

Rocky River Watershed

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



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

Map Created: October 2016 1:66,551 

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NORTHEAST OHIO REGIONAL SEWER DISTRICT



REGIONAL
STORMWATER
MANAGEMENT
PROGRAM

Regional Stormwater Management Program: Watershed Advisory Committee Rocky River October 27, 2016



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Agenda

- Welcome
- Program Updates
- Community Cost-Share
- Stormwater Construction Plan
- Stormwater Master Plans
- Phase II Stormwater Services
- What's Next

Watershed Advisory Committees

- Meets March and October
- Members: Member Community, Public Agency with control of infrastructure in the watershed
- Interested Entities: Watershed Groups, Land Conservancies

Watershed Advisory Committees

- Mechanism to provide input on Programs:
 - Stormwater Master Plans
 - Stormwater Construction Plan
 - Inspection, Operation and Maintenance Activities
 - NPDES Phase II Assistance



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Agenda

- Welcome
- Program Updates
 - Stormwater Fee Billing and Credits
 - Stormwater I&M
 - Stormwater Management Plan Review
- Community Cost-Share
- Stormwater Construction Plan
- Stormwater Master Plans
- Phase II Stormwater Services
- What's Next

Stormwater Fee Billing

- 2nd round of stormwater bills started in October
- Monthly billing begins in January
 - Stormwater Only bills will remain quarterly

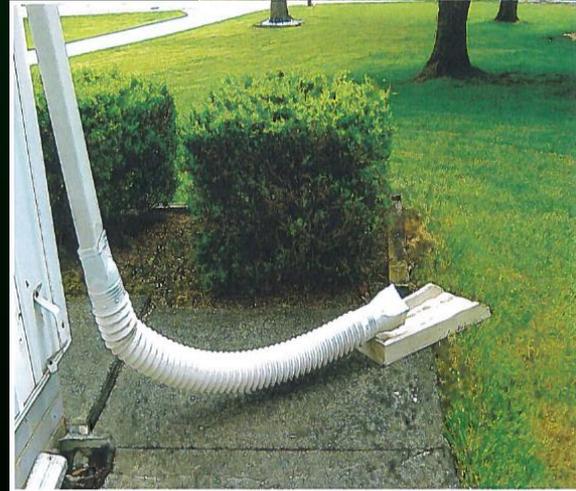


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Stormwater Fee Credits

- Stormwater Fee Credits
2013 to 10/5/2016
 - Approved: 1240
 - Pending Review: 210
 - Denied: 144
 - Incomplete: 35



Title V – SW Mgm't Plan Review

Member Community Responsibilities

- Submit/cause to submit SW mgm't plans to the Sewer District within 7 days of your receipt of plans
- Ensure minimum standards are used for design, including all applicable federal and state regulations
- Adopt minimum stormwater design and programmatic standards consistent with Ohio EPA NPDES MS4 and CGP Permits
- Update the Sewer District when your stormwater management regulations are revised



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Title V – SW Mgm't Plan Review

Sewer District Responsibilities

- Review submissions with respect to flooding, erosion and water quality issues
- Provide review comments within 15 business days of receiving a **complete** SW Mgm't Plan
- Ensure SCMs meet minimum design standards - maximize future credits opportunities
- **Sewer District comments are advisory only and are non-binding on the Member Community and the applicant**



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Stormwater Inspection and Maintenance Rocky River Fall 2016 Update



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Rocky River Watershed 2016 Inspections

