

Lake Erie Direct Tributaries Watershed

-  Regional Stormwater System in NEORSR Service Area
-  Regional Stormwater System not in NEORSR Service Area
-  Service Area
-  Community
-  District Culverted Stream

 **Northeast Ohio
Regional Sewer District**

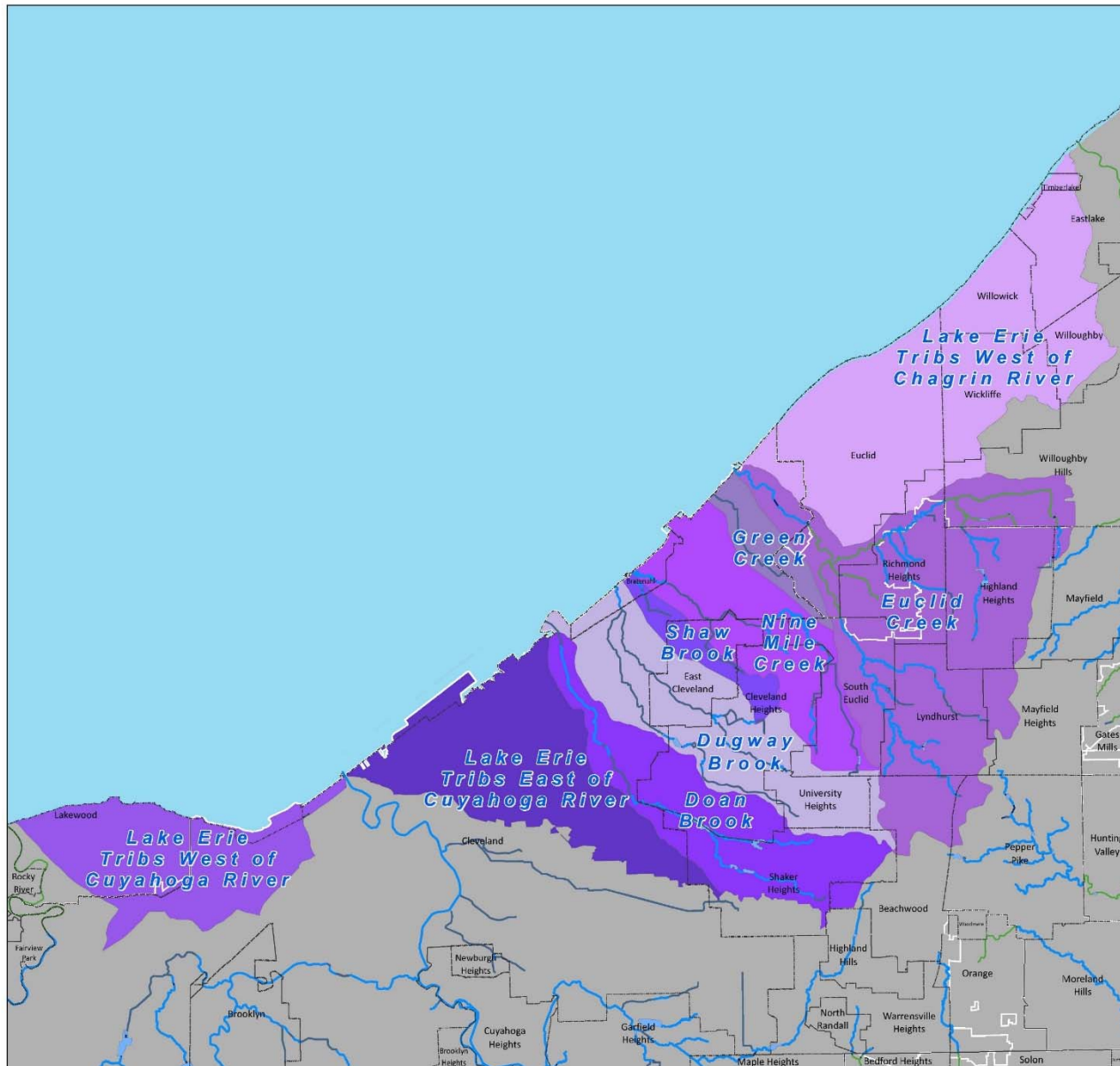
Coordinate System : Ohio State Plane North
Datum: NAD 1983 , NAVD 1988
Projection: Lambert Conformal Conic
Sources: NEORSR GIS

Map Created: March 2017

1:57,425



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NORTHEAST OHIO REGIONAL SEWER DISTRICT



REGIONAL
STORMWATER
MANAGEMENT
PROGRAM

Regional Stormwater Management Program

Watershed Advisory Committee

March 2017



Your Sewer District Keeping our Great Lake great.



Agenda

- Welcome
- Stormwater Construction Plan
- Stormwater Master Plans
- Stormwater Inspection and Maintenance
- Program Update
 - Community Cost-Share: Policy Update
 - Phase II Services
 - SW Management Plan Reviews – common Comments/issues



Stormwater Construction Plan 2016-2017









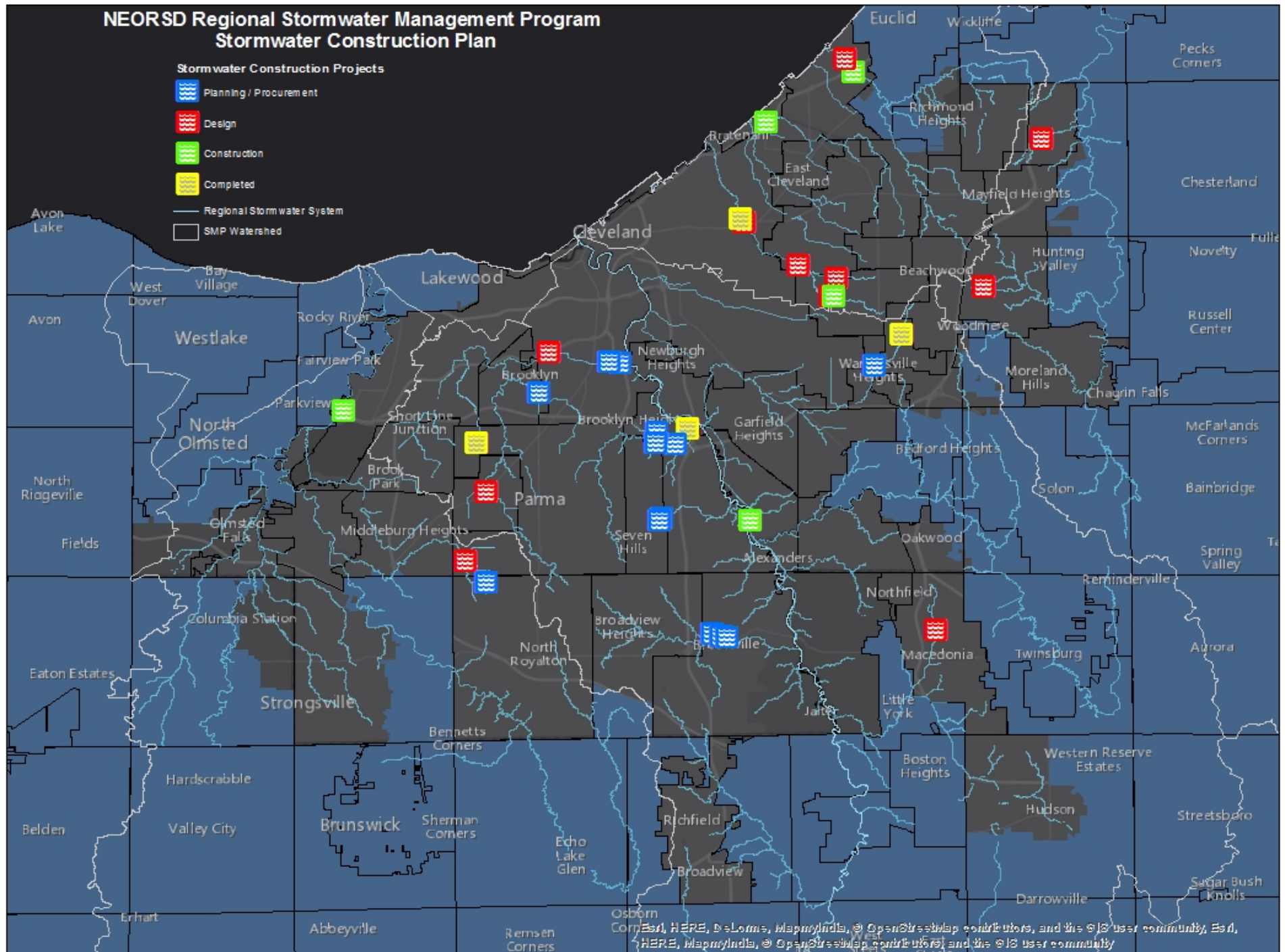
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NEORSD Regional Stormwater Management Program Stormwater Construction Plan

Stormwater Construction Projects

-  Planning / Procurement
-  Design
-  Construction
-  Completed
-  Regional Stormwater System
-  SMP Watershed





STORMWATER CONSTRUCTION PLAN

Stormwater Construction Plan 2017-2018



Please note, this is current as of the indicated date. This schedule will undoubtedly change. Please contact your Watershed Team Leader for the most current schedule for any particular project.

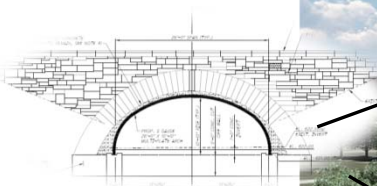
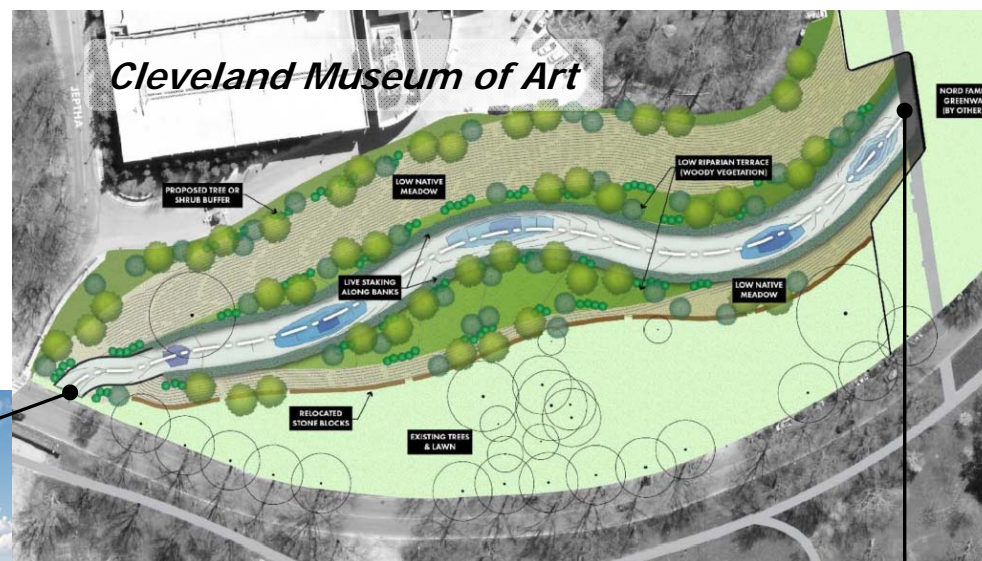
Doan Brook Bank Stabilization

Construction commencing: Summer 2018

Est. Construction Cost: \$3.8 M

Project Elements

- 850 LF Stream Restoration
- Bank Stabilization
- Reconnecting to the Floodplain



*City of Cleveland
MLK over Doan Bk
Bridge Restoration*



*Nord Family
Greenway
Project*

Shaw Brook Culvert Rehabilitation



Est. Completion Date: June 2017

Construction Cost: \$945,200

Project Elements

Replacement and rehabilitation of 525 linear ft. of 10 ft. diameter corrugated steel culvert.



Euclid Creek Concrete Channel Repair



Est. Completion Date: April 2017

Construction Cost: \$362,000

Project Elements

Replacement/rehabilitation of sections of concrete lined channel sides and bottoms that have failed along the river-right immediately downstream of the Euclid Creek spillway



Green Lake Dredging



Completion Date: Summer 2017

Construction Cost: \$1.53 M

Project Elements

- 25,000 CY sediment removal
- Installation of larger forebay



Shaker Lakes Dam Rehabilitation



DAM SAFETY INSPECTION REPORT

City Of Shaker Heights Dam
File Number: 1314-006
Class II

Cuyahoga County, City Of Shaker Heights
Inspection Date: September 30, 2014



In accordance with Ohio Revised Code Section 1521.062, the owners of dams must monitor, maintain, and operate their dams safely. Negligence of owners in fulfilling these responsibilities can lead to the development of extremely hazardous conditions to downstream residents and properties. In the event of a dam failure, owners can be subject to liability claims.

The Chief of the Division of Soil and Water Resources has the responsibility to ensure that human life, health, and property are protected from the failure of dams. Conducting periodic safety inspections and working with dam owners to maintain and improve the overall condition of Ohio dams are vital aspects of achieving this purpose.

Representatives of the Chief conducted this inspection to evaluate the condition of the dam and its appurtenances under authority of Ohio Revised Code Section 1521.062. In accordance with Ohio Administrative Code Rule 1501:21-21-03, the owners of dams must implement all remedial measures listed in the enclosed report.

