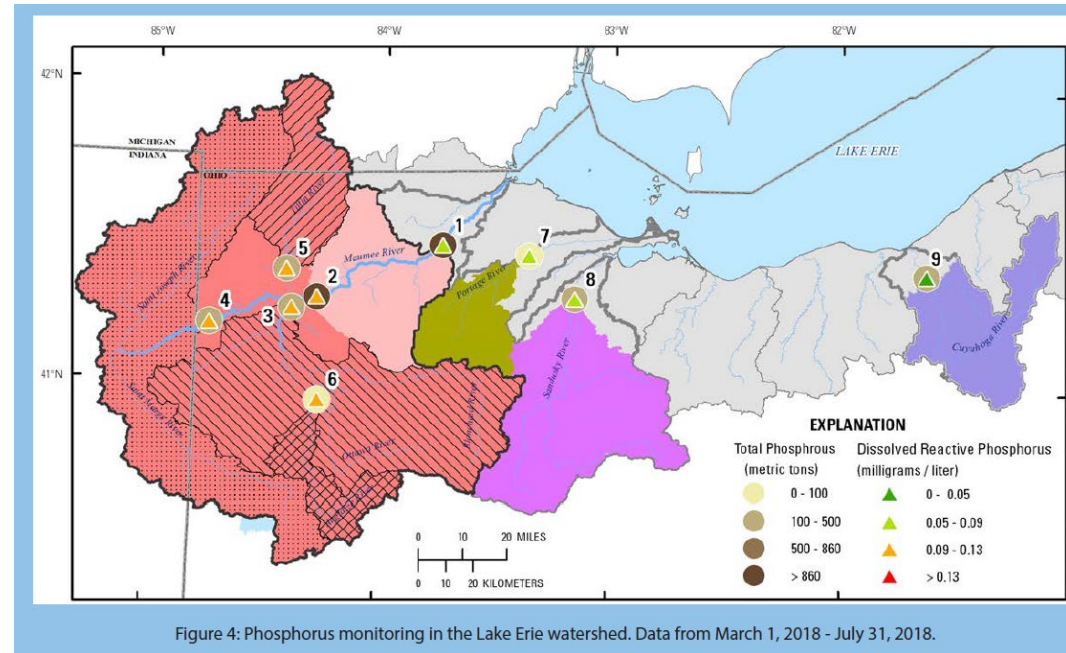


USDA United States Department of Agriculture
Natural Resources Conservation Service

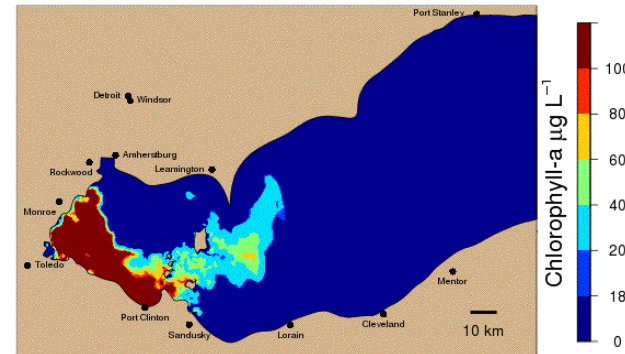
Are we making progress? Doesn't appear that way...