	Rocky River
PM	33
FO	7
SE	29
ER	0
	69

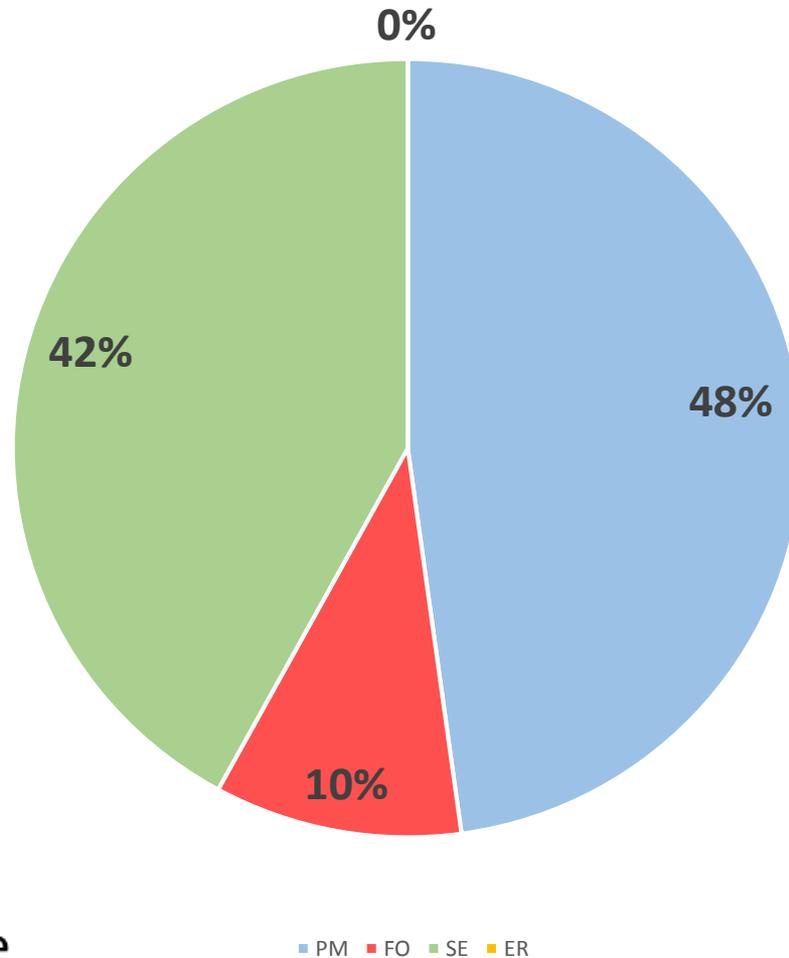
Legend:

SE = Customer Call

PM = Planned Inspection

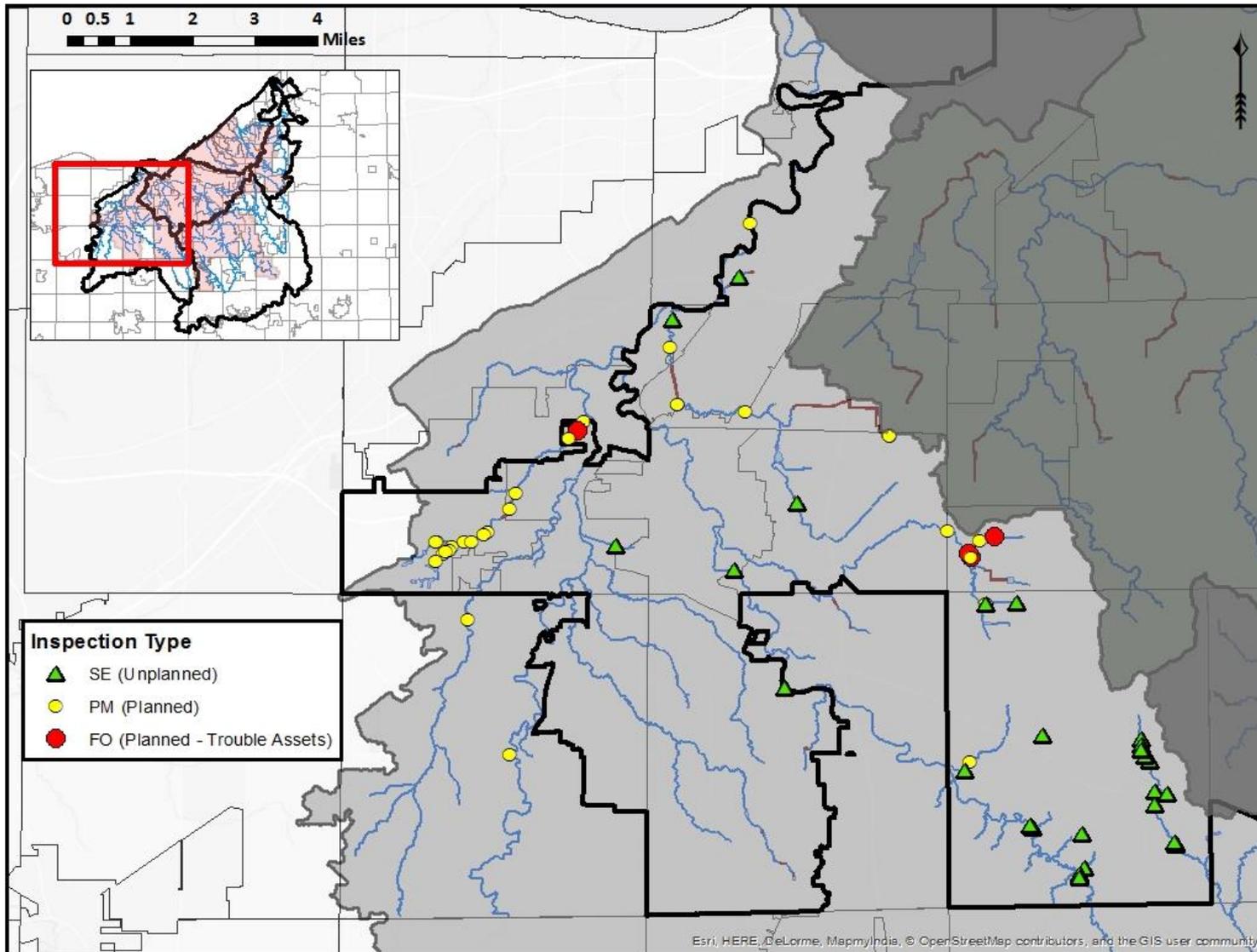
FO = Follow-up on a
Problem Asset

ER = Emergency Response



Rocky River Watershed

2016 Completed Inspections



Minnie Creek

Asset ID: MN00070B (Olmsted Falls)



Structural Integrity
Streambank Erosion

Recommendation
Further Analysis
Monitoring



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Abram Creek

Asset ID: AC00163 (Middleburg Heights)