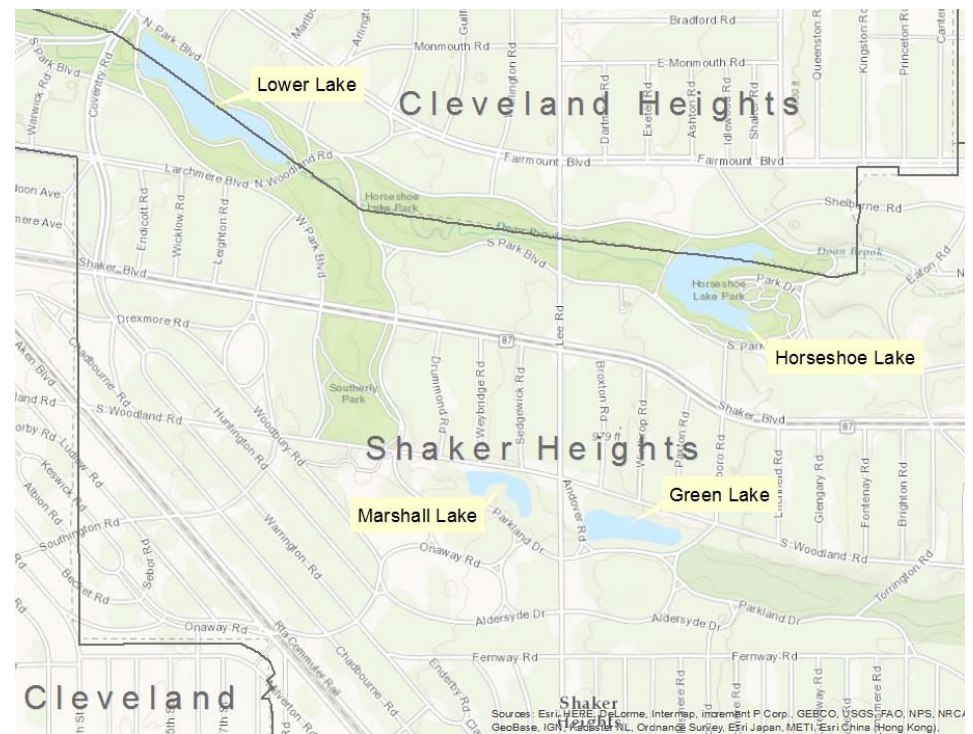
Division of Soil and Water Resources • 2045 Morse Road, Suite 500 • Columbus, Ohio 43229-6693
In July 2010, the Ohio Department of Natural Resources, Division of Water, was merged with the Division of Soil and Water to form the Division of Soil and Water Resources.

Completion Date: Summer 2018

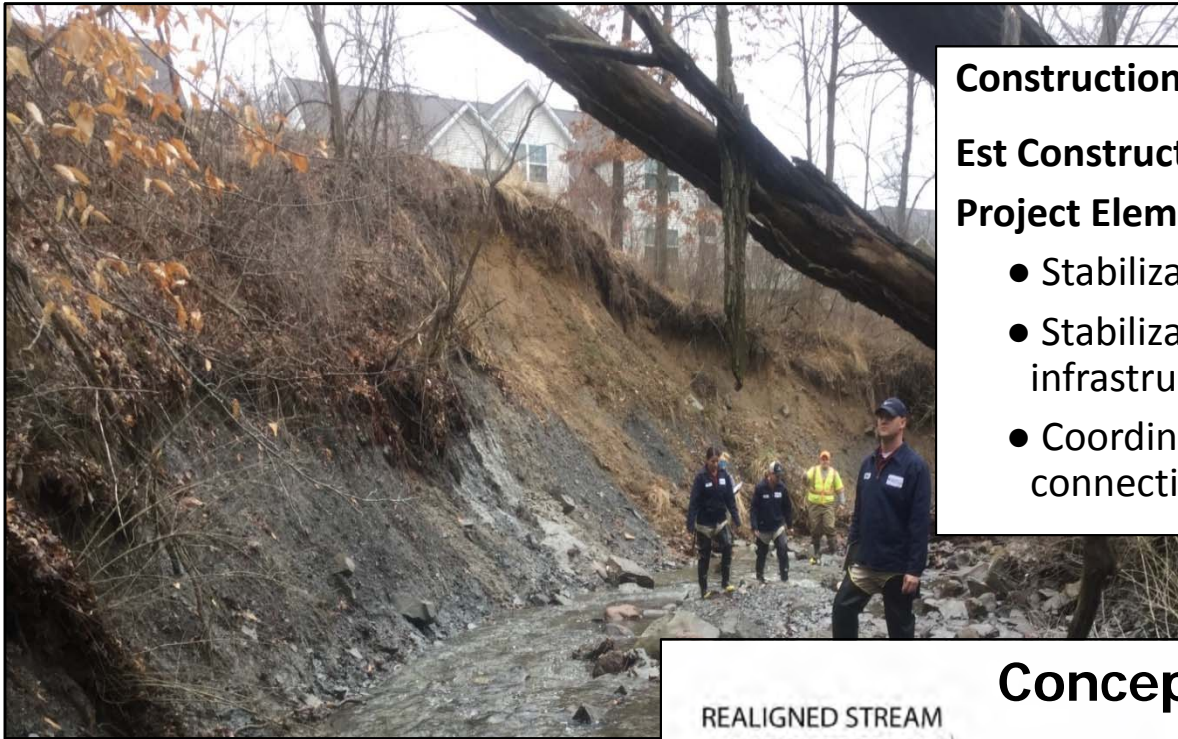
Construction Cost: \$3.4 M

Project Elements

Bring 2 dams into ODNR Compliance



Beechers Brook Bank Stabilization



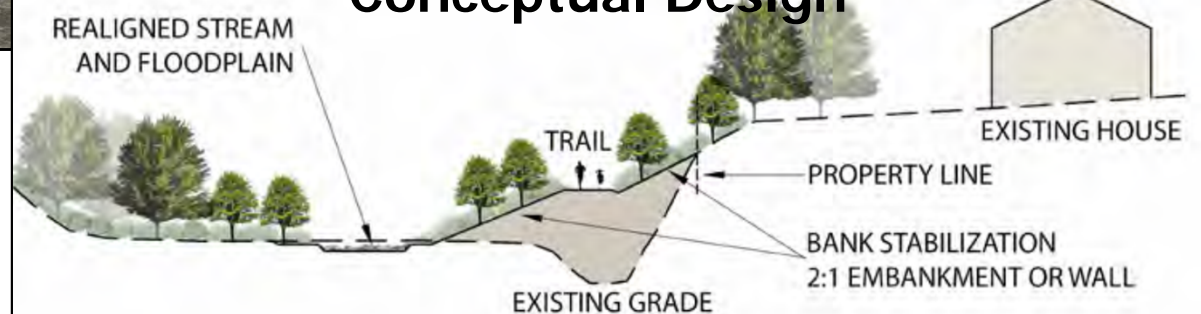
Construction Commencing: Spring 2018

Est Construction Cost: \$1,900,000

Project Elements:

- Stabilization of eroded hillside slope
- Stabilization of stream bed for protection of infrastructure
- Coordination with Mayfield Village on trail connection

Conceptual Design



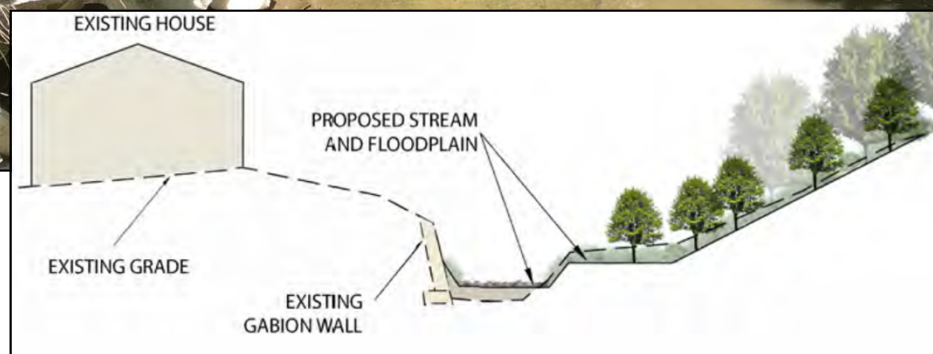
Pepper Creek Bank Stabilization

Construction Commencing: Summer 2018

Est Construction Cost: \$800,000

Project Elements:

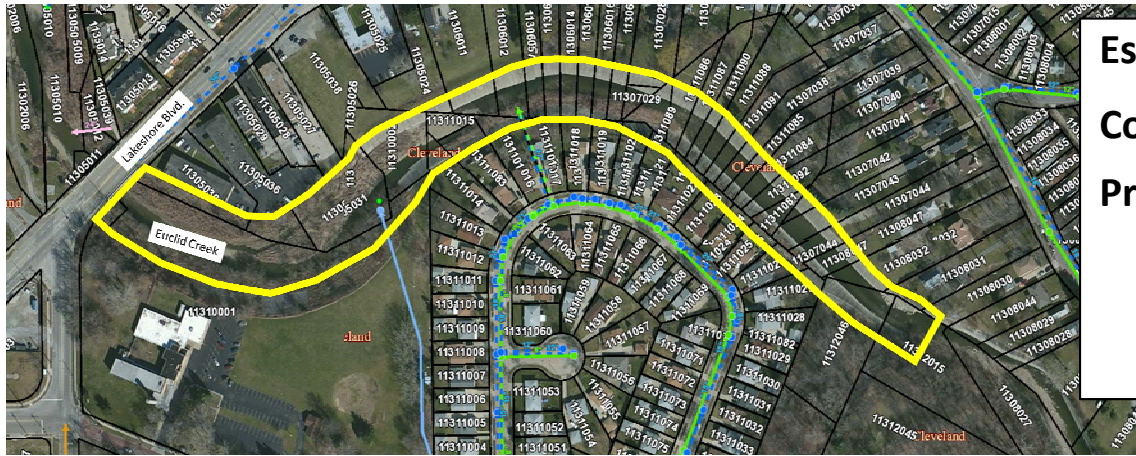
- Stabilization of eroded bank to protect infrastructure
- Floodplain and riparian enhancement



Potential Floodplain
Expansion Area



Euclid Creek Flood Control Channel Shoaling Removal



Est. Completion Date: Fall 2017

Construction Cost: \$500,000

Project Elements

- Remove sediment, vegetation, debris etc. to a depth of 24 inches
- Project length approximately 2,600 LF





Sioux Lane Culvert Replacement, Macedonia

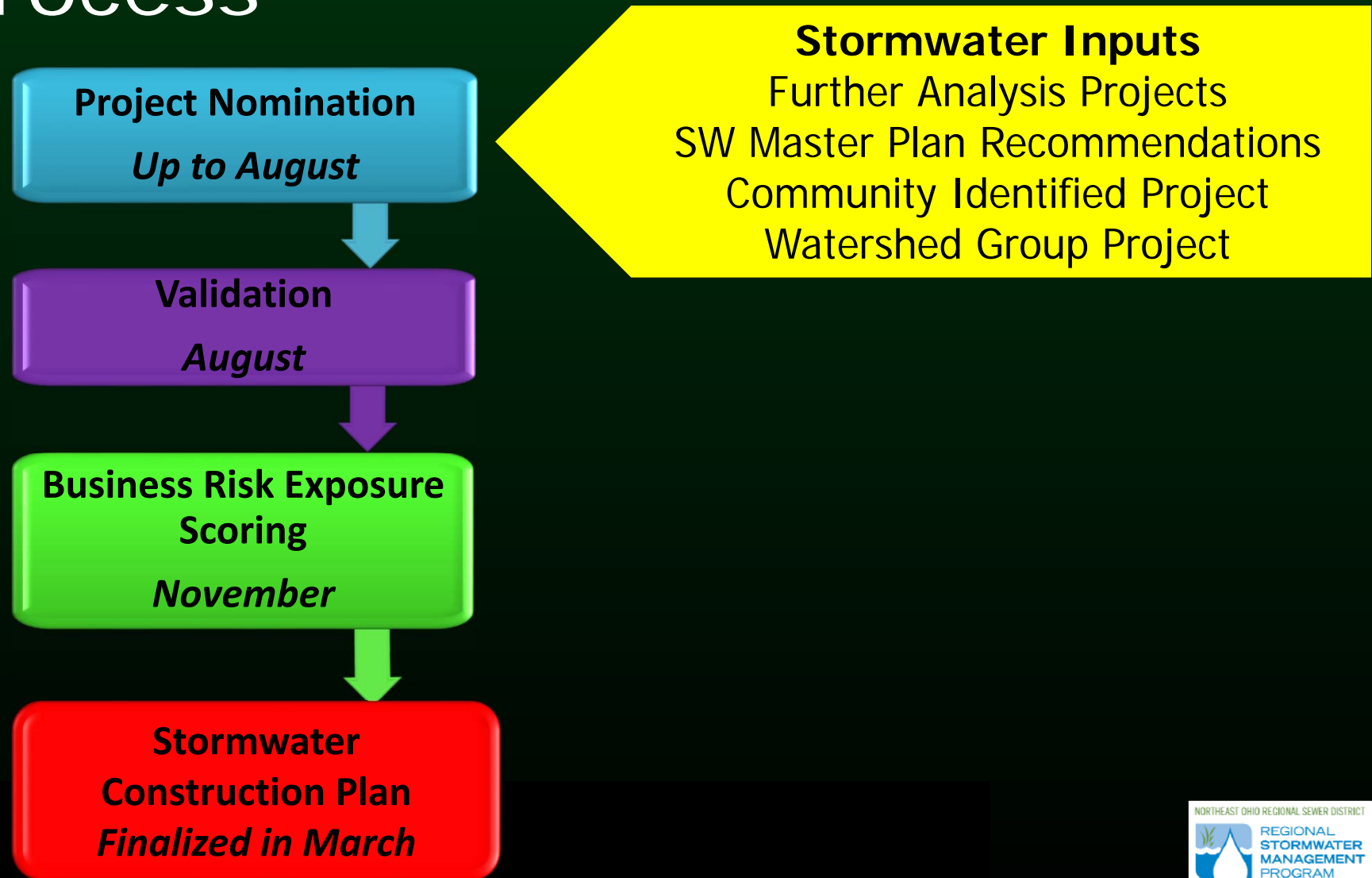
Stormwater Construction Plan Annual Review Process



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Stormwater Construction Plan Process



Stormwater Construction Plan Community Nomination



COMMUNITY PROPOSED STORMWATER PROJECT INFORMATION SUBMITTAL

The following information is necessary for the Northeast Ohio Regional Sewer District (NEORSRD) to evaluate proposed projects during the stormwater construction planning process under the Regional Stormwater Management Program. Complete information will aid in determining benefit to the Regional Stormwater System and facilitate the evaluation process. NEORSRD may request additional information to gain a better understanding of the project. NEORSRD can provide limited technical assistance for this submittal, however preliminary engineering studies are the responsibility of the community.