We need to track progress at multiple scales



- On the land
- In the streams
- In the lake

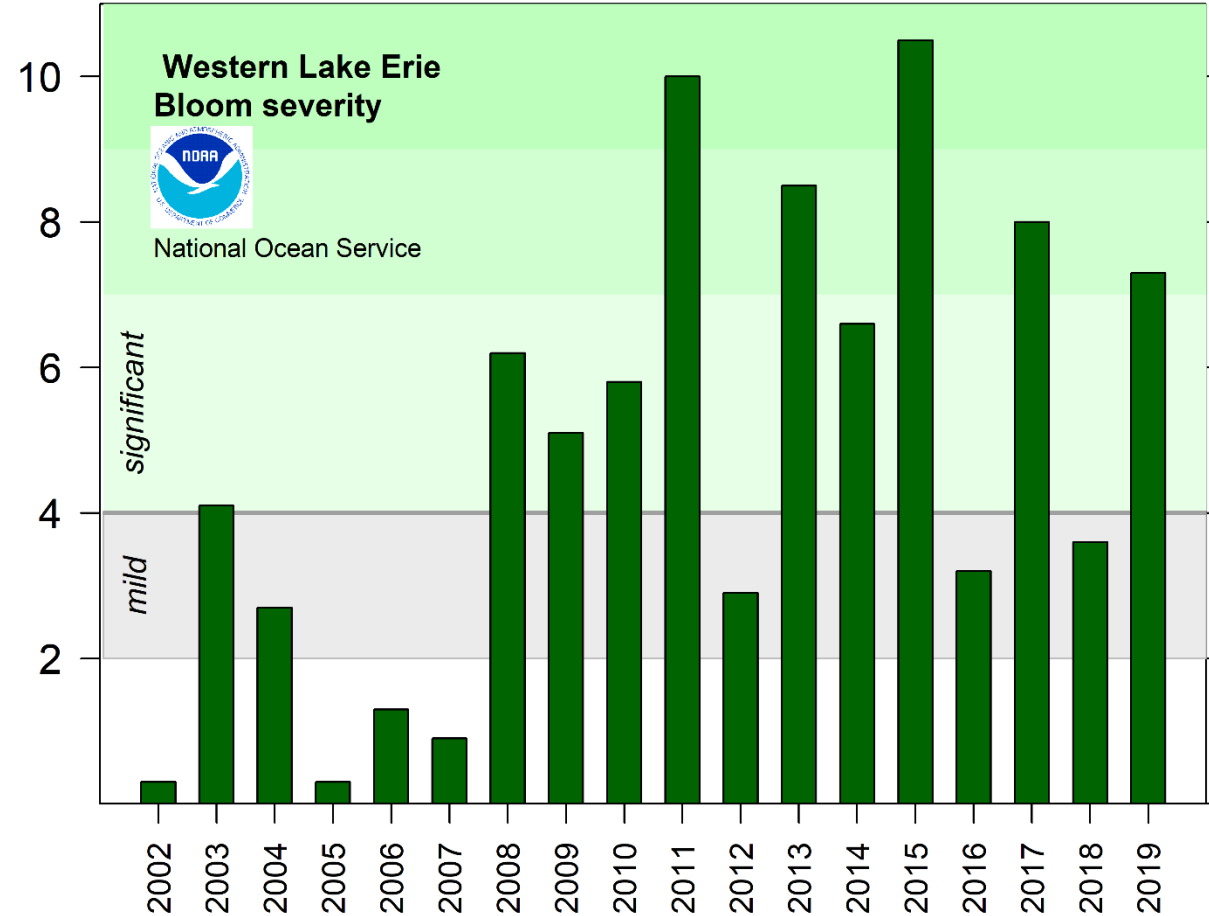


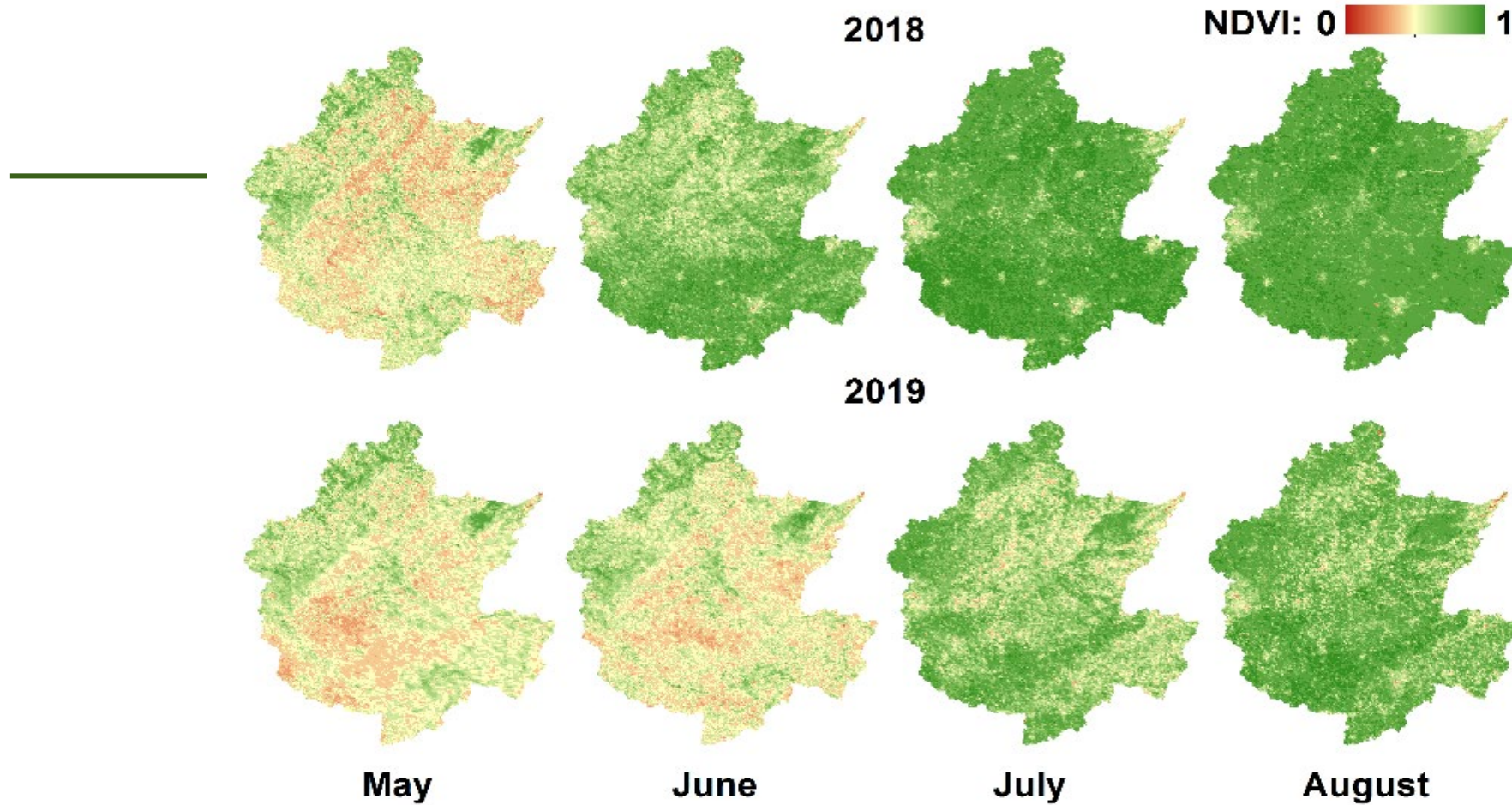
Loads and bloom severity highly variable each year



No discernable
downward trends

2020 projected to be
smaller than 2019,
bigger than 2018





- 41% of the land went unplanted in 2019 (5% in 2018)
- Only 46% of typical commercial P amounts were sold
- Only 15% of typical manure application from March-May

What did we learn in 2019?