Structural Integrity
Pipe Invert Beginning to
Fail

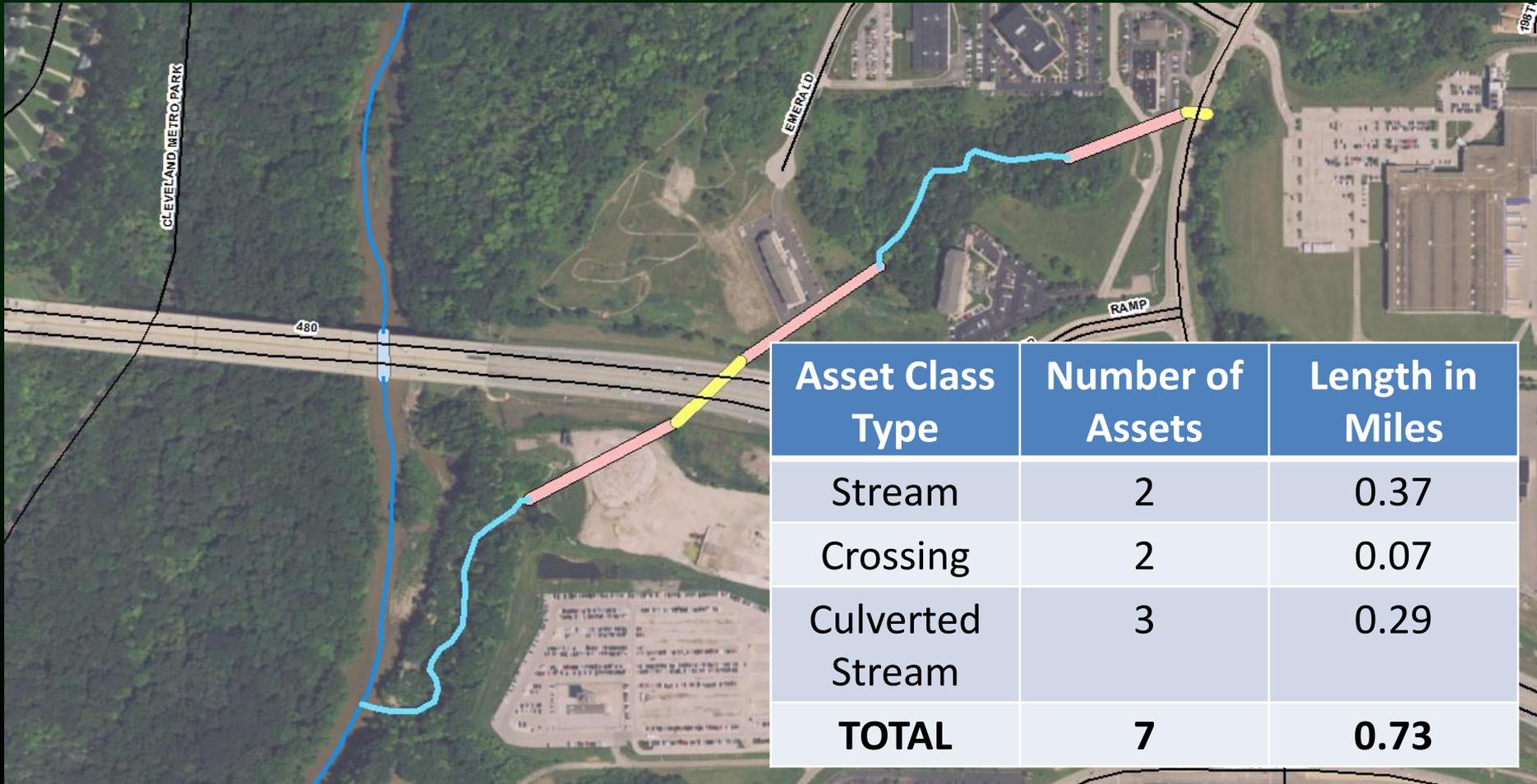
Recommendation
Further Analysis
Monitoring