The submittal of this information is solely for the purposes of facilitating the Sewer District's evaluation of projects along the Regional Stormwater System proposed by communities. The submittal of this information does not obligate the Sewer District to participate in or implement the proposed project.

Community Information	
Community	
Project Contact Name and Title	
Address	
Phone Number	
Email Address	

Project Information	
Project Name	
Project Location (Address and Attached Location Map)	
Parcel Numbers	
Ownership	
Stream/Watershed	
Proposed Start Date	
Proposed Completion Date	
Project Cost	

NORTHEAST OHIO REGIONAL SEWER DISTRICT COMMUNITY STORMWATER PROJECT INFORMATION FORM

Project Description (please attach or provide the following information)

1) Project Summary

Describe the project.

- Problem being addressed;
- Objectives and outcomes. Include explanation of the extent of specific improvements along the Regional Stormwater System;
- Vicinity maps, drawings, or figures of the site and the project;
- Other relevant project details that will facilitate NEORSRD's review.

2) Background Information

Include studies and planning documents which support the need, and the proposed solution, if applicable.

- Site soils;
- Geotechnical studies;
- Wetlands, water quality, and listed species
- Preliminary hydrology and hydraulics (existing and proposed hydraulics to determine benefit to the Regional Stormwater System)
- Permitting (if initiated)
- Risks or constraints
- Known stakeholder outreach or input
- Current photos of the project site

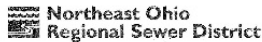
3) Budget Summary

The Budget Summary should include details on materials and services including specific material cost and hourly rate. If there is a volunteer component, please identify the source of volunteers and the extent to which these volunteers are committed to the specific project. If outside funding is guaranteed, please include the amount to be paid from other sources. If outside funding is anticipated, please include information on sources, timelines, and likelihood. Include an engineer's estimate if available.



Stormwater Construction Plan

Community Nomination: Sioux Lane



COMMUNITY/ORGANIZATION PROPOSED STORMWATER PROJECT INFORMATION SUBMITTAL

The following information is necessary for the Northeast Ohio Regional Sewer District (NEORSD) to evaluate proposed projects during the stormwater construction planning process under the Regional Stormwater Management Program. Complete information will aid in documenting projects to the Regional Stormwater System and facilitate the evaluation process. NEORSD may request additional information to gain a better understanding of the project. NEORSD can provide limited technical assistance for the submittal, however preliminary engineering studies are the responsibility of the community sponsor.

The submittal of this information is solely for the purposes of facilitating the Sewer District's evaluation of projects under the Regional Stormwater System program by community and/or organizations. The submittal of this information does not obligate the Sewer District to participate in or implement the proposed project.

Organization/Community Information	
Organization/Community	City of Macedonia
Project Contact Name and Title	Donald J. Sheehy, City Engineer
Address	22999 Foxboro Road, Oakwood, Ohio 44136
Phone Number	440-439-1533
Email Address	sheehydonald@macedonia.com

Project Information	
Project Name	Sioux Lane Culvert Replacement
Project Location (Address and Attached Location Map)	Sioux Lane, between Chenook Run and Chenook Run
Parcel Numbers	Sioux Lane, public right-of-way
Ownership	City of Macedonia
Street/Highway	Indian Creek
Proposed Start Date	02/15/26
Proposed Completion Date	02/15/26
Project Cost	\$215,000.00

Sioux Lane Culvert Replacement City of Macedonia Proposed Storm Water Project Submittal June 21, 2016

1) Project Summary

The Sioux Lane Culvert Replacement Project consists of the complete removal of the existing stream crossing, and installation of a concrete box culvert. The existing crossing consists of six CMP arches. The proposed concrete box will have an opening that is four feet in height and twenty feet in width. This project will address both the structural failings, and the hydraulic inefficiencies of the existing crossing. The existing CMP culverts are experiencing severe corrosion and joint separation, which is resulting in sinkholes on the roadway surface. The severity of these sinkholes has previously forced the City of Macedonia to close Sioux Lane to traffic. Given the structural deficiencies of the crossing, the City will need to proceed with the culvert replacement in the fall of 2016. The damage to the existing pipes has also resulted in partial blockages of the culvert, thus reducing the hydraulic capacity of the crossing. Finally, the six-barrel culvert design, and the relatively small opening size of each barrel, causes debris to gather at the upstream openings and further restrict flow. This causes the need for continual monitoring and cleaning of the culvert by both local and NEORSD forces. See attached mapping.

2) Background Information

NEORSD performed a complete inspection of this culvert on May 20, 2016, the results of which are on file. In addition, we have performed preliminary hydraulic calculations for this culvert replacement. In summary, replacing the existing six-barrel crossing with a 4' x 20' box culvert will lower the upstream water surface elevation immediately upstream of Sioux Lane by two inches. This culvert replacement will have no effect on water surface elevations downstream of Sioux Lane. See the tables below. All water surface elevations given in feet above sea level.

25 Year Storm Event				
	Approx. 300' Upstream	Immediately Upstream	Culvert	Approx. 300' Downstream
Existing Conditions	1003.14	1002.88	---	1000.90
Proposed Conditions	1003.04	1002.72	---	1000.43

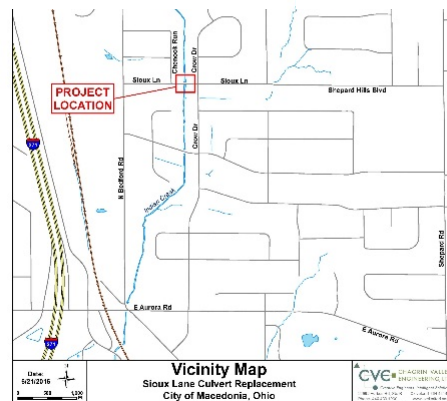
100 Year Storm Event				
	Approx. 300' Upstream	Immediately Upstream	Culvert	Approx. 300' Downstream
Existing Conditions	1003.63	1003.41	---	1001.78
Proposed Conditions	1003.50	1003.24	---	1001.44

3) Budget Summary

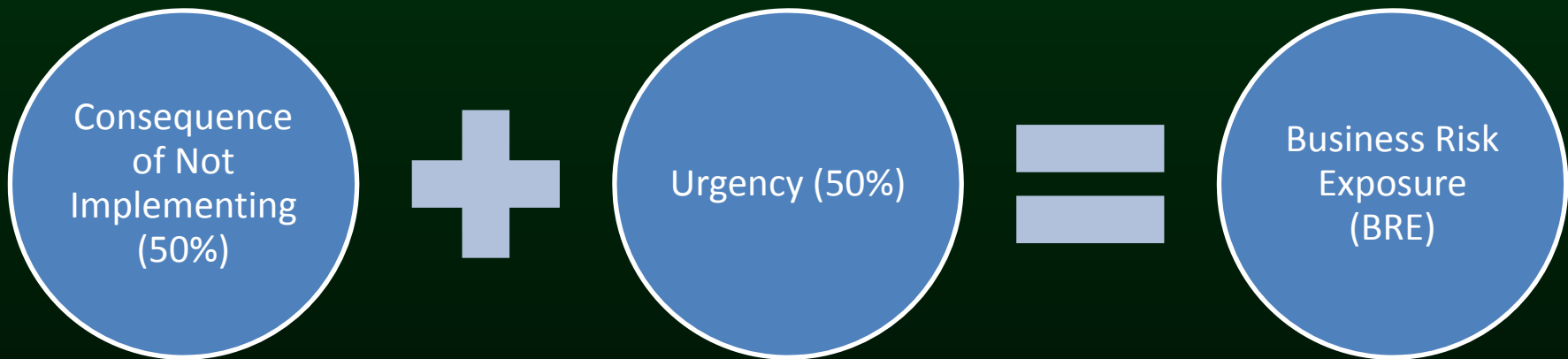
The preliminary project cost estimate is \$215,000.00. The NEORSD share for culvert and hydraulic improvements is estimated to be \$174,000.00. The City of Macedonia share for other utility and pavement improvements is estimated to be \$41,000.00.

SIoux Lane Culvert Replacement CITY OF MACEDONIA PRELIMINARY PROJECT COST ESTIMATE June 24, 2016									
Item	Description	Unit	Quantity	Unit Price	Total Price	NEORSD Share	City Share	Notes	
1	REPLACE WITH 4' x 20' FOUR-SIDED BOX CULVERT	AMP	1	\$ 120,000	\$ 120,000	\$ 120,000	\$ 0		
2	BOX CULVERT, 4' x 20', 10' LONG, 10' DEEP, 10' WIDE	LF	10	\$ 1,000	\$ 10,000	\$ 10,000	\$ 0		
3	CONCRETE TOP, 4' x 20', 10' LONG, 10' DEEP	SF	100	\$ 100	\$ 10,000	\$ 10,000	\$ 0		
4	PRELIMINARY DESIGN	HR	2	\$ 5,000	\$ 10,000	\$ 10,000	\$ 0		
5	CONCRETE CURB, 4' x 20', 10' LONG, 10' DEEP	SF	20	\$ 500	\$ 10,000	\$ 10,000	\$ 0		
6	BOX CULVERT, 4' x 20', 10' LONG, 10' DEEP	LF	2	\$ 5,000	\$ 10,000	\$ 10,000	\$ 0		
7	CONCRETE TOP, 4' x 20', 10' LONG, 10' DEEP	SF	20	\$ 500	\$ 10,000	\$ 10,000	\$ 0		
8	CONCRETE CURB, 4' x 20', 10' LONG, 10' DEEP	SF	40	\$ 500	\$ 20,000	\$ 20,000	\$ 0		
9	CONCRETE TOP, 4' x 20', 10' LONG, 10' DEEP	SF	20	\$ 500	\$ 10,000	\$ 10,000	\$ 0		
10	CONCRETE CURB, 4' x 20', 10' LONG, 10' DEEP	SF	40	\$ 500	\$ 20,000	\$ 20,000	\$ 0		
11	CONCRETE TOP, 4' x 20', 10' LONG, 10' DEEP	SF	20	\$ 500	\$ 10,000	\$ 10,000	\$ 0		
12	CONCRETE CURB, 4' x 20', 10' LONG, 10' DEEP	SF	40	\$ 500	\$ 20,000	\$ 20,000	\$ 0		
13	CONCRETE TOP, 4' x 20', 10' LONG, 10' DEEP	SF	20	\$ 500	\$ 10,000	\$ 10,000	\$ 0		
14	CONCRETE CURB, 4' x 20', 10' LONG, 10' DEEP	SF	40	\$ 500	\$ 20,000	\$ 20,000	\$ 0		
Total Preliminary Project Cost Estimate						\$ 215,000	\$ 0		
Total Preliminary Project Cost Estimate						\$ 215,000	\$ 0		

Note: The costs shown represent an estimate of project costs and do not represent a final estimate. The City of Macedonia share for other utility and pavement improvements is estimated to be \$41,000.00.