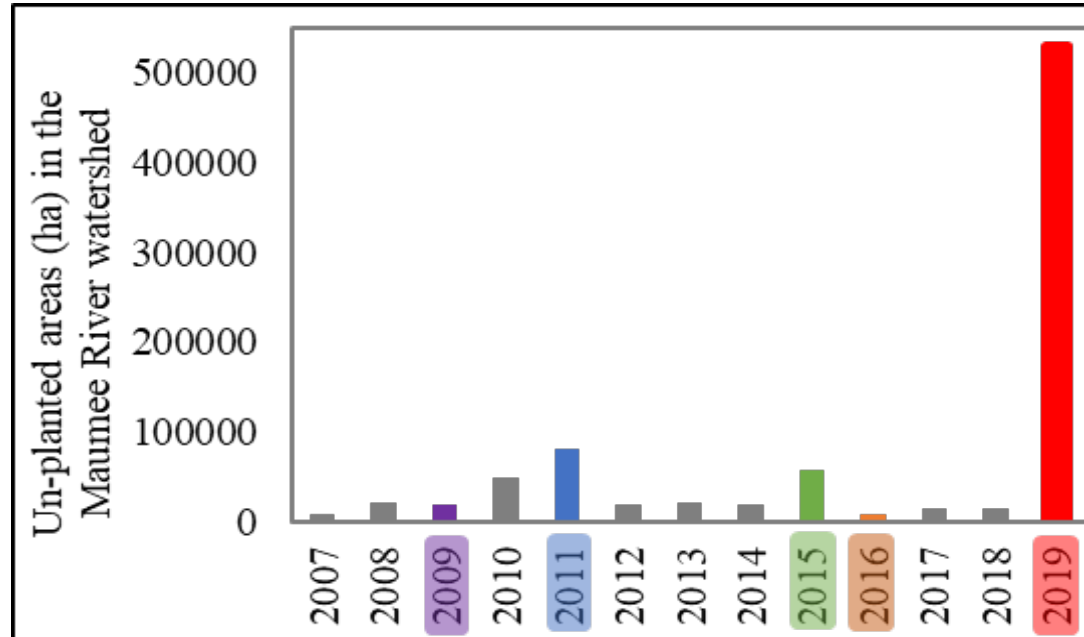


Image credit: Steve Davis, NRCS

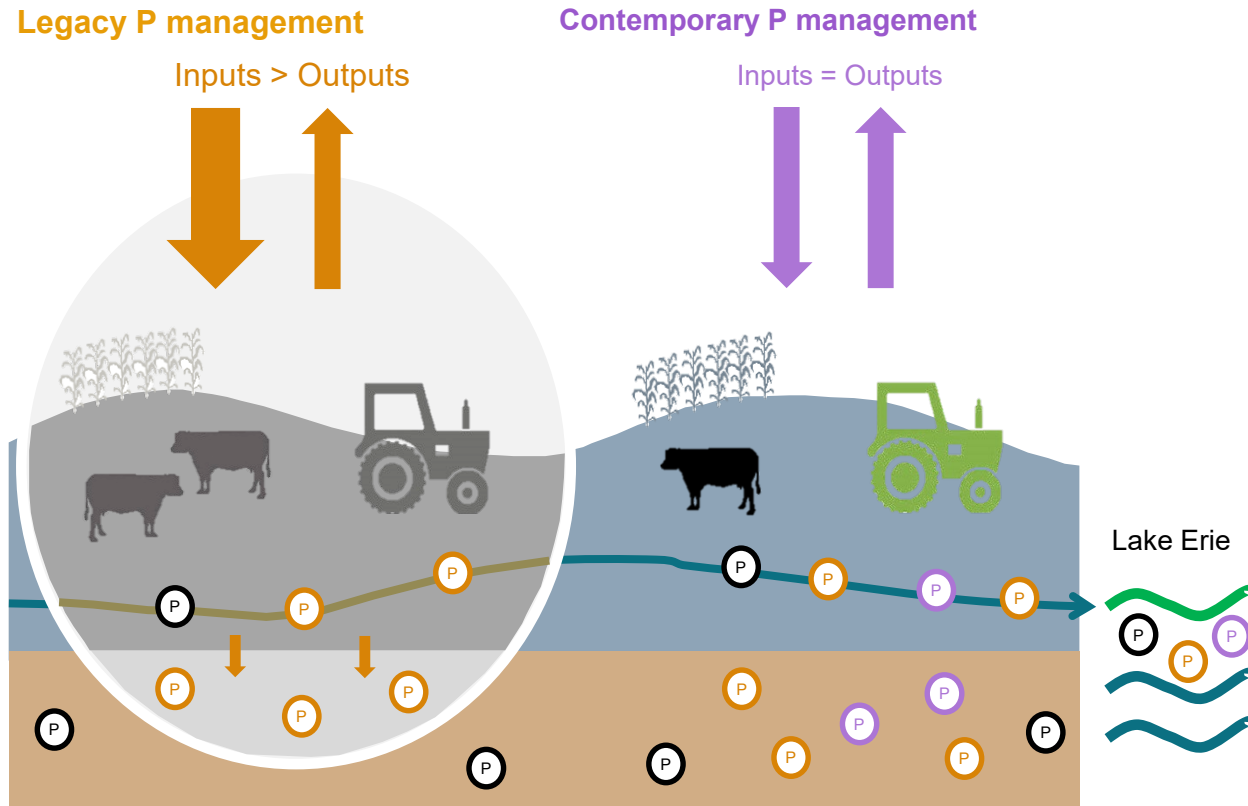
March-July **dissolved P** loads were 30% lower than expected for the flow

Bloom would have been even worse, if based on flow alone.

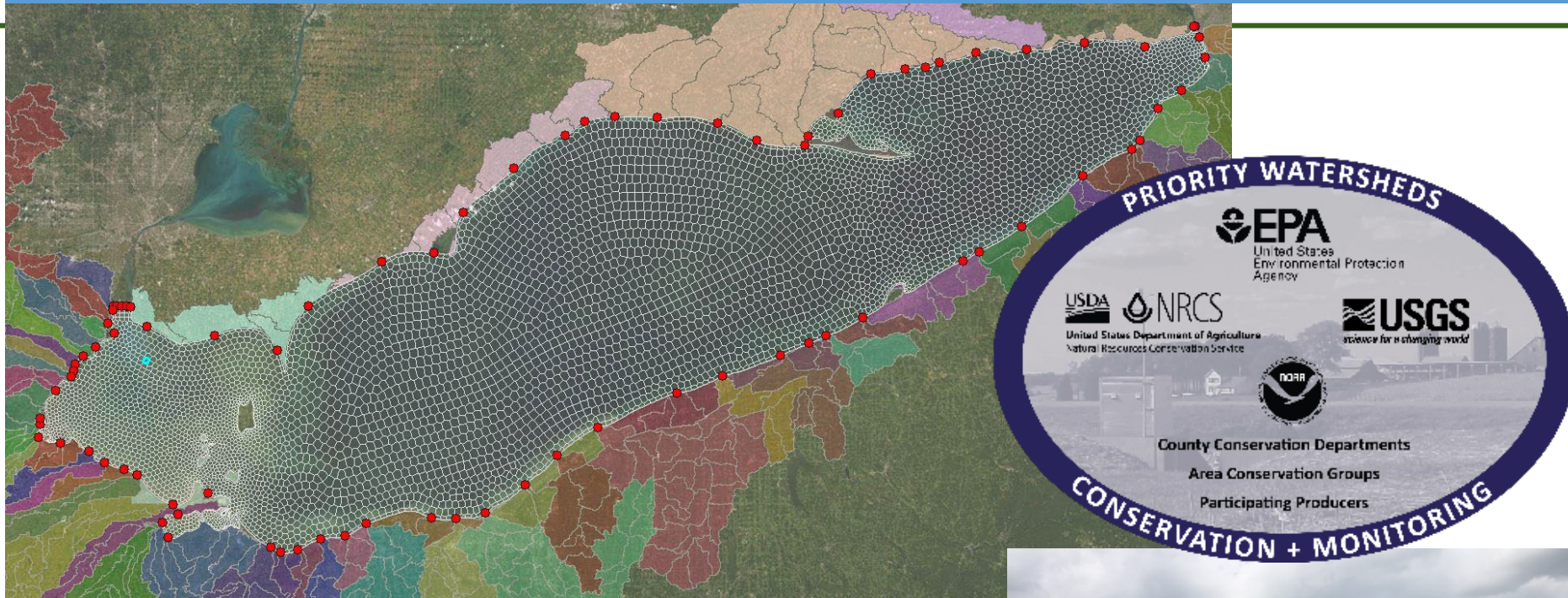
Clearly, present day inputs have a major impact. But so does legacy P.

Legacy Sources: Why They Matter?

- **Legacy P can serve as a chronic source of pollution to surface waters for decades**
- **Untreated sources of legacy P can mask the effects of present-day conservation efforts**
- **P management strategies will vary depending on the primary source of P – legacy vs. contemporary, in-field vs. instream**



Accelerating Progress under Action Plan 3



- Farmer-led outreach projects
- BMP effectiveness studies & demo farms
- Develop new or improved approaches for reducing or preventing HABs



Charge Question 1 and 2

- 1) Please **identify any strategies, using traditional or innovative technologies or methods, to reduce legacy phosphorus within the Lake Erie watershed** (and other Great Lakes and tributaries thereto).
- 2) Balancing the need for the continued production of agricultural commodities in the Great Lakes region, the contribution to excess nutrient loading in Lake Erie associated with agricultural production activities, and the need to significantly reduce the extent and duration of HABs on Lake Erie, **what innovative actions could reasonably be taken to accelerate the reduction of excess nutrients and HABs or duration of HAB events in Lake Erie?** Consider if there are new or different applications of traditional federal funding sources, opportunities to partner with the private sector (including tourism, drinking water systems, and others affected by HABs), or community-driven or market-based approaches to financing water quality improvements.