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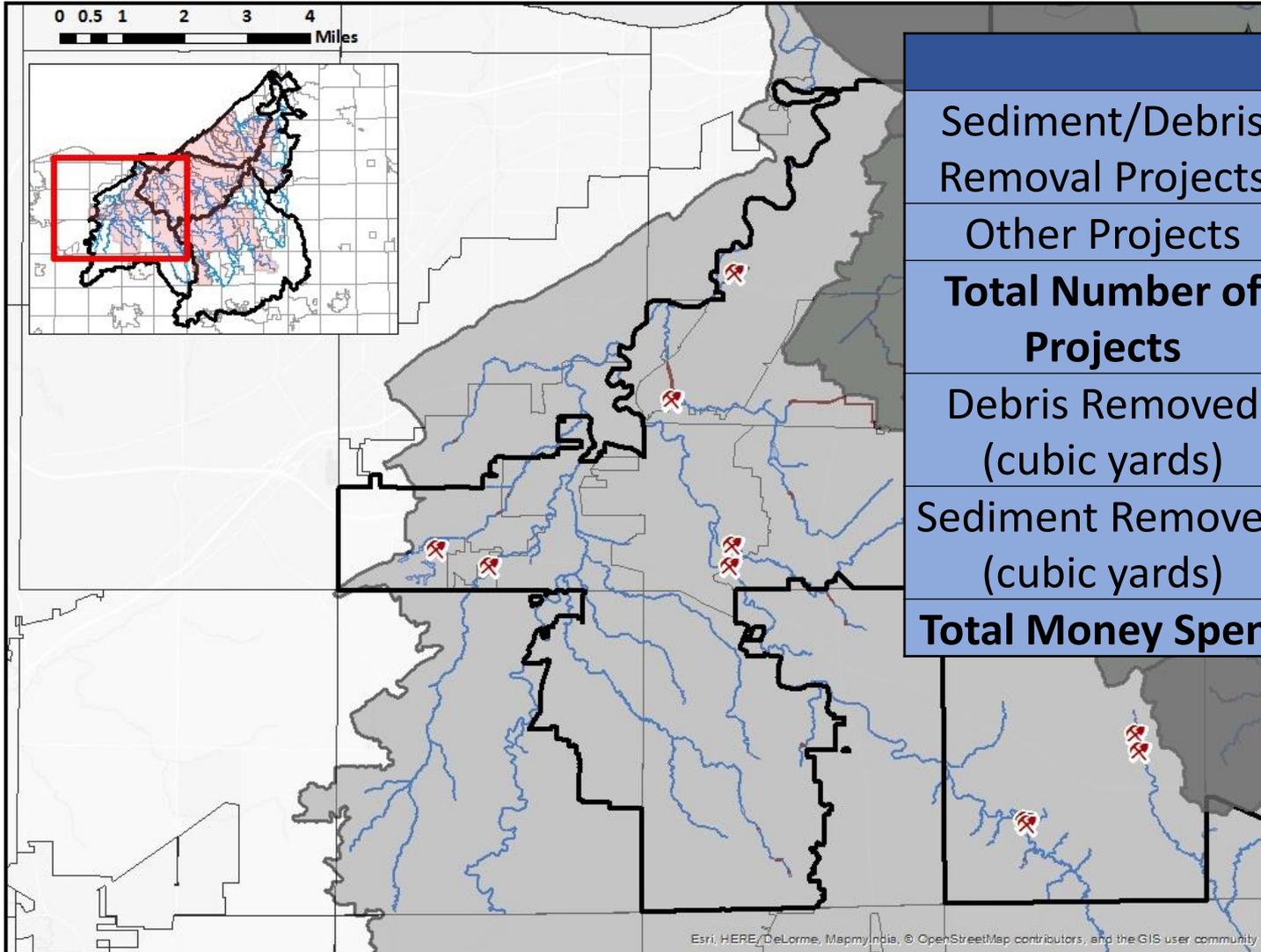


New Regional Stormwater System Assets Emerald Parkway (Cleveland)



Rocky River Watershed

2016 Completed Maintenance Projects



	Rocky River
Sediment/Debris Removal Projects	10
Other Projects	1
Total Number of Projects	11
Debris Removed (cubic yards)	346
Sediment Removed (cubic yards)	0
Total Money Spent	\$113,730.00

Debris Maintenance

BD00214 Baldwin Creek (Berea)



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Debris Maintenance

AC00016 Abram Creek (Cleveland)

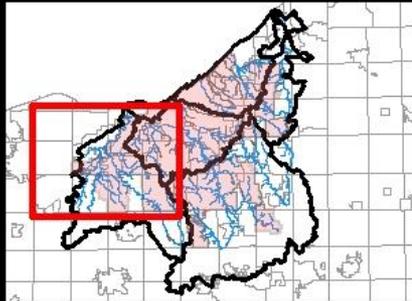


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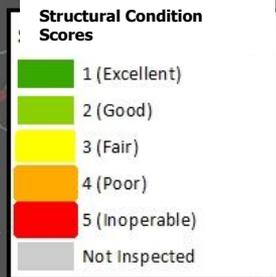