Scoring for Project Prioritization



Analysis Components

- Financial
- Social/Reputational
- Compliance
- Environmental
- Safety

2 years=	50 points
5 years=	20 points
10 years=	10 points
25 years=	5 points
50 years=	1 points
100 years=	0 points



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Stormwater Construction Plan



[Show Project Summaries](#)

2017 - 2021 Stormwater Program Summary As of Jan 31, 2017

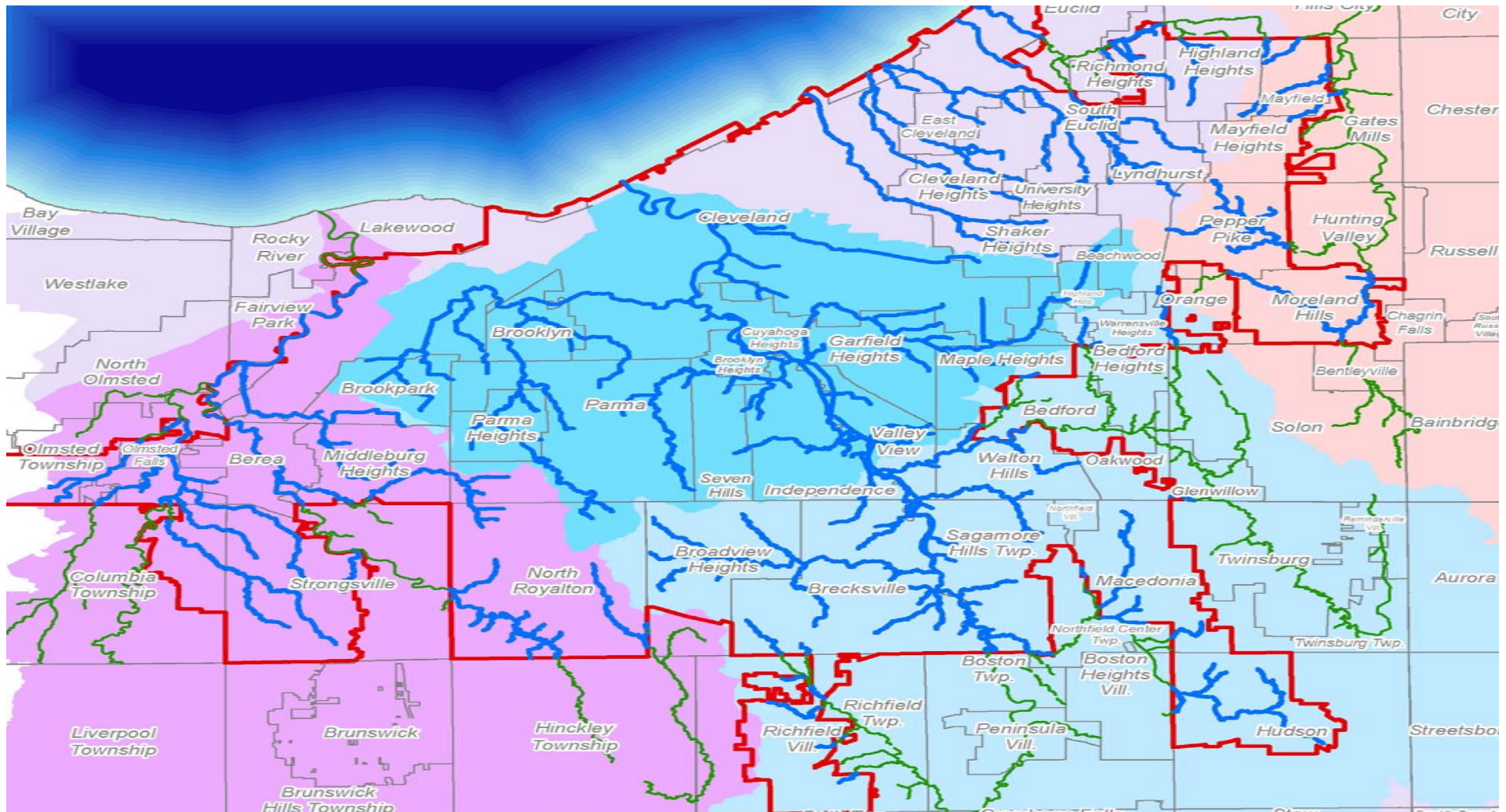
Project Name and Location	RFP(1)	Design(2)	Award of Construction	Construction Est.(\$M)
Stormwater				
Chagrin River				
Beechers Brook and Pepper Creek Bank Stabilization CW00021 & CW00146	06-Oct-16 A	16-Feb-17 A	N/A	\$2.8
Chagrin River/LET SWMP Study	3rd Quarter 2018	4th Quarter 2018	N/A	N/A
Lake Erie Direct				
Shaker Lakes Dam Rehabilitations DB00056 & DB00101	N/A	04-Feb-16 A	21-Sep-17	\$3.6
Doan Brook Stream and Bank Stabilization DB00029	N/A	N/A	2nd Quarter 2018	\$2.4
Nine Mile Headwall Replacement	2nd Quarter 2019	3rd Quarter 2019	4th Quarter 2020	\$0.3
Lakeview Dam Regulatory Compliance	N/A	N/A	3rd Quarter 2020	\$0.3
Euclid Creek Streambank Stabilization EE00350	3rd Quarter 2019	4th Quarter 2019	N/A	\$0.1
USACE Euclid Creek Spillway Fish Passage EC00008	4th Quarter 2020	1st Quarter 2021	N/A	\$0.5
Doan Brook Sowinski Park Floodplain Connection DB00013	4th Quarter 2019	1st Quarter 2020	N/A	\$0.6

<http://www.neorsd.org/communitystormwaterresources.php>



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Stormwater Master Plan



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Stormwater Master Plans

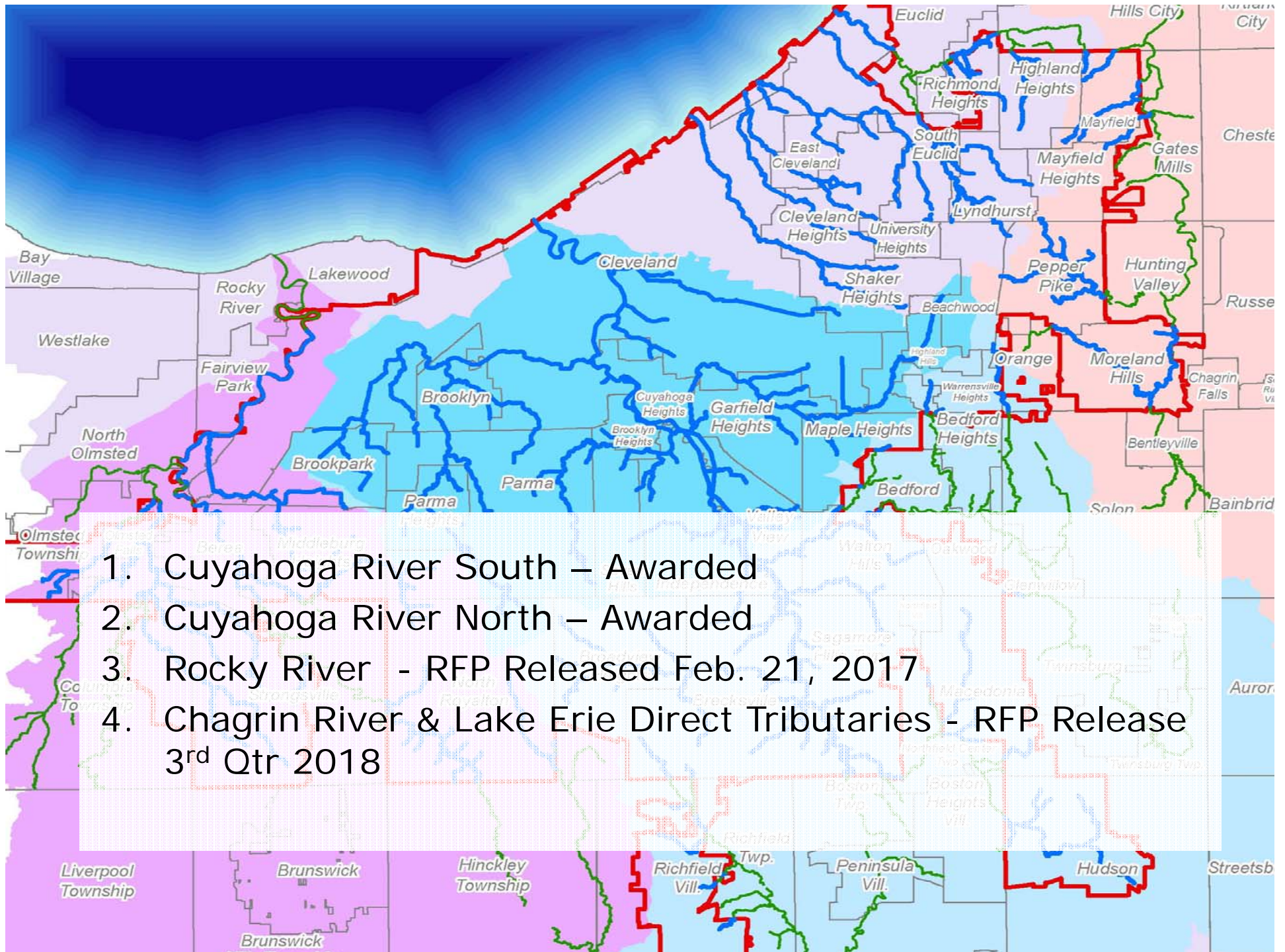
Goals and Objectives

- Multi-objective, watershed approach to developing solutions for broad suite of problems
- Prioritized list of construction and maintenance projects at the Watershed-level and Program-level
- Identification of early action projects



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Chippewa Creek — Broadview Heights

Stormwater Inspection and Maintenance



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Stormwater Inspection & Maintenance

All actions begin with an Inspection

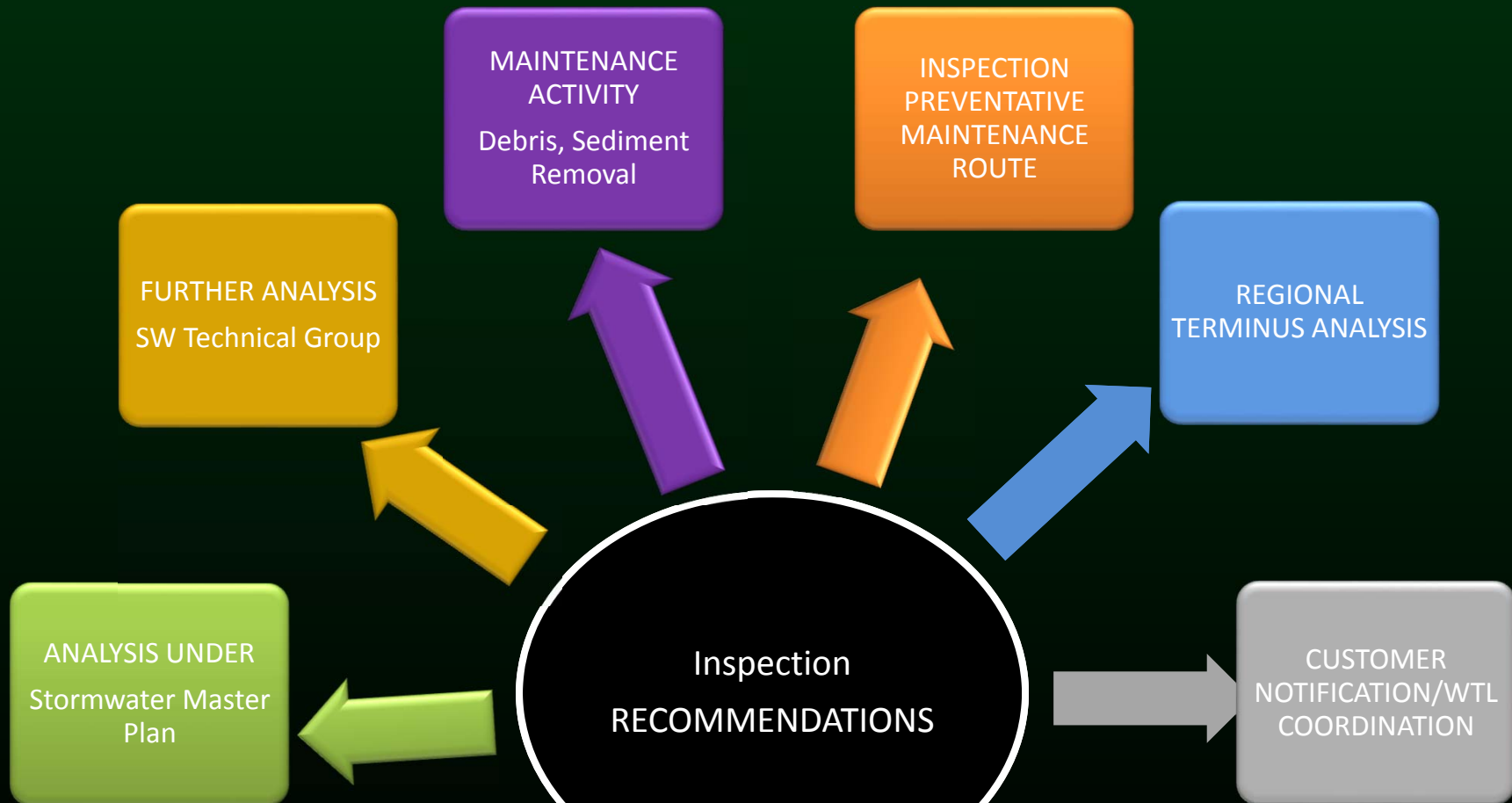


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Stormwater Inspection & Maintenance