Open Forum

**OPPORTUNITY FOR MEMBERS TO ASK
QUESTIONS ON THEME'S 1 & 2.**



Great Lakes Advisory Board

Theme 3: GLRI Outreach

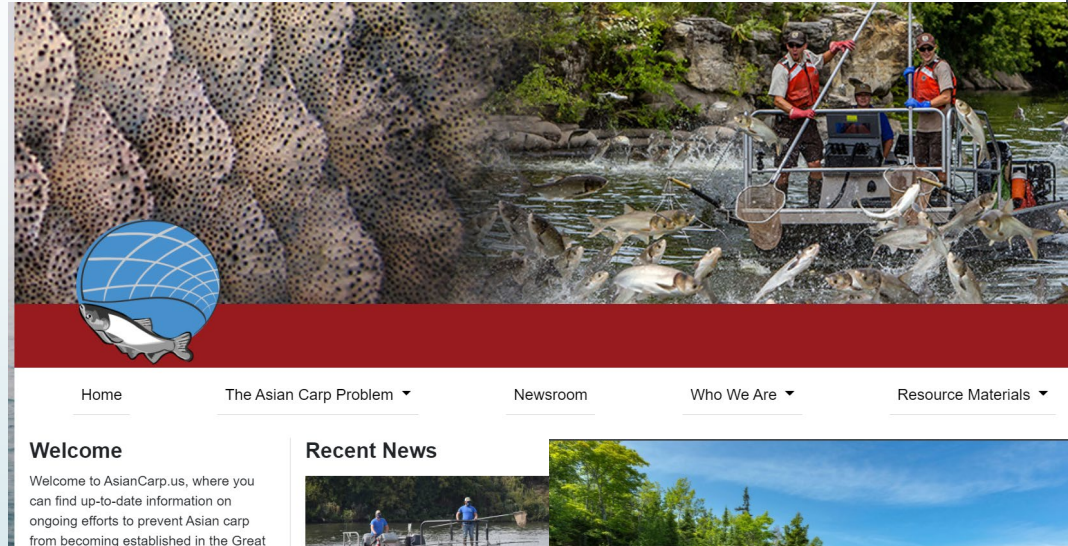
Background Information

Theme 3: Seek Advice and Recommendation on GLRI Outreach

➤ www.Glri.us

➤ www.Binational.net

➤ www.Asiancarp.us



Reports to Congress and the President

Federal agencies report GLRI progress in Reports to Congress and the President. Amended Clean Water Act Section 118(c)(7)(H) requires the EPA Administrator to report on GLRI progress to Committees of the House and Senate.

- [FY2017 GLRI Report to Congress](#)
- [FY2016 GLRI Report to Congress](#)
- [FY2015 GLRI Report to Congress](#)
- [FY2010-FY2014 GLRI Report to Congress](#)
- [FY2012 GLRI Report to Congress](#)
- [FY2011 GLRI Report to Congress](#)
- [FY2010 GLRI Report to Congress](#)



Charge Question 3

How well are EPA and its federal, state and tribal partners communicating the goals, challenges and accomplishments of GLRI? Are there stakeholder groups that could be more effectively communicated with? What additional and/or innovative tools could be used to improve outreach to citizens, elected officials and partners?





Open Forum

**OPPORTUNITY FOR MEMBERS TO ASK
QUESTIONS ON THEME 3.**





Break



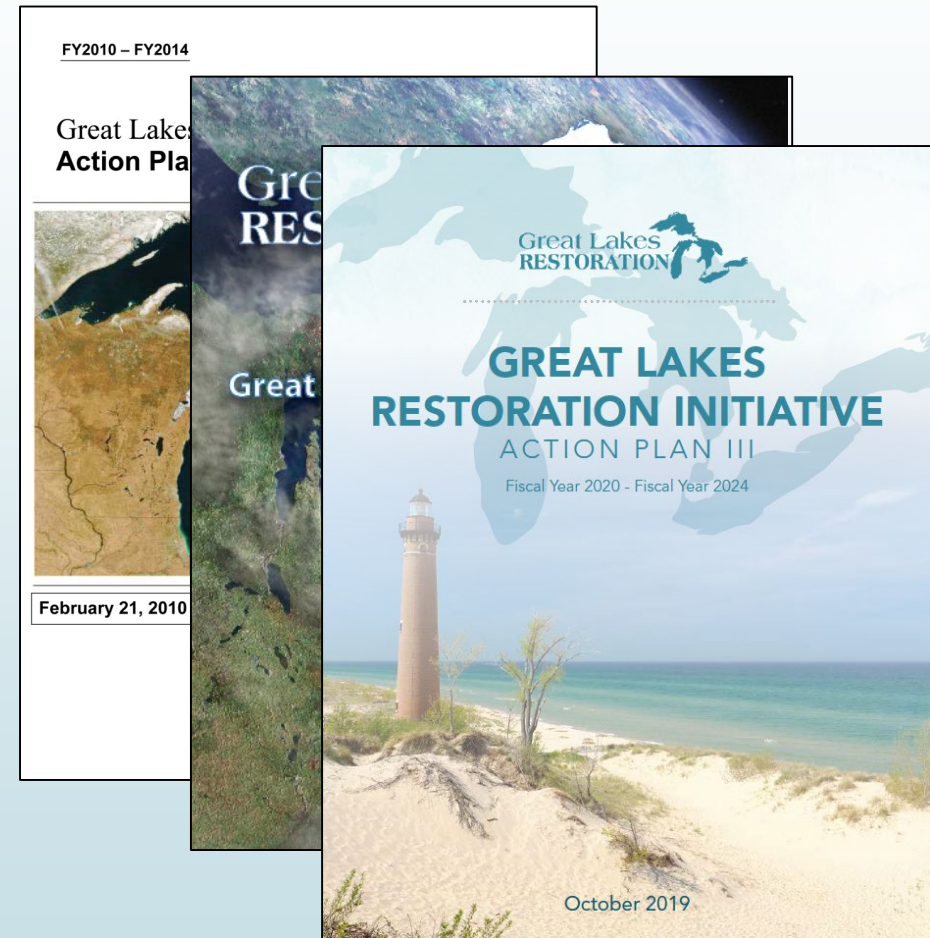


Great Lakes Advisory Board

Theme 4:
Invasive Species
Background
Information

What the GLRI Does and Does Not Do

- Provides significant resources and funding
- Sets aggressive and ambitious annual goals and metrics
- Encourages strong interagency coordination
- ***Does not authorize any new Great Lakes invasive species programs***



Existing Federal Invasive Species Authorities and Programs

- Lacey Act (18 U.S.C. 42)
 - U.S. Fish And Wildlife Service regulates shipment and possession of “injurious” species that may be introduced into the U.S. through human-assisted movements.
 - Regulation of transport and use within a state is the responsibility of the state.