Rocky River Watershed

Structural Integrity Condition Ratings



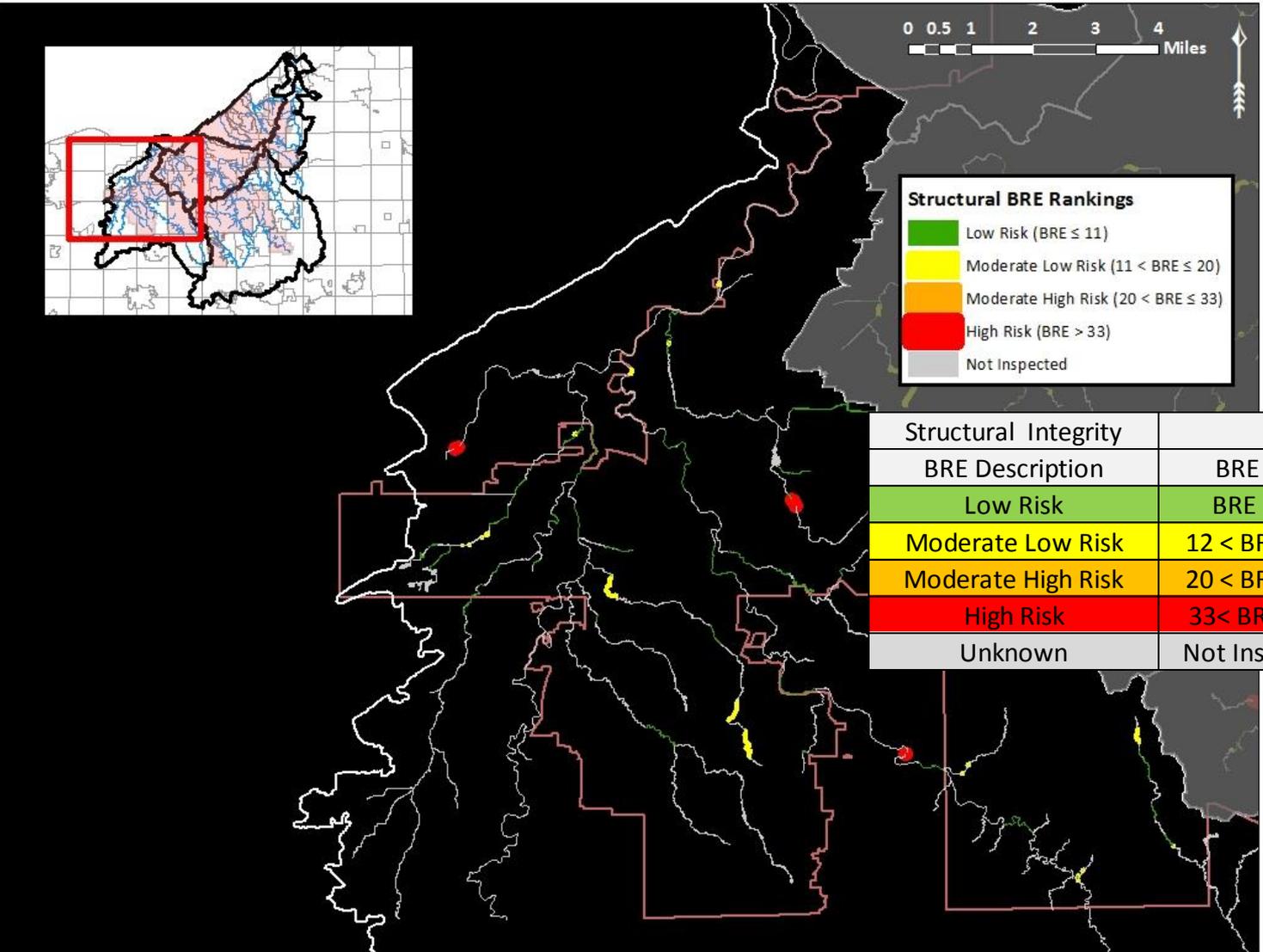
0 0.5 1 2 3 4 Miles



Structural Integrity	Rating	Count	% Total
Excellent	1	83	10%
Good	2	20	3%
Fair	3	15	2%
Poor	4	10	1%
Inoperable	5	6	1%
Unknown	Not Inspected	667	84%

