NEORSD 2021: Protecting Public Health & Water Quality
At a glance

- 355 sq. mile service area
- Sanitary and regional stormwater services
- Serving Cleveland and 61 communities
- Water quality monitoring
- Lake Erie beach monitoring, maintenance
Programs and progress

- 3 plants
- 90 billion gal/yr
- Certified lab
- $3 billion, 25 years
- CSO control
- Sewer fees
- $43 million annually
- Flooding & erosion
- Impervious surface fee
Project Clean Lake: Reducing CSO Activations

- Baseline (1970s): 0 to 80 Overflows, 82% Capture
- CD Entry (2011): 0 to 4 Overflows, 98% Capture
- Target (2036): 0 to 4 Overflows, 98% Capture
Project Clean Lake: Progress

- 66 Projects Completed or Active
- $1.51 B spent or awarded to date
  - $1.21 B (2009$)
- $429 M (2009$) in realized Value Engineering savings
- ≈1 BG in annual CSO reduction to date and ≈1.5 BG within next 3 years
Better solutions for collection system, Southerly, and Westerly
$91 M savings, improved plant operations and water quality
Filed with US District Court in early 2021.
Response to comments underway.
Discussions continue in Easterly district
Project Clean Lake: Recent Accomplishments

- 2019: Activated the Dugway Storage Tunnel (376 MG/year CSO control)
- 2019: Completed Green Infrastructure projects
- 2020: Commenced Westerly Tunnel Dewatering Pump Station
Westerly Tunnel Dewatering Pump Station

Northeast Ohio Regional Sewer District
Project Clean Lake: Looking ahead

- 2021: Activation of Doan Valley Tunnel (348 MG/yr CSO control)
- 2021: Commence construction of Shoreline Tunnel System (370 MG/yr CSO control)
- 2021: Commence design of Southerly Tunnel System (est. 750 MG/year CSO control)
➢ 1,000 feet of stream stabilization with 100-year floodplain connectivity
➢ 66 trees and 6,000+ live stakes
➢ $2.45 million Total Project Cost
# Green Infrastructure Grant
For the Combined Sewer Area Program

<table>
<thead>
<tr>
<th>Funding Round</th>
<th>Award Recommendations Total</th>
<th>Runoff Reduction gallons/year Total</th>
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<tbody>
<tr>
<td>2014 GREEN INFRASTRUCTURE GRANT PROGRAM</td>
<td>$1,746,274</td>
<td>7,138,890</td>
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<td>2016 GREEN INFRASTRUCTURE GRANT PROGRAM</td>
<td>$1,974,747</td>
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<td>2018 GREEN INFRASTRUCTURE GRANT PROGRAM</td>
<td>$799,130</td>
<td>1,730,688</td>
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<td>2019 GREEN INFRASTRUCTURE GRANT PROGRAM</td>
<td>$1,908,361</td>
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<td>2020 GREEN INFRASTRUCTURE GRANT PROGRAM</td>
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<td>2021 GREEN INFRASTRUCTURE GRANT PROGRAM</td>
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<td><strong>GRAND TOTAL</strong></td>
<td><strong>$8,827,453</strong></td>
<td><strong>27,281,957</strong></td>
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</table>
Treatment Train to Community Development Green Infrastructure Project - 2019 Award - $229,274
Permeable Pavers & Bioretention - Completed
Member Community Infrastructure Program

Helping local governments address chronic infrastructure issues
## 2021 Member Community Infrastructure Program
### 7 Awarded Projects

<table>
<thead>
<tr>
<th>APPLICANT</th>
<th>PROJECT TITLE</th>
<th>DESIGN &amp; CONSTRUCTION REQUEST</th>
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<tbody>
<tr>
<td>South Euclid</td>
<td>Oakmount Road Infrastructure Improvement Project</td>
<td>$365,973.00</td>
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<tr>
<td>Maple Heights</td>
<td>Maple Heights Manhole Sewer Separation Project - Phase 2 (Northeast Quadrant)</td>
<td>$1,021,887.00</td>
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<td>Lorain County Commissioners</td>
<td>Westview I &amp; I Remediation</td>
<td>$359,300.00</td>
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<tr>
<td>East Cleveland</td>
<td>Wheeler Avenue Sanitary Sewer Improvement Study and Design</td>
<td>$302,340.00</td>
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<tr>
<td>Shaker Heights</td>
<td>Lynnfield &amp; Lomond SSO 11 Control Project</td>
<td>$112,500.00</td>
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<tr>
<td>Parma</td>
<td>Krueger Avenue Area Sewer Improvements</td>
<td>$260,000.00</td>
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<tr>
<td>Parma</td>
<td>Green Acres Area Sewer Improvement Project</td>
<td>$78,000.00</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>$1,747,160.00</strong></td>
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</tbody>
</table>