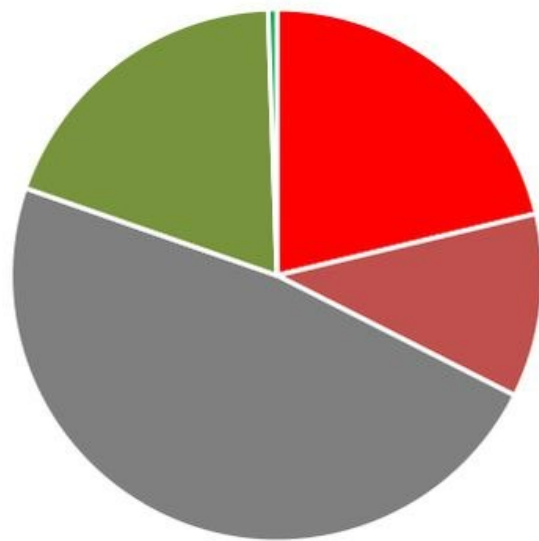
Existing Federal Invasive Species Authorities and Programs

- Nonindigenous Aquatic Nuisance Prevention and Control Act (NANPCA) & National Invasive Species Act (NISA)
 - Section 1201 establishes Aquatic Nuisance Species (ANS) Task Force and Regional Panels.
 - ANS Task Force provides states guidance and annual funding for development and implementation of aquatic nuisance species management plans.

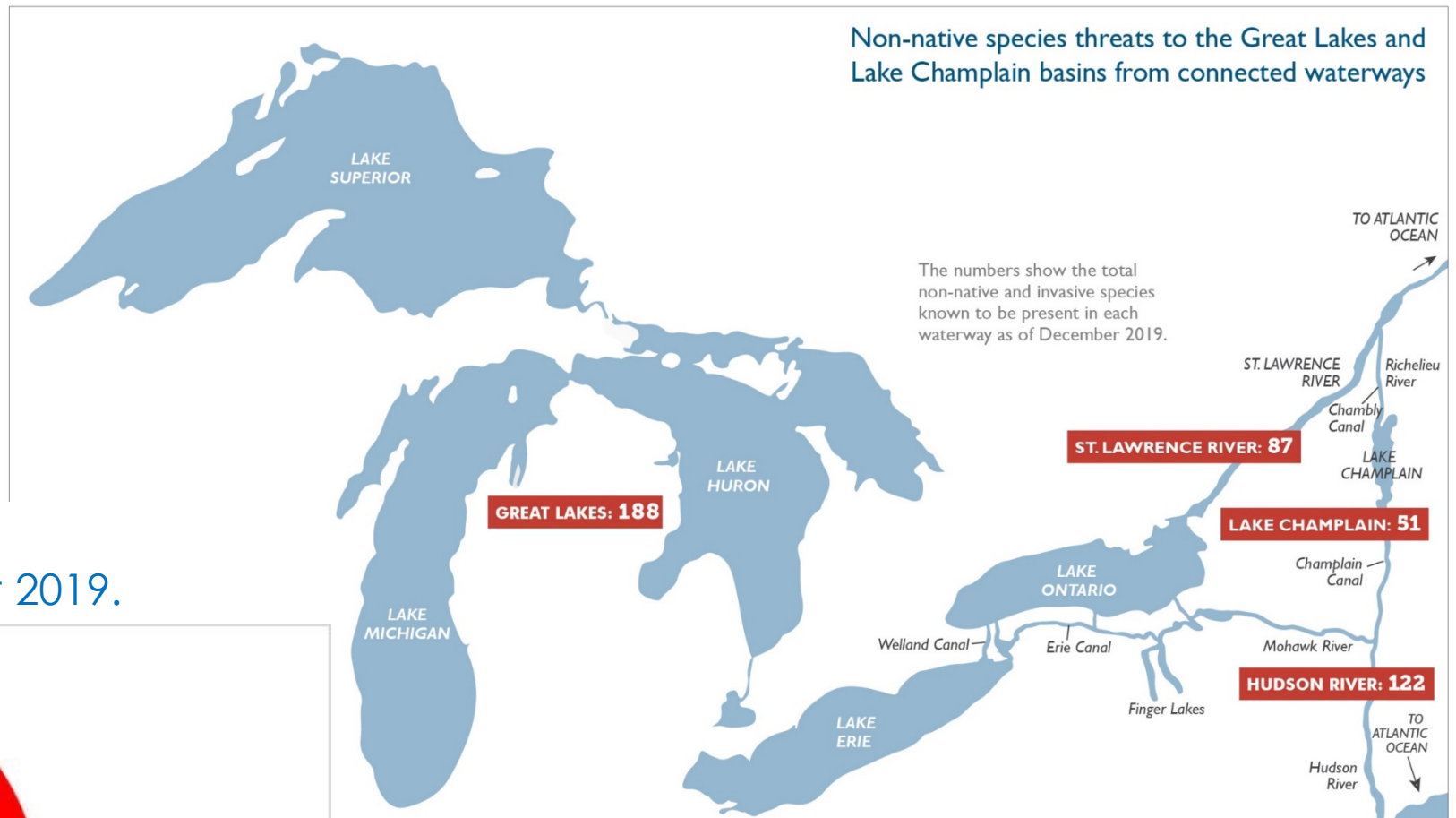
Existing Federal Invasive Species Authorities and Programs

- Great Lakes and Lake Champlain Invasive Species Program (GLLCISP)
 - Section 903 (g) of 2018 Vessel Incidental Discharge Act
 - Established within EPA Great Lakes National Program Office
 - Eight purposes of GLLCISP authorized

Great Lakes Non-native Species Classified by Impact. R. Sturtevant 2019.



■ Invasive
 ■ Invasive + Benefit
 ■ Unknown
 ■ No Impact
 ■ Benefit



GLRI Focus Area 2 Key Issue Areas

- Sustain Asian Carp Action Plan progress
- Maintain early detection and surveillance for non-native species
- Enhance multi-agency ballast water research efforts
- Provide support to state priority invasive projects
- Support construction of the large sea lamprey barriers
- Stand up collaborative and innovative approaches to controlling established species

Charge Question 4

Balancing the need for continued commercial, recreational and other activities on the Great Lakes, what innovative actions could reasonably be taken to accelerate the control of existing invasive species, and what methods or strategies can be deployed to prevent the establishment of future infestations?