Inspection Recommendations

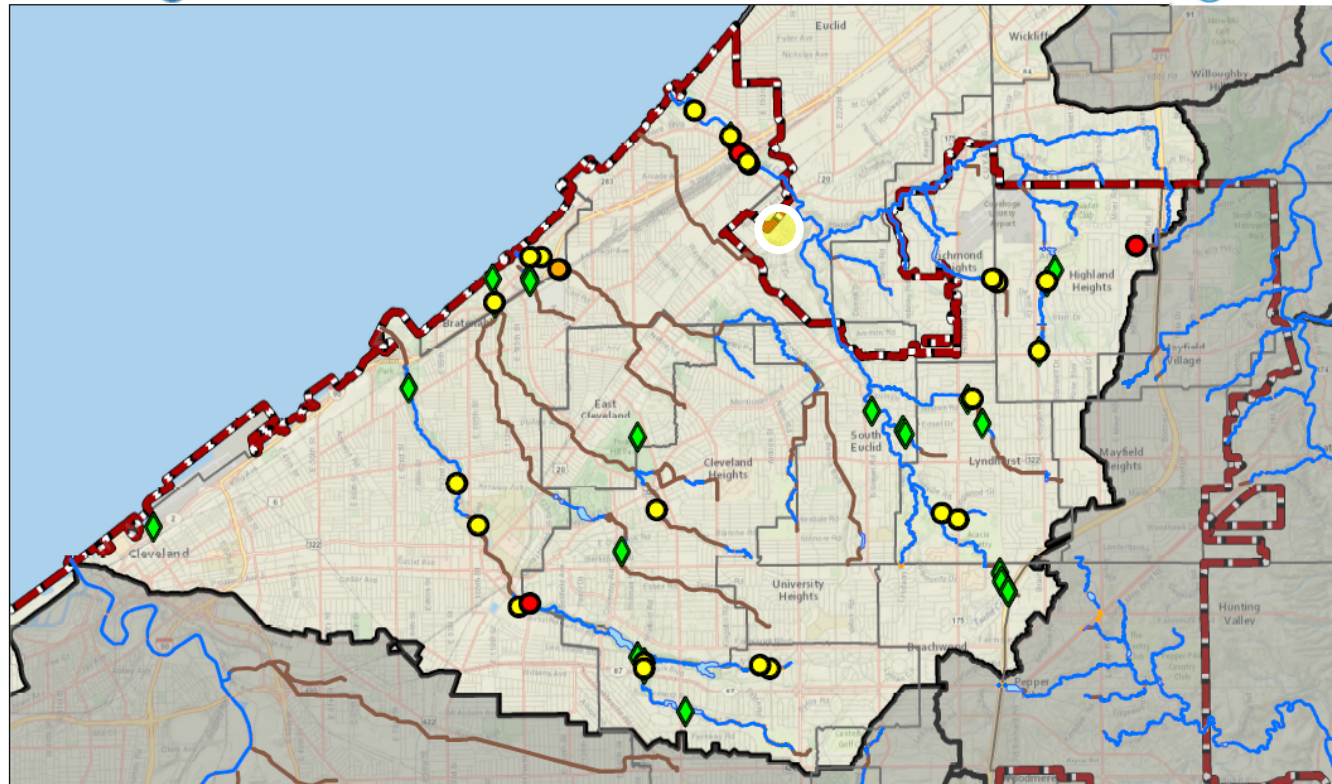


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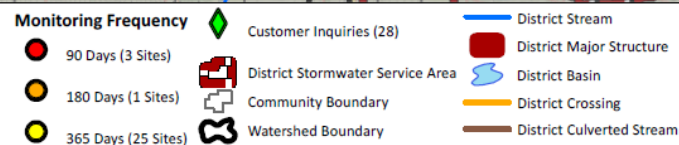


Stormwater Inspections

Lake Erie Direct Tributaries: 2016 Summary



Lake Erie Tributaries Watershed
Monitoring Sites and
2016 Customer Inquiries



28 Customer Inquiries
(132 in Service Area)

29 sites
currently being
monitored
(190 in Service Area)



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Stormwater Inspections

Lake Erie Direct Tributaries – Euclid Creek

FHWA Condition Rating	NEORSD Condition Rating	Criticality	BRE Score
2	5	6	30



Asset #: EW00027
Euclid
Local Road

Structural Integrity:

- Extensive efflorescence
- Exposed rebar
- Undercut and spalled at footing
- Fallen retaining wall

Recommendation:

- ✓ Owner annually inspects
- ✓ District/Owner coordination
- ✓ Load limit restrictions by Owner

Stormwater Inspections

Chagrin River: 2016 Summary

15 Customer
Inquiries
(**132** in Service Area)

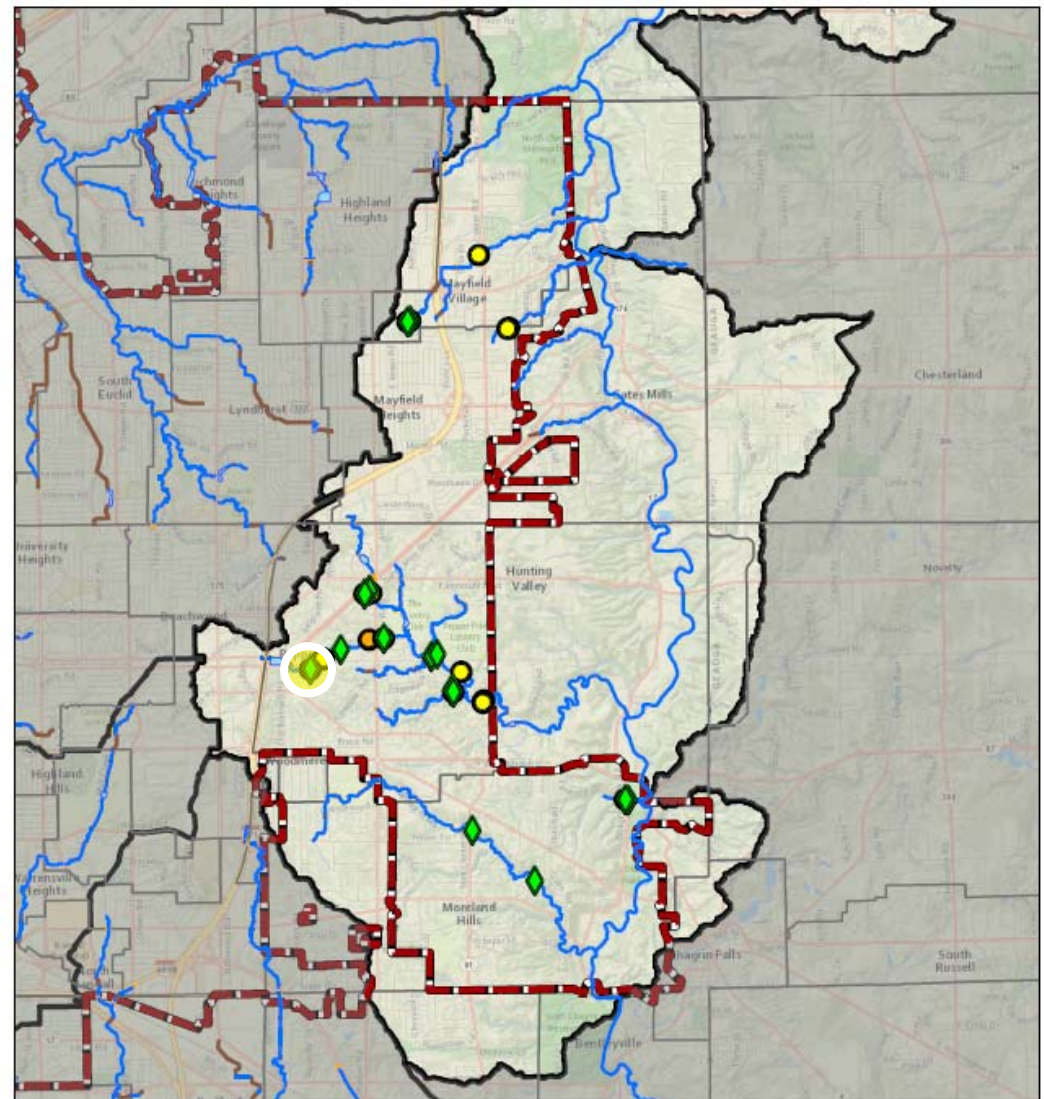
18 sites
currently being
monitored
(**190** in Service Area)



Your Sewer District Keeping our



**Northeast Ohio
Regional Sewer District**



**Chagrin River Watershed
Monitoring Sites and
2016 Customer Inquiries**

Monitoring Frequency

- 90 Days (1 Site)
- 180 Days (1 Site)
- 365 Days (16 Sites)



Customer Inquiries (15)



District Stormwater Service Area



Community Boundary



Watershed Boundary

District Stream

District Major Structure

District Basin

District Crossing

District Culverted Stream

Stormwater Inspections

Chagrin River: Pepper Luce Creek



Asset ID: PC00257
Pepper Pike
Residential: Concord Road

Structural Integrity:

- Eroding bank
- No bank protection at toe
- Minimal woody rootmass on dumped material
- Location at tight meander

Recommendation:

✓ Monitoring

BEHI Rating	NBS Rating	NEORS Condition Rating	Criticality	BRE Score
High	Extreme	5	6	30

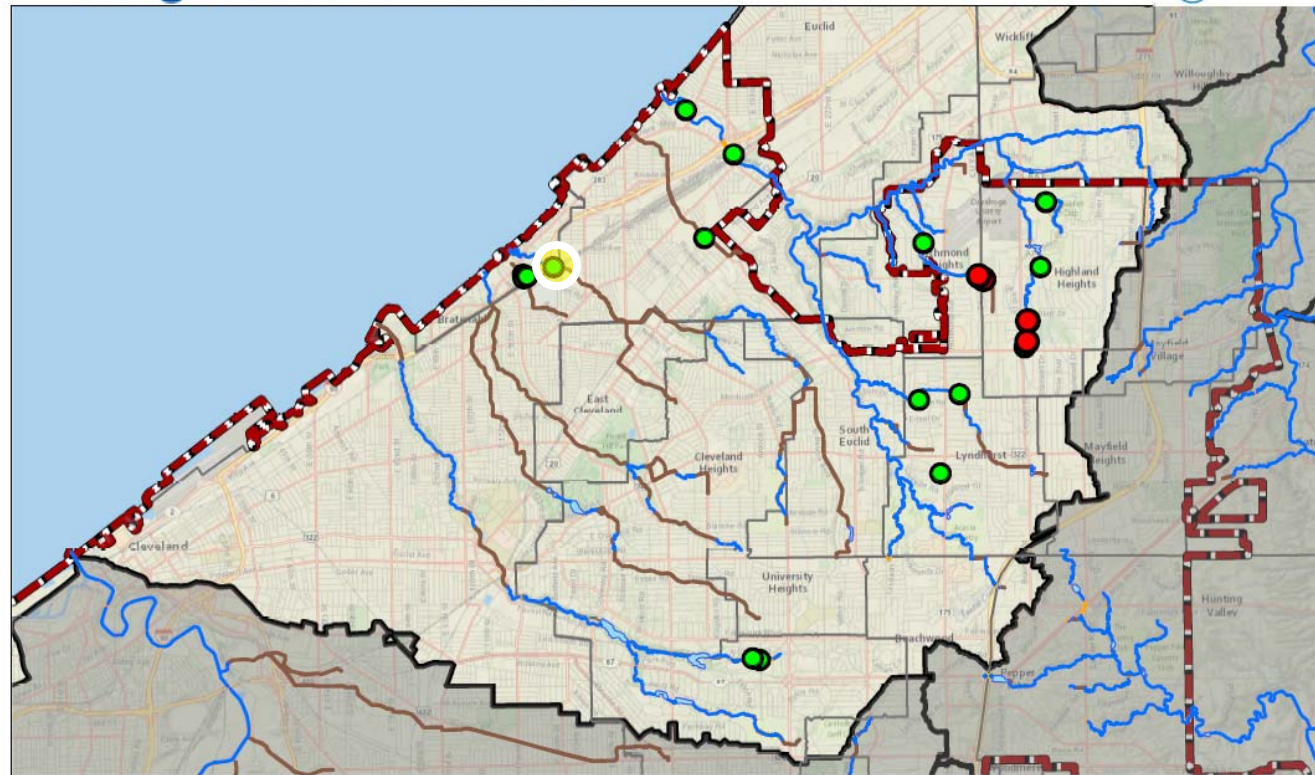


Stormwater Inspection: Further Analysis/SW Master Plan






Lake Erie Direct Tributaries: 2016 Summary

 **Northeast Ohio
Regional Sewer District**

 **NORTHEAST OHIO REGIONAL SEWER DISTRICT
REGIONAL
STORMWATER
MANAGEMENT
PROGRAM**



Lake Erie Tributaries Watershed
Stormwater Master Planning
and Further Analysis Recommendations

-  Stormwater Master Planning (4)
-  Further Analysis (17)
-  District Stormwater Service Area
-  Community Boundary
-  District Stream
-  District Major Structure
-  District Basin
-  District Crossing
-  District Culverted Stream
-  Watershed Boundary

4 Assets
recommended for
SW Master Plan
(**37** in Service Area)

17 assets
recommended for
Further Analysis
(**120** in Service Area)

 **NORTHEAST OHIO REGIONAL SEWER DISTRICT
REGIONAL
STORMWATER
MANAGEMENT
PROGRAM**

Stormwater Inspection: Further Analysis/SW Master Plan

Lake Erie Direct Tributaries: Nine Mile Creek

BEHI Rating	NBS Rating	NEORSD Condition Rating	Criticality	BRE Score
High	High	4	9	36

Asset #: NM00056
Bratenahl
(Railroad South of I-90)

Structural Integrity:

- Eroding bank
- Little rootmass protection
- Some protection at toe

Recommendation:

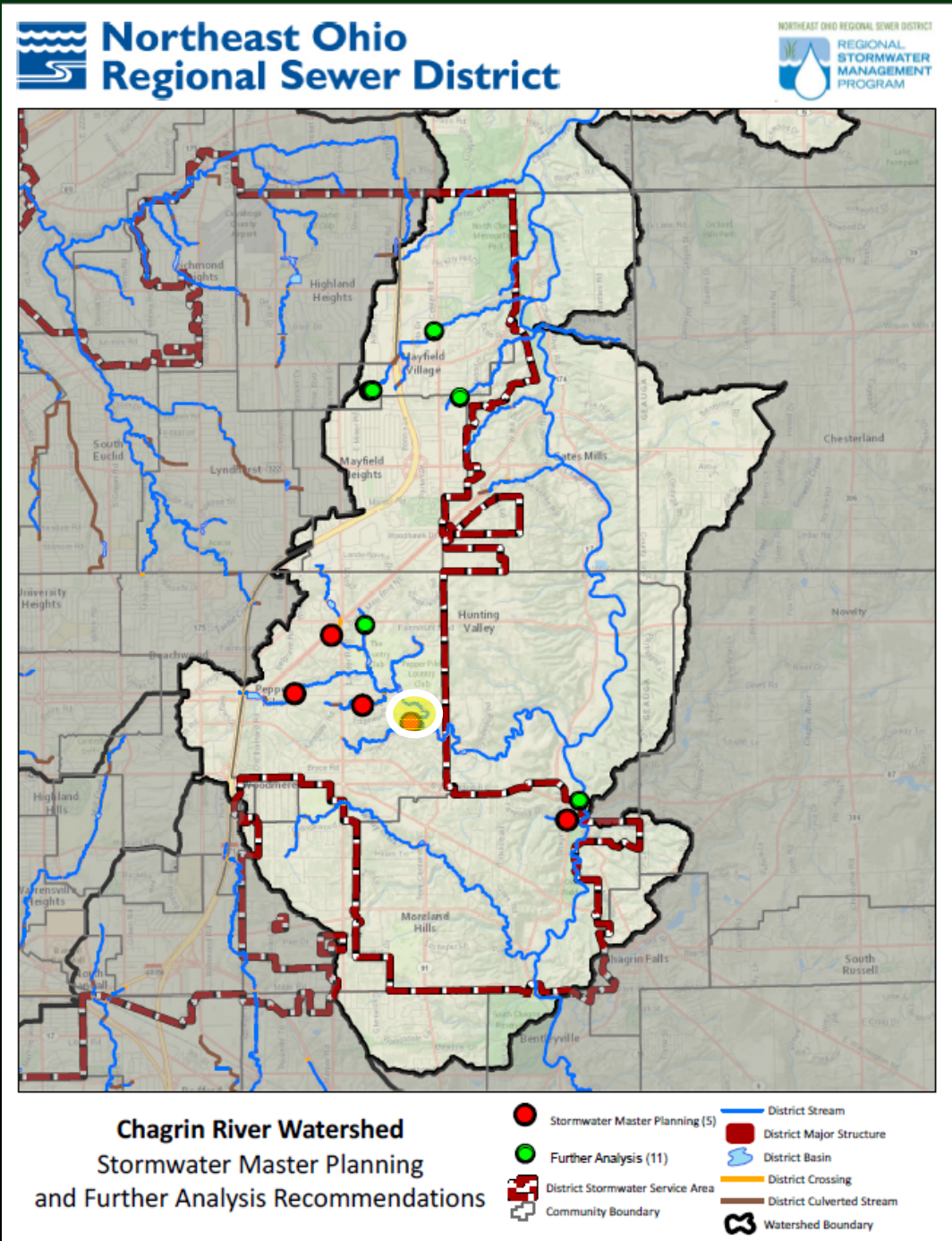
- ✓ Further Analysis
- ✓ Monitoring

Stormwater Inspection: Further Analysis/SW Master Plan

Chagrin River: 2016 Summary

5 Assets recommended
for SW Master Plan
(**37** in Service Area)

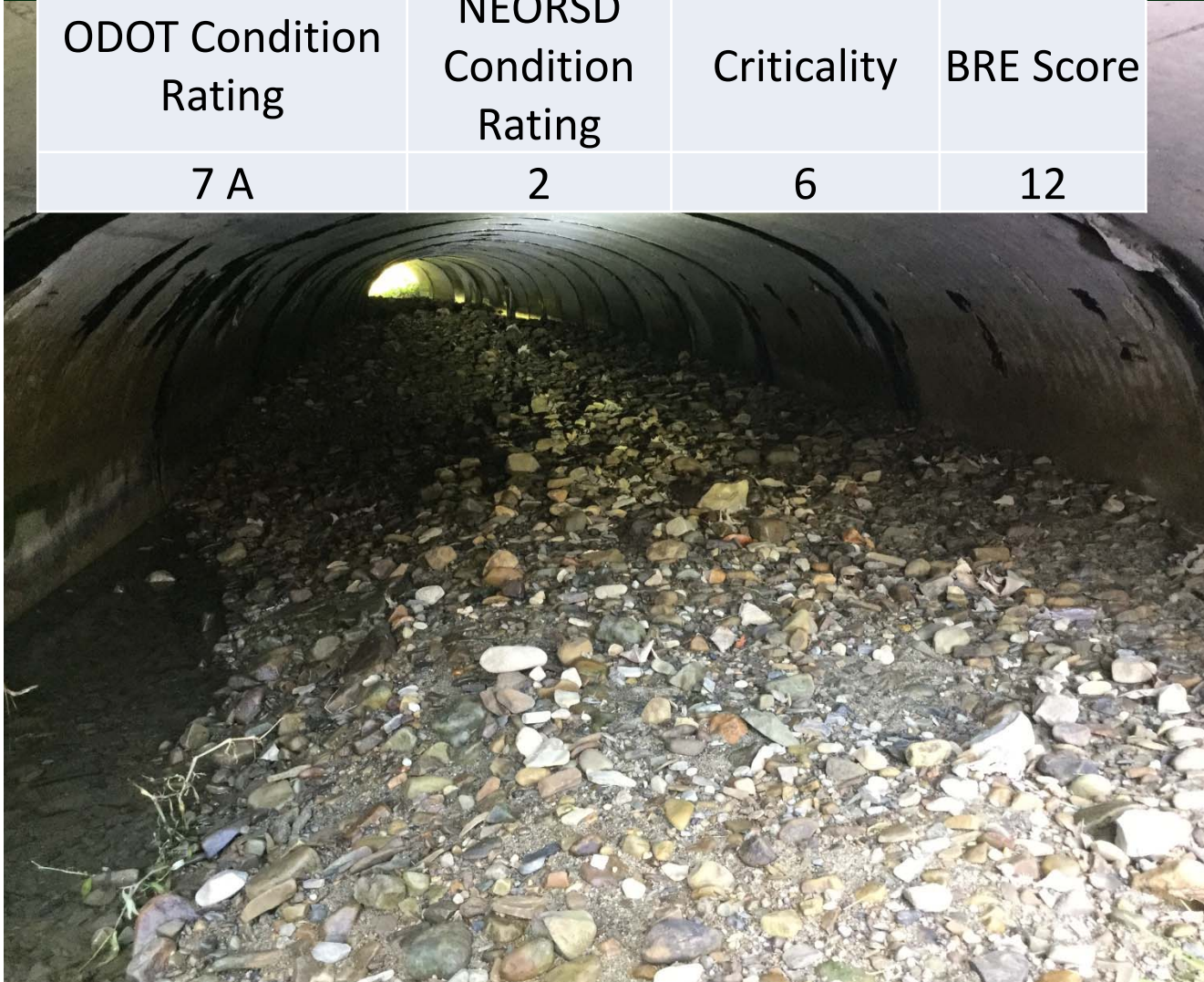
11 assets recommended
for Further Analysis
(**120** in Service Area)



Stormwater Inspection: Further Analysis/SW Master Plan

Chagrin River: Pepper Luce Creek

ODOT Condition Rating	NEORSD Condition Rating	Criticality	BRE Score
7 A	2	6	12



Asset ID: PC00087
Pepper Pike
Pepper Creek Drive
BTU: Local Road

Structural Integrity:

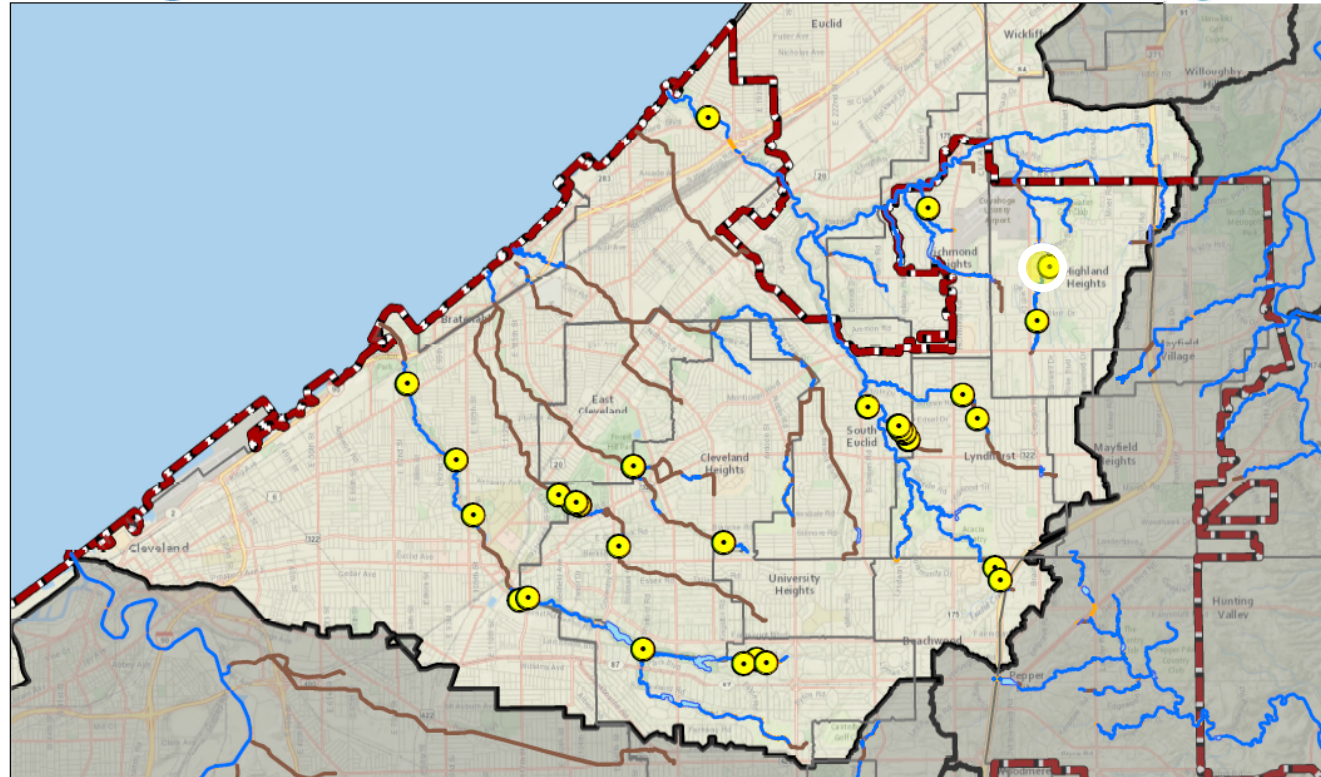
- Bedload material
- Spalling with reinforcement
- Minor separation at joints
- Minor delamination, staining, crackings

Recommendation:

- ✓ SWMP
- ✓ Monitoring

Stormwater Maintenance

Lake Erie Direct Tributaries: 2016 Summary



Lake Erie Tributaries Watershed
2016 Maintenance Projects

- Maintenance Locations (33)
- District Stormwater Service Area
- Community Boundary
- Watershed Boundary
- District Stream
- District Major Structure
- District Basin
- District Crossing
- District Culverted Stream

33 Maintenance projects
(**112** in Service Area)

1,021 CY sediment and debris removed
(**3,646** CY in Service Area)



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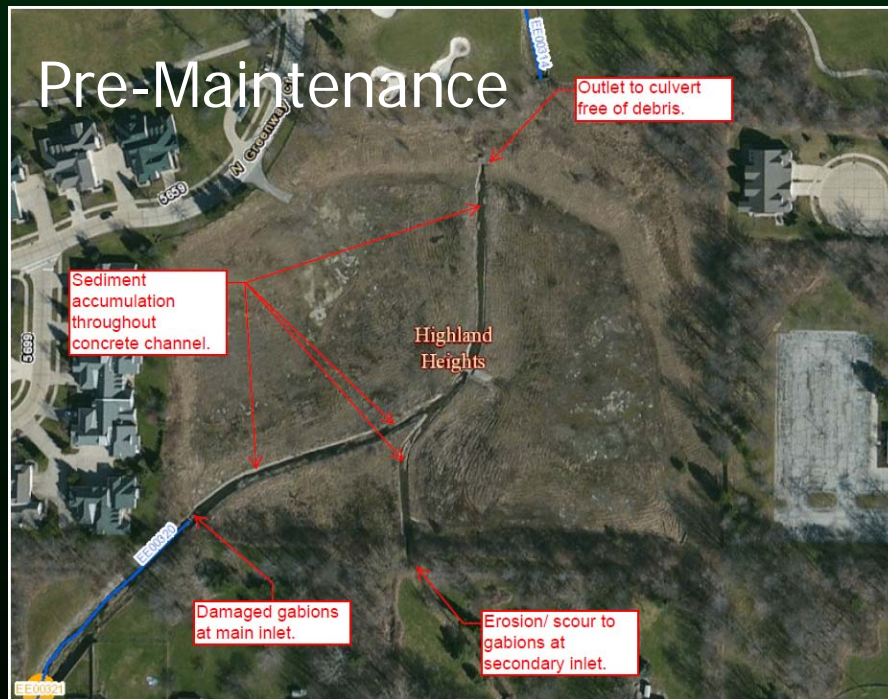
Stormwater Maintenance