**TOTAL** $752,840.00
2017 Projects

- **Berea** - $735K
  Sewer Capacity – Common Trench I/I

- **Cleveland** - $1M
  Sewer Capacity – Common Trench I/I

- **Olmsted Twp** - $500K
  53 HSTSs

- **Olmsted Falls** - $600K
  225 HSTSs

- **Strongsville** - $617K
  94 HSTSs

- **Parma** - $250K
  49 HSTSs

- **Parma** - $340K
  54 HSTSs

- **Newburgh Hts** - $717K
  Sewer Capacity – Common Trench I/I

- **Strongsville** - $617K
  94 HSTSs

- **Garfield Hts** - $717K
  Sewer Separation

- **South Euclid** - $300K
  Sewer Capacity – Common Trench I/I

- **Seven Hills** - $1M
  300 HSTSs

- **Lyndhurst** - $250K
  I/I

- **Lyndhurst** - $600K
  225 HSTSs

- **Newburgh Hts** - $400K
  Sewer Separation

- **Parma** - $340K
  54 HSTSs

- **Newburgh Hts** - $717K
  Sewer Capacity – Common Trench I/I

- **South Euclid** - $300K
  Sewer Capacity – Common Trench I/I
2018 Projects

- **Shaker Hts** - $400K
- **Parma** - $160K
- **Garfield Hts** - $1M
- **Newburgh Hts** - $178K
- **Maple Hts** - $154K
- **South Euclid** - $230K
- **Lyndhurst** - $182K
- **Mayfield Village** - $750K
- **Richfield** - $892K
- **South Euclid** - $230K (Manhole Separate – Common Trench)
- **Garfield Hts** - $1M (Sewer Capacity – Common Trench I/I)
- **Newburgh Hts** - $178K (Sewer Separation)
- **Maple Hts** - $154K (Sewer Capacity)
- **Richfield** - $892K (325 HSTSs)
- **Shaker Hts** - $400K (SSOs)
- **Parma** - $160K (17 HSTSs)
- **Lyndhurst** - $182K (I/I)
- **Mayfield Village** - $750K (60 HSTSs)
- **South Euclid** - $230K (I/I)

Northeast Ohio Regional Sewer District
2019 Projects

- **Shaker Hts** - $425K SSOs
- **Parma** - $480K (40 HSTSs)
- **Garfield Hts** - $686K (Sewer Capacity – Common Trench I/I)
- **Newburgh Hts** - $291K (Sewer Separation)
- **Pepper Pike** - $838K (62 HSTSs)
- **Olmsted Falls & Twp** - $1.09M (156 HSTSs)
- **Cuyahoga Hts** - $303K (Sewer Separation)
- **Parma Hts** - $260K (50 HSTSs)
- **Walton Hills** - $321K (Force Main Replacement)
- **Maple Hts** - $600K (Sewer Capacity – Common Trench I/I)
- **Brecksville** - $1.5M (75 HSTSs)
- **CCDPW** - $127K (85 HSTSs, Decommissioning)
- **Parma** - $1M (Sewer Capacity)
- **Parma** - $480K (40 HSTSs)

Northeast Ohio Regional Sewer District
2021 Projects

2021 MCIP Recommendations

- **Design & Construction project**
  - **East Cleveland**
    - Wheeler Avenue Sanitary Sewer Improvement Study
      - $302,000.00
  - **Shaker Heights**
    - Lynnfield & Lomond SSO 11 Control Project
      - $113,000.00
  - **Parma**
    - Krueger Avenue Area Sewer Improvements
      - $260,000.00
  - **Lorain County Commissioners**
    - Westview I & I Remediation
      - $359,000.00
  - **Maple Heights**
    - Maple Heights Manhole Sewer Separation Project
      - $1,022,000.00
  - **Parma**
    - Green Acres Area Sewer Improvement Project
      - $78,000.00