Open Forum

**OPPORTUNITY FOR MEMBERS TO ASK
QUESTIONS ON THEME 4.**





Great Lakes Advisory Board

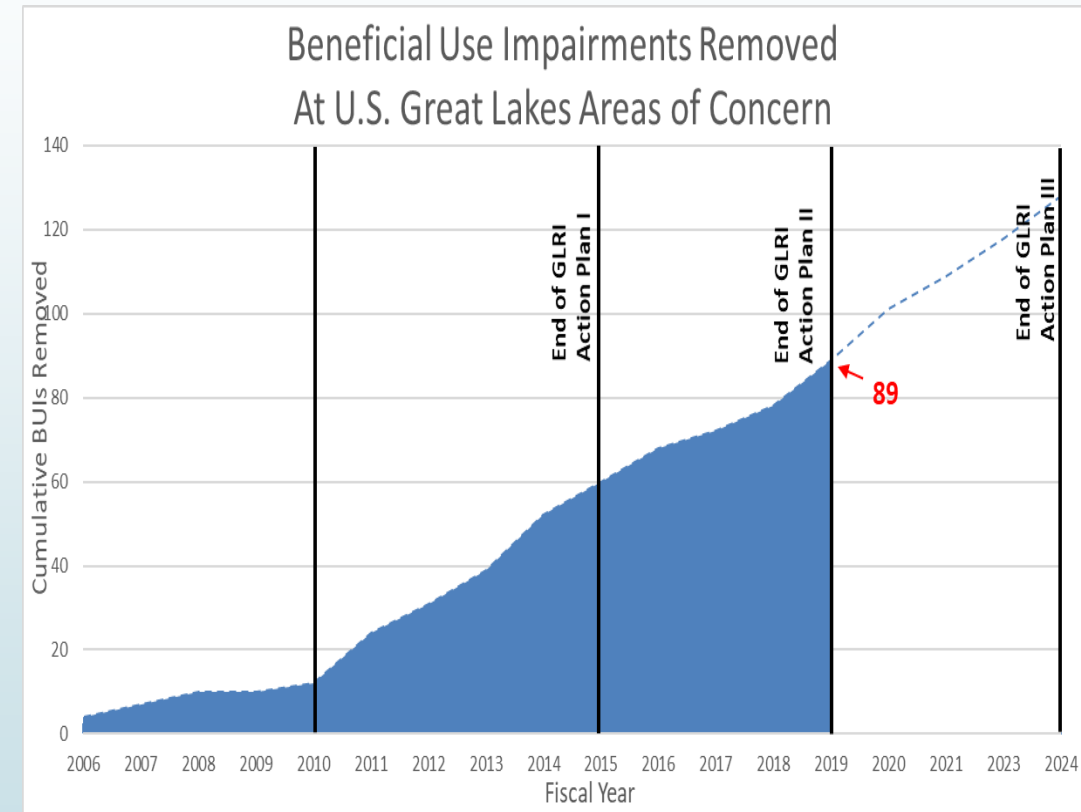
Theme 5: Outcome Based Investments in the Great Lakes

Background Information

GLRI Accomplishments: Focus Area 1

AOCs with all Management Actions
Complete under GLRI

- Presque Isle Bay*
- Sheboygan River
- Ashtabula River
- Deer Lake*
- White Lake*
- Waukegan Harbor
- St. Clair River
- River Raisin
- Lower Menominee River*
- St. Mary's River
- Rochester Embayment
- Manistique River
- Black River
- Eighteenmile Creek



GLRI Accomplishments: Focus Area 2

| GLRI Action Plan II Measures | FY 2016 Results/Targets | FY 2017 Results/Targets | FY 2018 Results/Targets | FY 2019 Preliminary Results/Targets |
|------------------------------|-------------------------|-------------------------|-------------------------|-------------------------------------|
| Rapid Response Exercises | 11/8 | 25/8 | 12/8 | 37/8 |
| Projects Blocking Pathways | 14 | 15 | 28 | 80 |
| Early Detection Activities | 3 | 7 | 24 | 53 |
| Aquatic/Terrestrial Acres | 115,889/ 110,000 | 134,856/ 120,000 | 153,569/ 80,000 | 178,258/ 140,000 |
| Invasive Tributary Miles | 0 | 0 | 69 | 76 |
| Invasive Technologies | 65 | 70 | 92 | 105 |
| Invasive Collaboratives | 4 | 4 | 10 | 16 |