Lake Erie Direct Tributaries: Euclid Creek East Branch

Asset ID: EE00120

Community: Highland Heights

Maintenance Project: Debris and Sediment Removal - 65 CY



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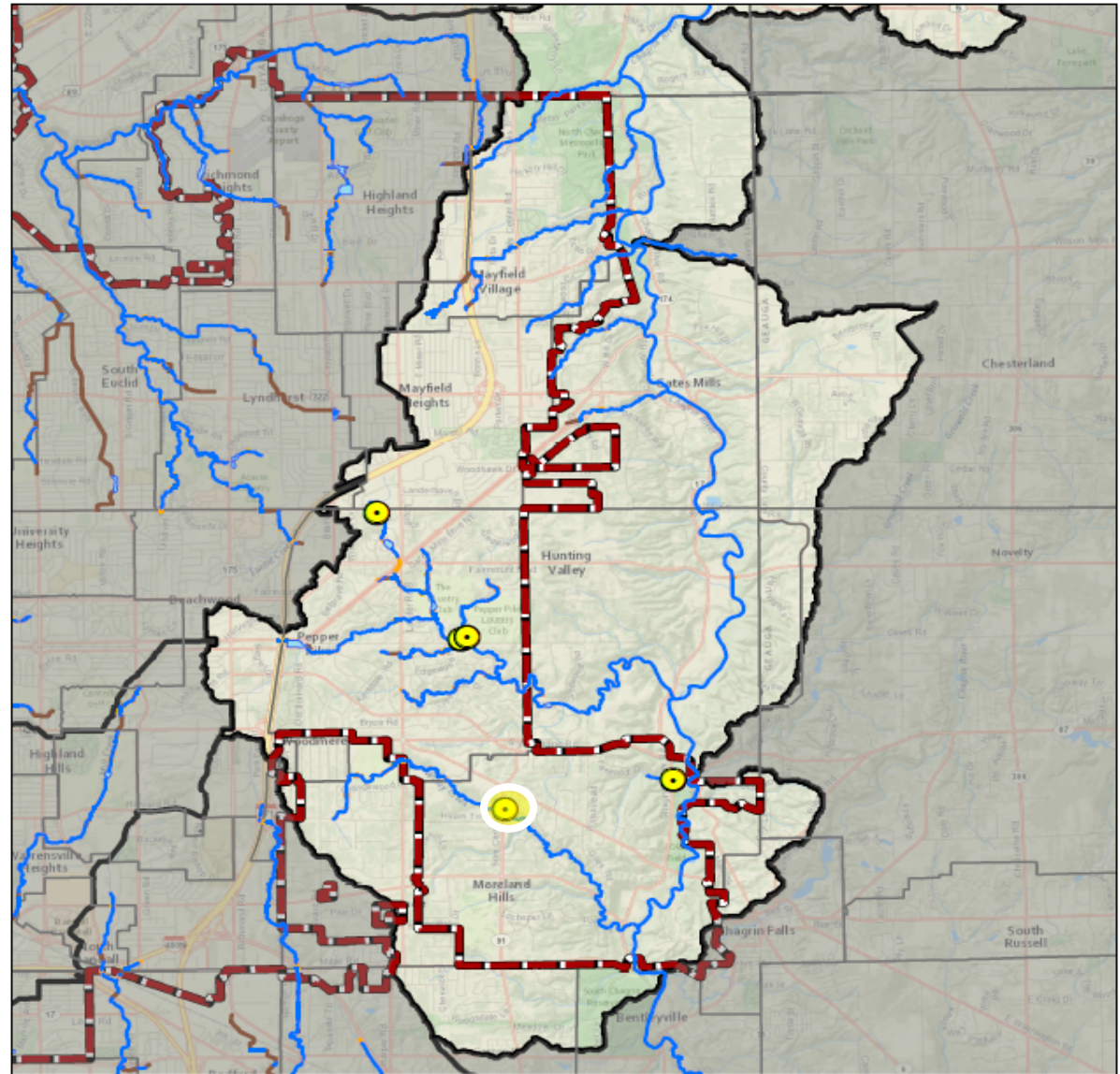
Stormwater Maintenance

Chagrin River:

2016 Summary

5 Maintenance projects
(**112** in Service Area)

74 CY sediment and
debris removed
(**3,646** CY in Service Area)



Chagrin River Watershed
2016 Maintenance Projects



Stormwater Maintenance

Chagrin River: Willie Creek

Asset ID: WI00244

Community: Moreland Hills

Maintenance Project: Debris and Sediment Removal - 15 CY



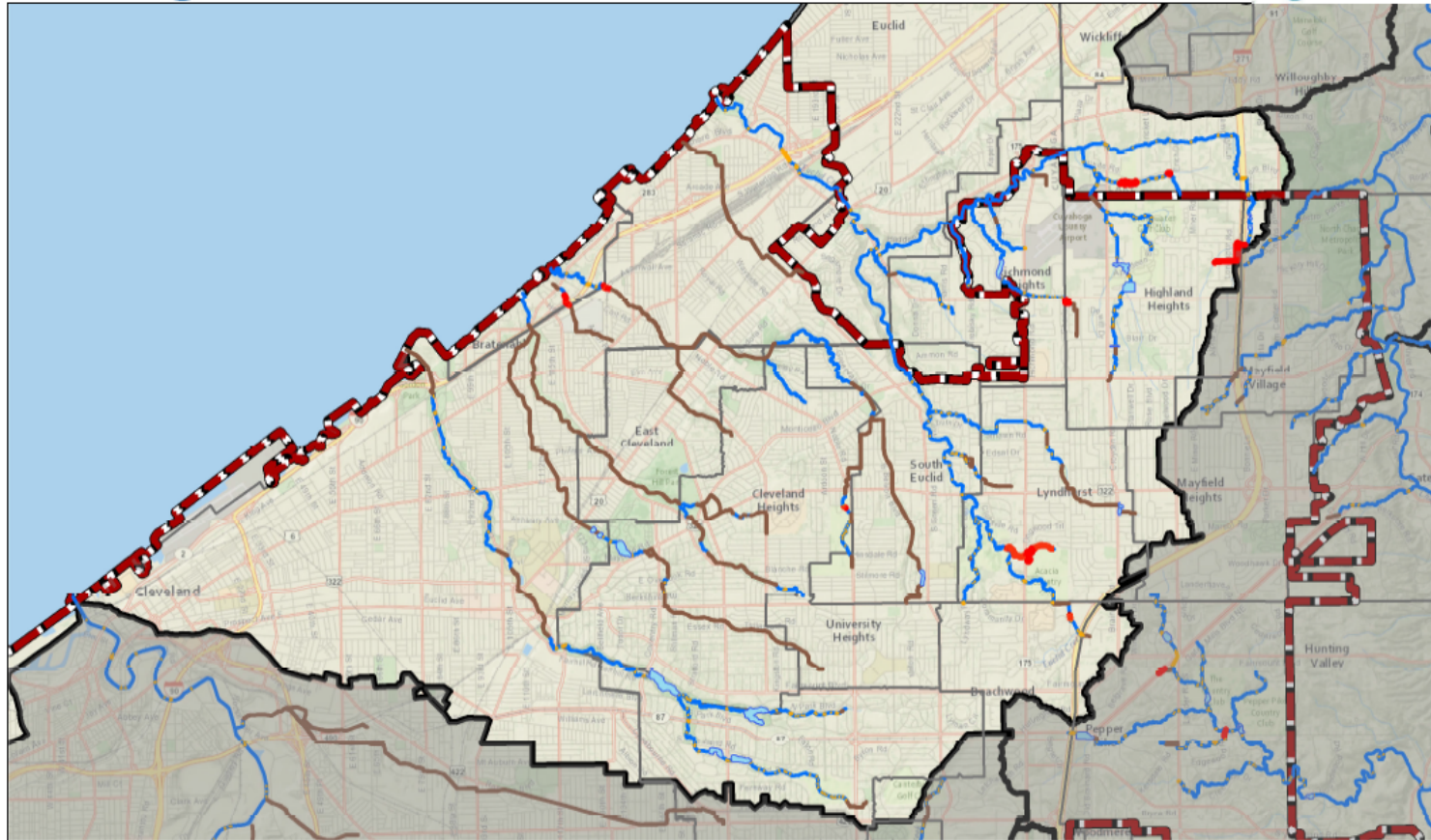
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Regional Stormwater System New Assets (Mostly Terminus Extensions)

 **Northeast Ohio
Regional Sewer District**

 **NORTHEAST OHIO REGIONAL SEWER DISTRICT
REGIONAL
STORMWATER
MANAGEMENT
PROGRAM**

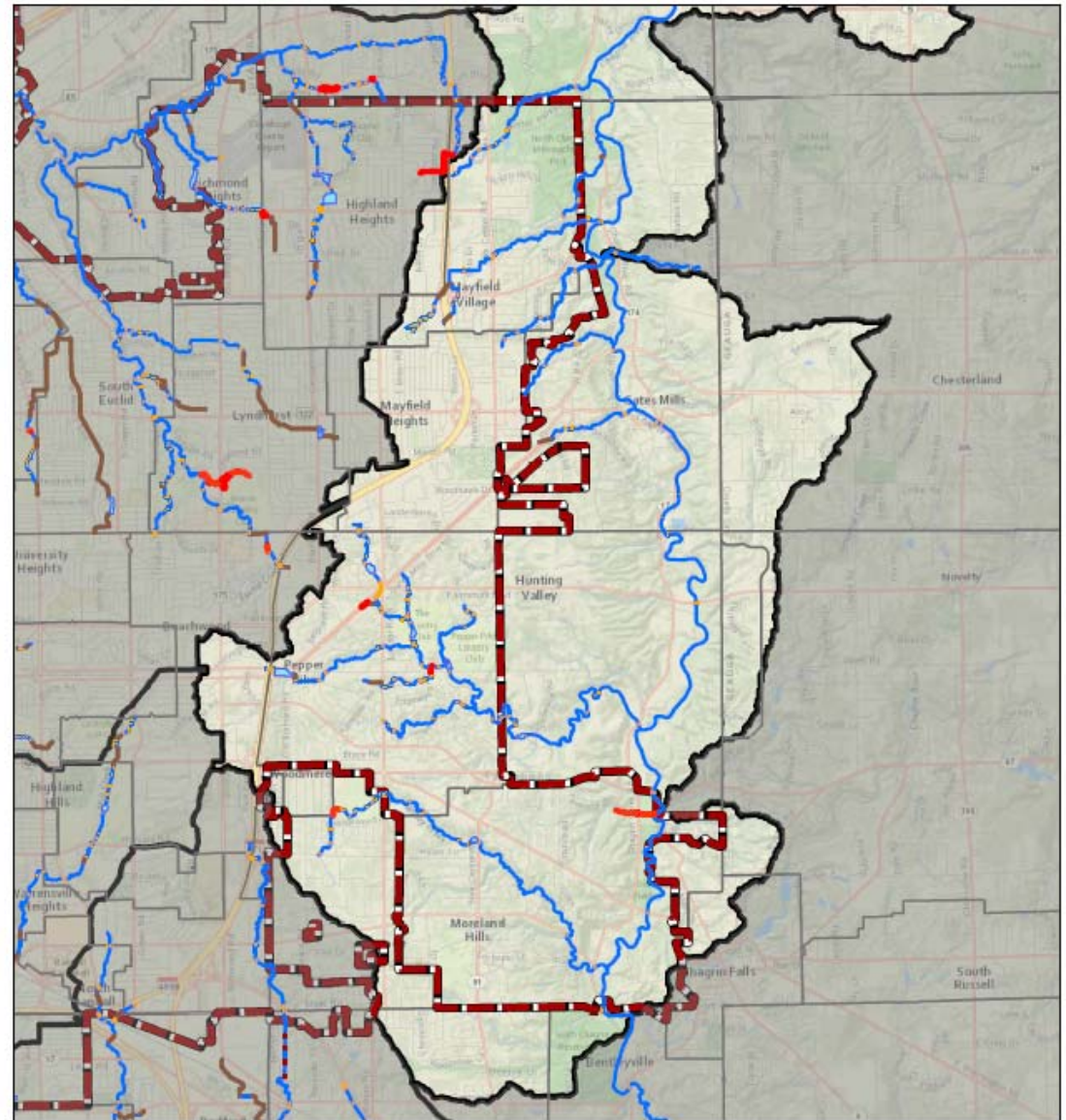


Lake Erie Tributaries Watershed
New Regional Stormwater System
Assets Added in 2016-Present

- | | |
|--|---|
|  New Assets Added in 2016-Present |  District Stream |
|  District Stormwater Service Area |  District Major Structure |
|  Community Boundary |  District Basin |
|  Watershed Boundary |  District Crossing |
| |  District Culverted Stream |

 **NORTHEAST OHIO REGIONAL SEWER DISTRICT
REGIONAL
STORMWATER
MANAGEMENT
PROGRAM**

Regional Stormwater System New Assets (Mostly Terminus Extensions)