- **Design Only project**
  - **South Euclid**
    - Oakmount Infrastructure Improvement Project
      - $366,000.00

Northeast Ohio Regional Sewer District
<table>
<thead>
<tr>
<th>MCIP Year</th>
<th>Basement Flooding Remediation</th>
<th>Reduced Impact on SSO/CSO</th>
<th>Removal of WWTP</th>
<th>HSTS Removal</th>
<th>Linear Feet of New Collection System</th>
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<tbody>
<tr>
<td>2017</td>
<td>427</td>
<td>3</td>
<td></td>
<td>779</td>
<td>67,855</td>
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<tr>
<td>2018</td>
<td>39</td>
<td>2</td>
<td>1</td>
<td>402</td>
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<td>2019</td>
<td>659</td>
<td>3</td>
<td>2</td>
<td>232</td>
<td>34,147</td>
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<tr>
<td>2020</td>
<td>149</td>
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<td>20,276</td>
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<td>2021</td>
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<td>1</td>
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<td>20,591</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1,606</strong></td>
<td><strong>11</strong></td>
<td><strong>3</strong></td>
<td><strong>1,595</strong></td>
<td><strong>160,999</strong></td>
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Doing great work for a Great Lake
Great Lakes Advisory Board (GLAB) March 1\textsuperscript{st}, 2021.
Great Lakes Advisory Board - Charter

The Advisory Board will provide advice and recommendations on matters related to: a. the Great Lakes Restoration Initiative; and b. the domestic implementation of the Great Lakes Water Quality Agreement between the U.S. and Canada.

Description of Duties: The duties of the Advisory Board are solely to provide advice and recommendations to the EPA Administrator through the Great Lakes National Program Manager. In response to specific requests (i.e., charge questions) from the Agency, the Advisory Board will provide advice and recommendations on:

a. Great Lakes protection and restoration activities.

b. Long term goals, objectives and priorities for Great Lakes protection and restoration.

c. Other issues identified by the Great Lakes Interagency Task Force/Regional Working Group.

Agency or Official to Whom the Committee Reports: The Advisory Board will provide advice and recommendations, and report to the EPA Administrator through the Region 5 Administrator in their capacity as the Great Lakes National Program Manager.
Current GLAB Members

- **Co-Chair: Stephen Galarneau**, Director of the Office of Great Waters – Great Lakes & Mississippi River, Wisconsin Department of Natural Resources
- **Co-Chair: Kyle Dreyfuss-Wells**, Chief Executive Officer, Northeast Ohio Regional Sewer District
- **Scudder Mackey**, Chief of the Office of Coastal Management, Ohio Department of Natural Resources
- **James Williams Jr.**, Tribal Chairman, Lac Vieux Desert Band of Lake Superior Chippewa Indians
- **Jeff Stollenwerk**, Director of Government and Environmental Affairs, Duluth Seaway Port Authority
- **John Hull**, Founder and Chairman, Hull & Associates Inc.
- **Lisa Frede**, Director of Regulatory Affairs, Chemical Industry Council of Illinois
- **Larry Antosch**, Senior Director, Ohio Farm Bureau Federation
- **Kay Nelson**, Director of Environmental Affairs, Northwest Indiana Forum
- **J. Val Klump**, Dean and Professor of the School of Freshwater Sciences, University of Wisconsin - Milwaukee
- **Alan Steinman**, Director of Annis Water Resources Institute, Grand Valley State University
- **Brian Miller**, Retired, Illinois-Indiana Sea Grant and Illinois Water Resources Center
- **Sylvia Orduño**, Organizer, Michigan Welfare Rights Organization
Great Lakes Advisory Board

Theme 1: Legacy Phosphorus
Theme 2: Excess Nutrients
1) 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.
Great Lakes Advisory Board

Theme 3: GLRI Outreach
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?
Great Lakes Advisory Board

Theme 4: Invasive Species
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?
Great Lakes Advisory Board

Theme 5: Outcome Based Investments in the Great Lakes
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?
Great Lakes Advisory Board

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