GLRI Accomplishments: Focus Area 3

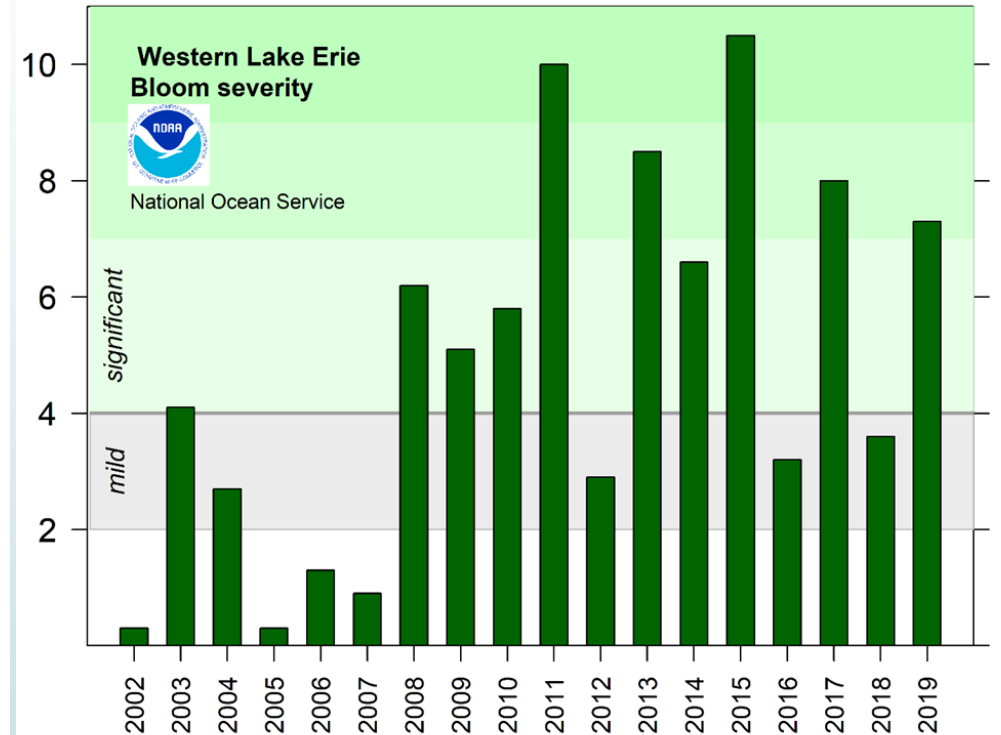
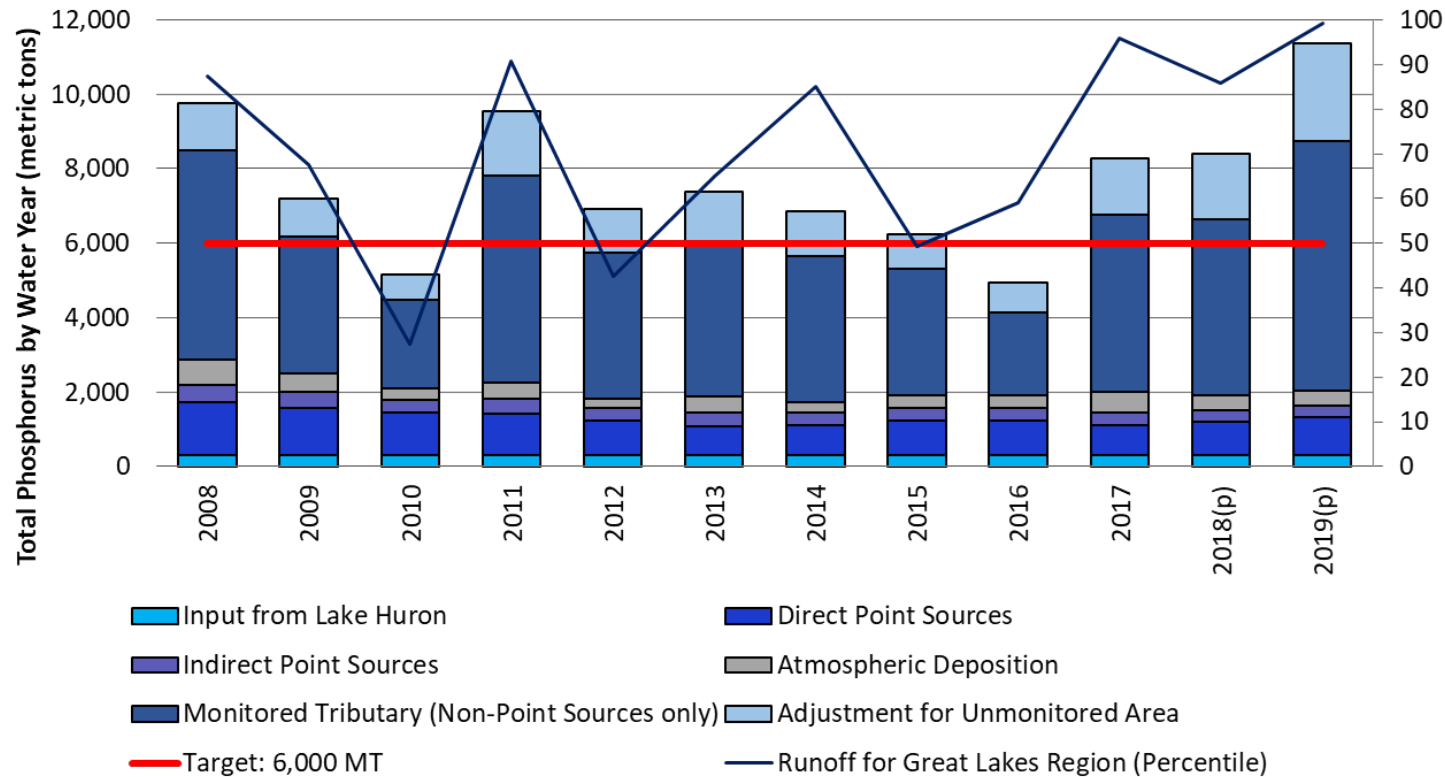
| GLRI Action Plan II Measures | FY 2016 Results/Targets | FY 2017 Results/Targets | FY 2018 Results/Targets | FY 2019 Preliminary Results/Targets |
|--|-------------------------|-------------------------|-------------------------|-------------------------------------|
| Ag. Phosphorus Reduction Projects (lbs.) | 402,943/ 310,000 | 767,864/ 525,000 | 1,113,603/ 795,000 | 1,551,605/ 1,070,000 |
| Nutrient/Sediment Reduction (acres) | 89,211 | 168,545 | 115,519 | 105,241 |
| Nutrient/Sediment Reductions (lbs.) | NA | NA | 138 | 0 |
| Urban Runoff Projected (millions of gallons) | 116/ 70 | 239/ 120 | 252/ 185 | 274/ 250 |
| Urban Runoff Projects | 36 | 36 | 22 | 33 |
| Urban Runoff Captured or Treated | NA | NA | 46,964 | NA |

GLRI Accomplishments: Focus Area 4

| GLRI Action Plan II Measures | FY 2016 Results/Targets | FY 2017 Results/Targets | FY 2018 Results/Targets | FY 2019 Preliminary Results/Targets |
|-----------------------------------|-------------------------|-------------------------|-------------------------|-------------------------------------|
| Habitat Tributary Miles | 4,615/ 4,200 | 4,967/ 4,900 | 5,289/ 3,100 | 5,497/ 5,500 |
| Shoreline Miles | 662/ 350 | 947/ 725 | 1,046/ 225 | 1,477/ 875 |
| Coastal Wetland Acres | 17,540/ 15,000 | 24,306/ 30,000 | 52,755/ 52,000 | 60,531/ 60,000 |
| Other Habitat Acres | 167,218/ 167,000 | 201,663/ 187,000 | 317,733/ 187,000 | 381,205/ 227,000 |
| Federally Listed Species Projects | 17 | 24 | 31 | 50 |
| Self-Sustaining Species Projects | 28 | 23 | 38 | 71 |

Are we moving the needle?

Phosphorus Loads to the Central Basin



Charge Question 5

As we enter the next decade of GLRI funding, what are appropriate annual ecological and community-based outcomes (coupled with appropriate baselines and monitoring) to show that we are making progress in the areas of AOC remediation and delisting, invasive species control and prevention, nutrient reduction, and habitat restoration and protection, such that we can show a good return on investment?



Open Forum

**OPPORTUNITY FOR MEMBERS TO ASK
QUESTIONS ON THEME 5.**



Great Lakes Advisory Board

Theme 6: GLRI's Role in the Vitality and Reinvestment of Great Lakes Communities

Background Information

Great Lakes Revitalization

Socioeconomic Impacts of the Great Lakes Restoration Initiative

University of Michigan Research Seminar in Quantitative Economics

September 30, 2018

GREAT LAKES REVIVAL

How Restoring Polluted Waters Leads to
Rebirth of Great Lakes Communities



IAGLR

What is a Brownfield?

- The **Environmental Protection Agency (EPA)** defines a **brownfield** as "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant".

Revitalization Tools

Brownfield Grant Opportunities:

- Assessment grants
- Revolving Loan Fund (RLF) grants
- Cleanup grants
- Environmental Workforce Development Job Training (EWDJT)
- Multi-Purpose (Assessment and Cleanup) Grants

Brownfield Technical Assistance:

- Targeted Brownfields Assessment (TBA)
- Technical Assistance to Brownfields Communities (TAB)
- State & Tribes with CERCLA 128(a) grants may also provide TBAs to communities when requested
- Technical Assistance
- Land Revitalization

Milwaukee, WI

- City of Milwaukee leveraged Brownfields Cleanup Grant and GLRI for the 400 S Layton site's River Bank Restoration Project.
 - Cleanup included excavation and disposal of contaminated soil, capping, and providing additional public access to the River
 - Re-grading and stabilizing approx. 900 linear ft. of the shoreline of the Menomonee River with native plants and trees.
- Mixed use of funds to achieve = Remediation, Restoration, Revitalization





Created in the 2017 Tax Cuts and Jobs Act, Opportunity Zones are designed to drive long-term capital into economically distressed communities across the nation, using tax incentives to encourage private investment.