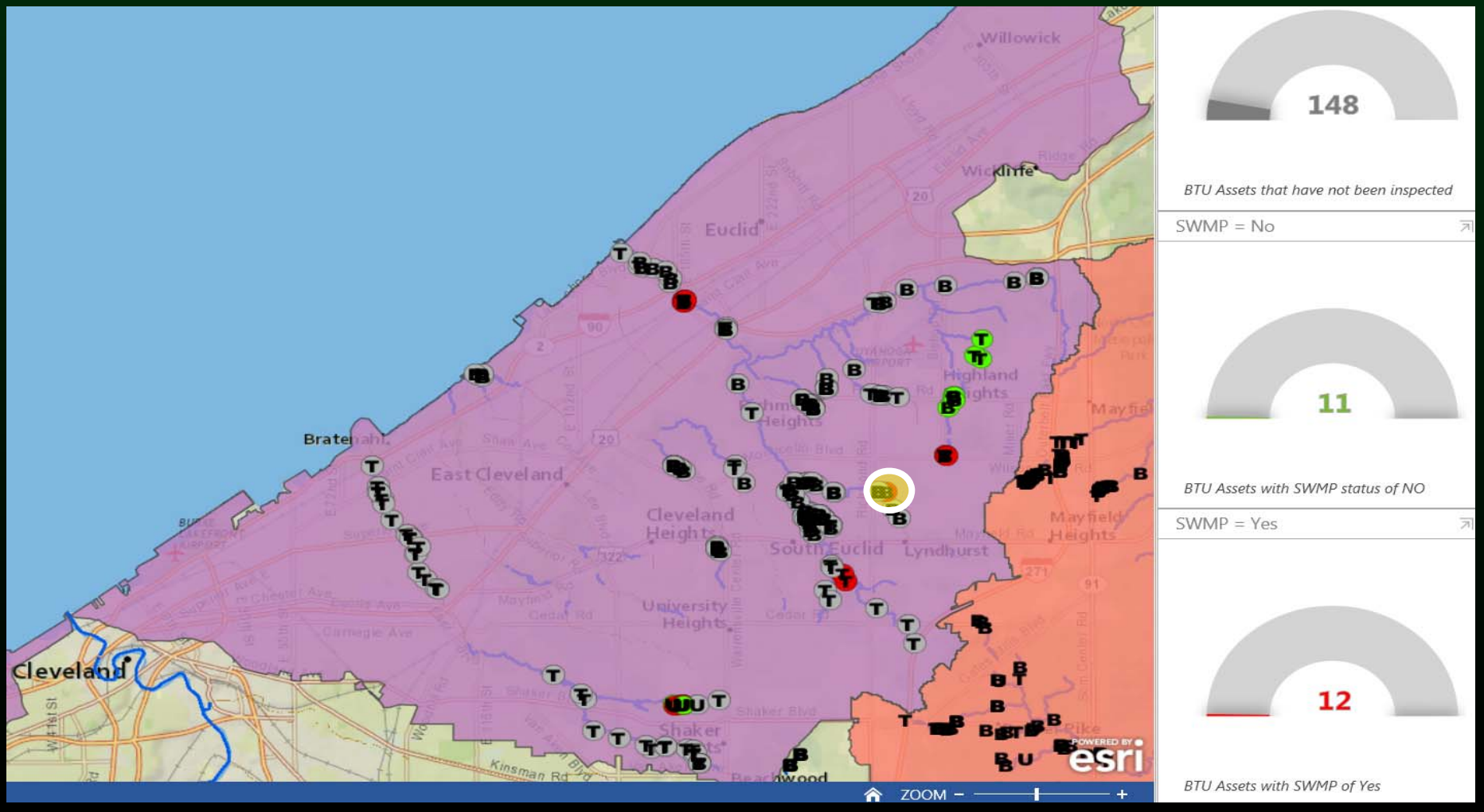
Chagrin River Watershed
New Regional Stormwater System
Assets Added in 2016-Present



Potentially Threatened Infrastructure: Buildings, Transportation and Utilities (BTU)

Initial BTU assessment will be completed prior to the SW Master Plan (2018)

360 BTUs (out of 1,979) in Service Area recommended to date



Threatened Infrastructure: BTUs

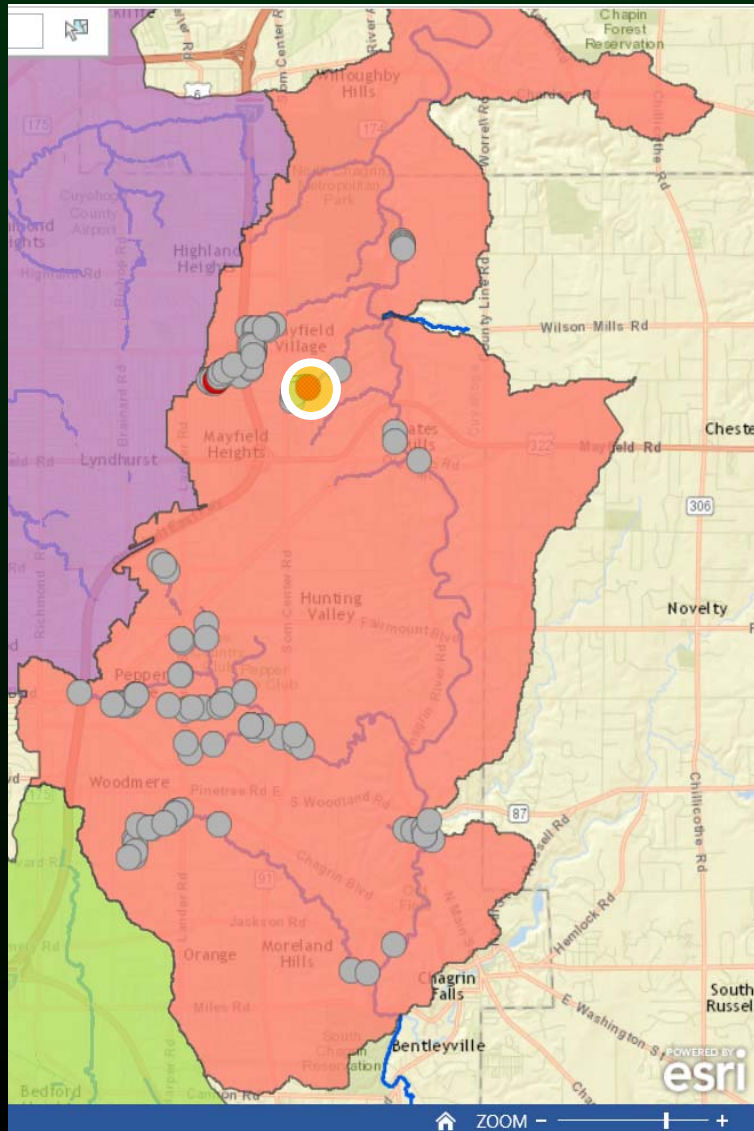
Lake Erie Direct Tributary – Euclid Creek



Community: Lyndhurst

BTU: Residential Building
(North of Ridgebury Blvd)

Potentially Threatened Infrastructure: Buildings, Transportation and Utilities (BTU)



BTU Assets that have not been inspected

SWMP = No



BTU Assets with SWMP status of NO

SWMP = Yes



BTU Assets with SWMP of Yes

Initial BTU assessment will be completed prior to the SW Master Plan (2018)

360 BTUs (out of 1,979) in Service Area recommended to date

Threatened Infrastructure: BTUs

Chagrin River – Beechers Brook

Community: Mayfield

BTU: Residential Building (South of Woodlane Drive)



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Stormwater Inspection & Maintenance 2017 Agenda

- Continuing to collect RSS data:
 - Record drawings
 - Responsible party infrastructure: culverted streams, bridges, culverts, basins, major structures
 - Gather historical inspections reports
- **Data request to be made via Member Community Work Plans and individual agency requests**



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Stormwater Inspection & Maintenance 2017 Agenda

- Planning to pilot new maintenance project types:
 - Basin Dredging
 - Structural Repair
 - Streambank Stabilization (small scale/low cost/low risk)
- Looking for potential locations
- **Contact SWIM representative (Mark Link, George Remias) with ideas**



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A photograph showing a flooded industrial or commercial area. In the foreground, murky brown floodwater covers the ground. In the middle ground, several large, light blue and white shipping containers are partially submerged. To the right, a long, single-story brick building with a dark roof is visible. A utility pole with power lines stands behind the containers. The sky is overcast and grey.

Questions

Independence, OH



Community Cost-Share



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Community Cost-Share

- \$9,946,579.37 available across communities
- 32 approved projects, totaling \$3,041,990.58
- 6 completed projects, totaling \$199,529.74
- Vendor Registration
http://www.neorsd.org/isupplier_homepage.php
- Policy Update



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Community Cost-Share

Policy Update Example – Shaker Heights

- Allocation Agreement: Underground Stormwater Detention
- Construction Costs \$750,000
 - City to apply for reimbursement annually over seven (7) years



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Community Cost-Share

Policy Update Example - Parma

- Allocation Agreement: Equipment Purchase
 - Jet/Vacuum Machine: \$550,000
 - Mechanical Broom Sweeper: \$325,000
 - Maintenance: \$40,000 x 5 years = \$ 200,000
- Total = \$1,075,000
- Application Approved January
- Apply for \$215,000/year reimbursement as funds accrue



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Community Cost-Share

Policy Update

Allocate CCS funds to a project before funds have accumulated in the Member Community's CCS account

1. Submit CCS application for the project to WTL
2. District reviews application for compliance with CCS Policy
3. Execute CCS project agreement with District for allocation of CCS funds
4. Implement project
5. Submit reimbursement request to District for CCS funds
6. Repeat step 5 until the Member Community has requested and received the total amount needed for project



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Questions



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Title V Requires Phase II Support Services for Certain MCM's

- MCM #1: Public Education and Outreach
- MCM #2: Public Participation and Involvement
- MCM #3: Illicit Discharge Detection and Elimination
- MCM #6: Pollution Prevention/Good Housekeeping for Municipal Operations



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Providing Services with Established Providers

- Cuyahoga County Board of Health
 - 48 communities offered services
 - 1 community has declined
- Cuyahoga Soil & Water Conservation District
 - 48 communities offered services
 - 1 community has declined



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Title V – SW Mgmt Plan Review

Recurring Issues/Comments

- Lack of detail on SCM outlet structure to guard against “leaks”
 - Ensure wall penetrations, and weir wall inserts/seams are watertight
- SCM inspection & maintenance plans
 - Lack of detail to define dredging needs to maintain function of the SCM
- Considerations to maximize future stormwater fee credits



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Title V – SW Mgmt Plan Review

Recurring Issues/Comments

- Incorrect WQv calcs for redevelopment
 - Calculate minimum required WQv for the site as a whole
 - SCMs must be designed for the WQv of its watershed - must meet or exceed the minimum required WQv
- Inaccurate drainage area delineations and curve number interpretations
 - Need to account for offsite run-on



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Questions

Highland Park Golf Course Stream Restoration, Highland Hills

What's Next...

- WAC Meetings
 - Lake Erie/Chagrin River: March 13
 - Cuyahoga River – North: March 15
 - Cuyahoga River – South: March 20
 - Rocky River Watershed: March 22
- Next Round in October 2017

Questions

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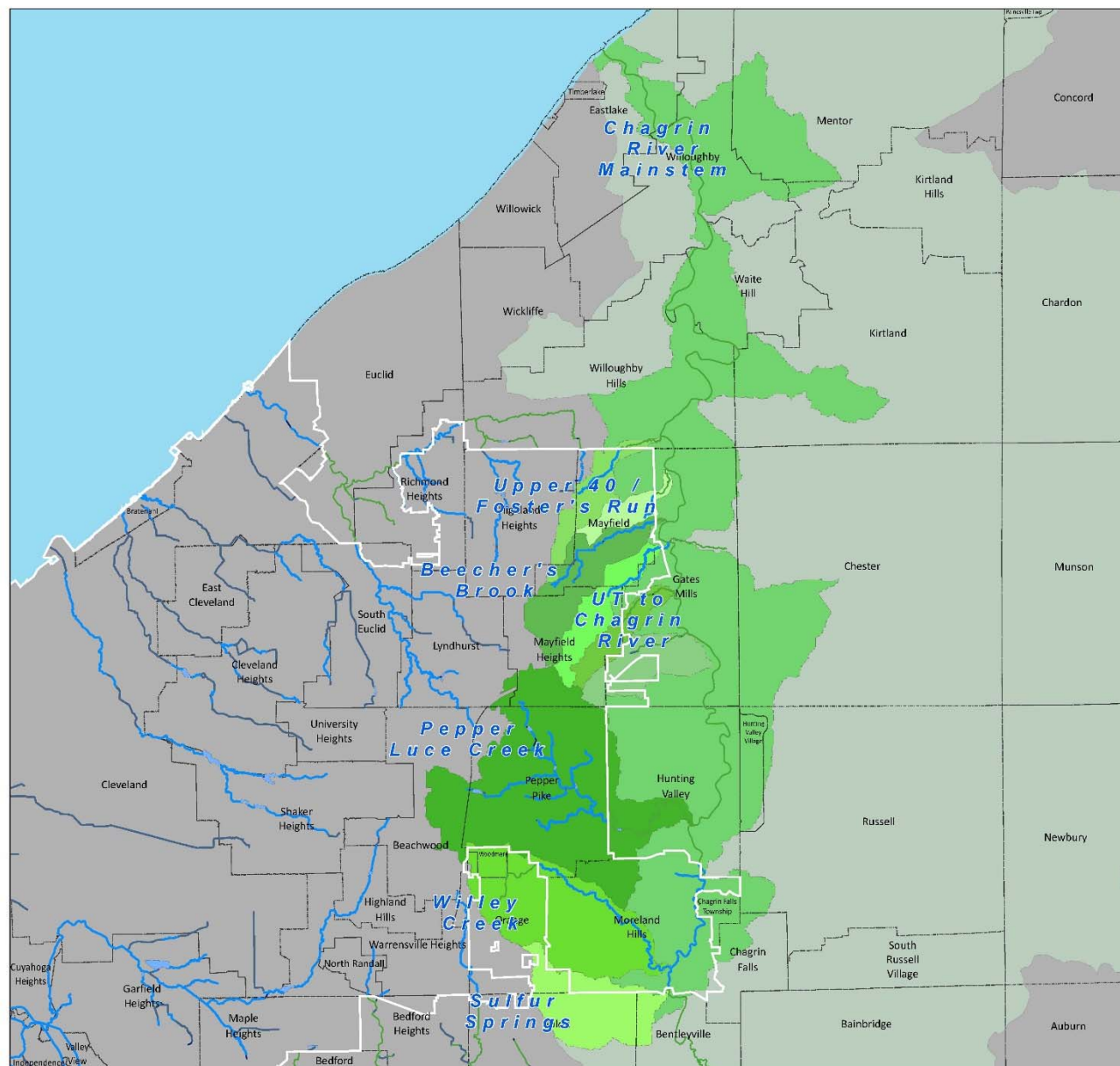
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Stormwater Program: Community Resources

<http://www.neorsd.org/communitystormwaterresources.php>



Chagrin River Watershed

-  Regional Stormwater System in NEORS Service Area
-  Regional Stormwater System not in NEORS Service Area
-  Service Area
-  Community
-  District Culverted Stream



**Northeast Ohio
Regional Sewer District**

Coordinate System : Ohio State Plane North
Datum: NAD 1983 , NAVD 1988
Projection: Lambert Conformal Conic
Sources: NEORS GIS



Map Created: March 2017

1:54,785

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