In 2018, every State nominated zones. More than 8,700 around the country: 40% rural, 38% urban, and 22% suburban

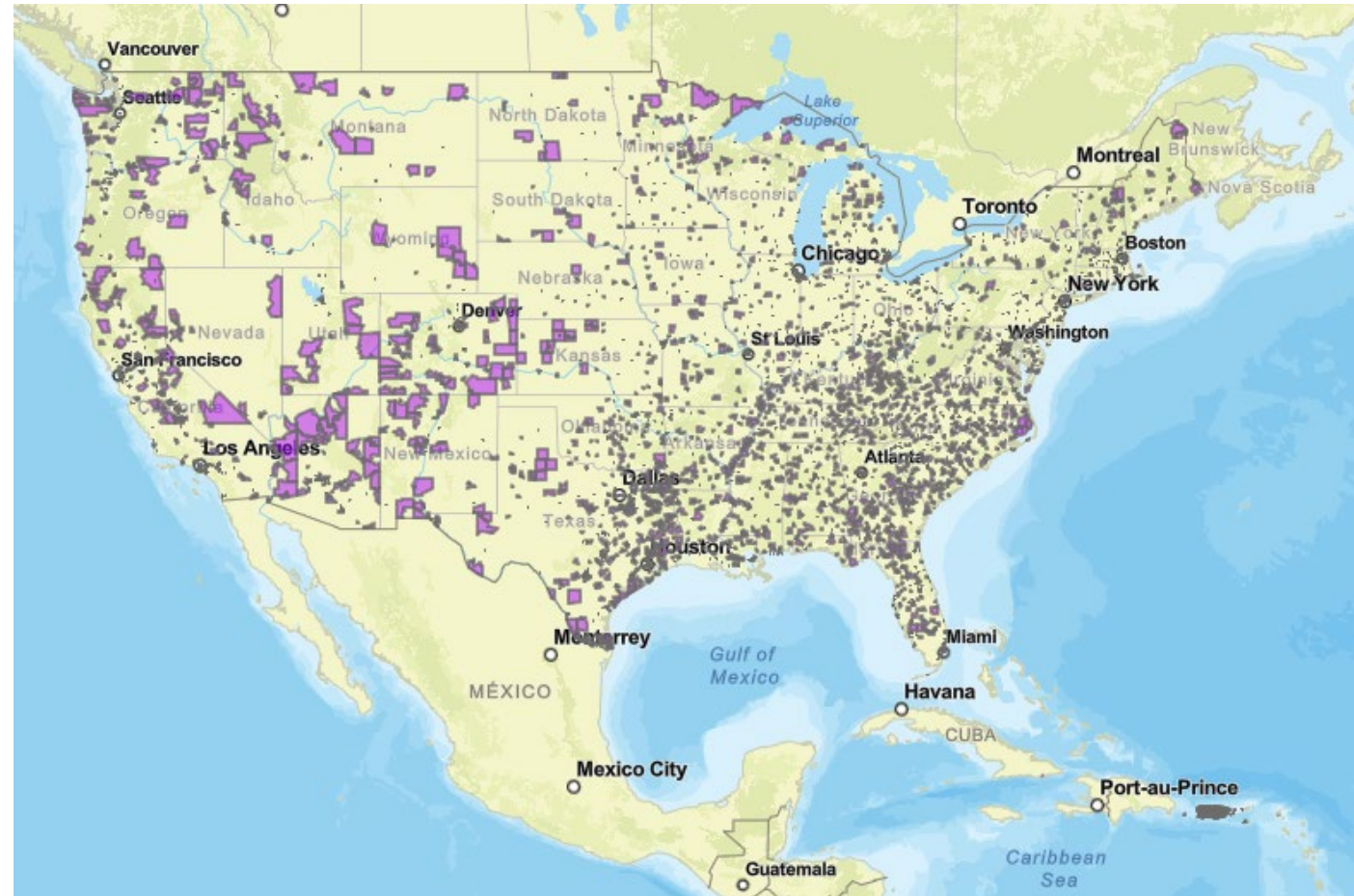


OZ investment happens through IRS qualified Funds where capital gains taxes can be held and used for investment in Opportunity Zones.

What are Opportunity Zones?

Why Do We Care?

- New investor incentive to deal with legacy environmental challenges:
 - States selected Opportunity Zones based upon demographics and revitalization needs
 - Most would be considered EJ
 - Typically overlap with legacy commercial and industry
 - Sites are often centrally located and have existing infrastructure (roads, sewer, electrical, highway, rail) that can be reused or updated



Source: EPA GeoPlatform, July 5, 2019



US EPA Programs Supporting Community Revitalization in Opportunity Zones

The USEPA program assistance listed below represent the best matches for site investment in Opportunity Zones



Land Cleanup

- Brownfields
- Superfund
- Resource Conservation and Recovery Act
- Leaking Underground Storage Tanks



Infrastructure Investment

- WIFIA
- State Revolving Funds - Drinking Water and Clean Water
- Urban Waters
- Sustainable Water Infrastructure



Technical Assistance

- Community Revitalization Workshops (OCR)
- Environmental Justice
- Land Revitalization
- Superfund Redevelopment Initiative



Geographic Initiatives

- Community-Driven Solutions
- Great Lakes Restoration Initiative (R5)
- Chesapeake Bay (R3)
- Puget Sound (R10)



Air Quality & Energy

- Tools for Nonattainment Areas (Redesignation / "Advance")
- Energy Star
- Green Power Partnership

Executive Order on Modernizing America's Water Resource Management and Water Infrastructure

October 13, 2020

- Sec. 3. Interagency Water Subcabinet.
 - promote efficient and effective coordination across agencies engaged in water-related matters,
 - prioritize actions to modernize and safeguard our water resources and infrastructure,
 - co-chaired by the Secretary of the Interior and the Administrator of the Environmental Protection Agency, and
 - include the Secretary of Agriculture, the Secretary of Commerce, the Secretary of Energy, the Secretary of the Army, and the heads of such other agencies as the Co-Chairs deem appropriate.

Charge Question 6

- How can GLRI projects and funding be further leveraged across Federal agencies and programs, including Opportunity Zones and Brownfields, to maximize environmental and economic benefits to Great Lakes communities?



Open Forum

**OPPORTUNITY FOR MEMBERS TO ASK
QUESTIONS ON THEME 6.**



GLAB Member Discussion



Public Comments



Next Steps and Action Items



6 CHARGE QUESTIONS / THEMES – 3 WORKGROUPS

Discussion Platform

Grouping the 6 Charge Questions

- Nutrients Workgroup (1 & 2)
 - Theme 1: Seek Advice and Recommendations on Innovative Strategies to Address Legacy Phosphorus
 - Theme 2: Seek Advice and Recommendation on Managing Excess Nutrients
- GLRI Workgroup (3, 5 & 6)
 - Theme 3: Seek Advice and Recommendation on GLRI Outreach
 - Theme 5: Outcome Based Investments in the Great Lakes
 - Theme 6: GLRI's Role in the Vitality and Reinvestment of Great Lakes Communities
- Invasive Species Workgroup (4)
 - Theme 4: Seek Advice and Recommendation on Invasive Species

Meeting Adjourn