Rocky River Watershed

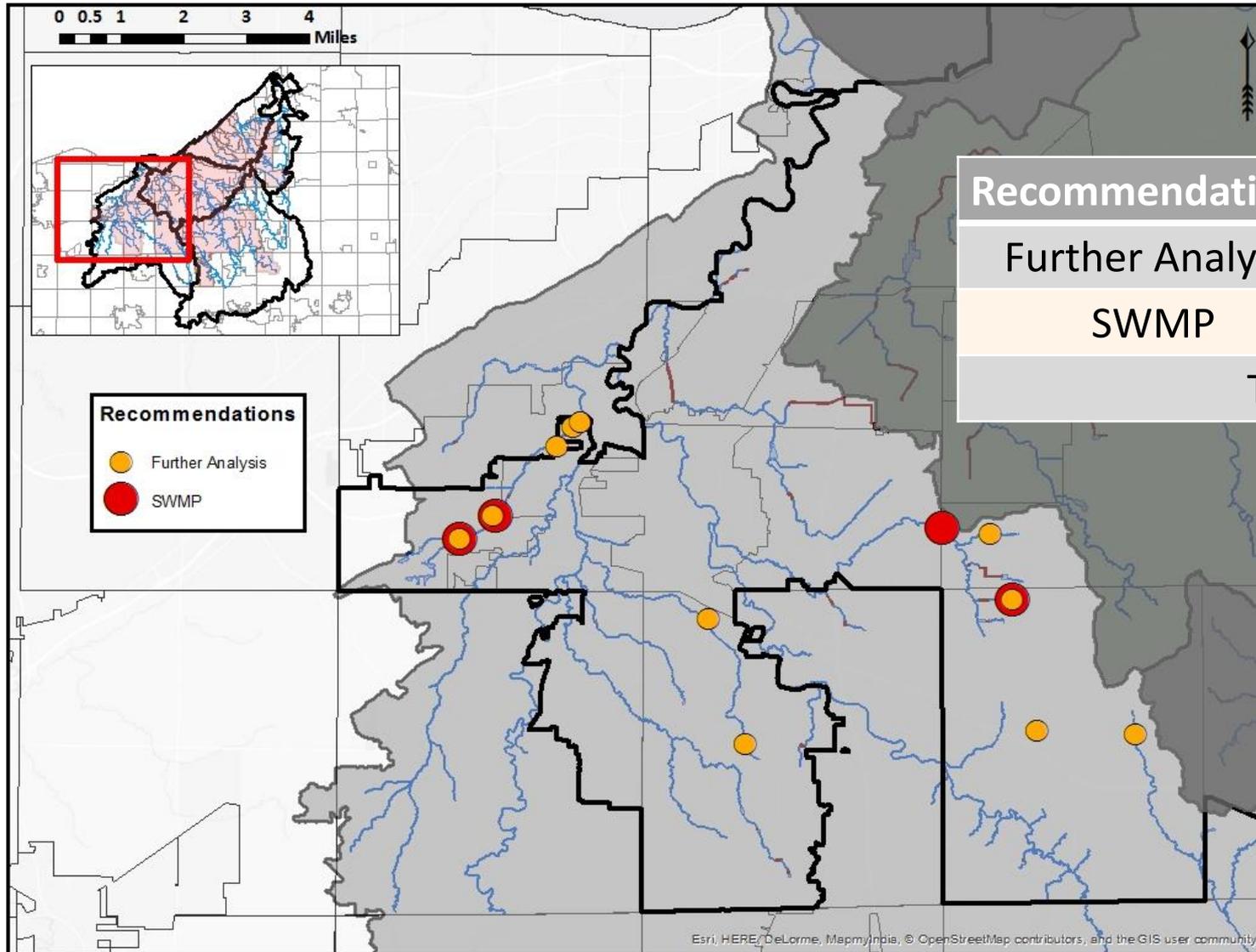
Structural Integrity BRE Rankings



Structural Integrity	BRE Description	BRE Tier	Count	% Total
Low Risk	BRE ≤ 11	BRE < 12	108	14%
Moderate Low Risk	11 < BRE ≤ 20	12 < BRE < 20	23	3%
Moderate High Risk	20 < BRE ≤ 33	20 < BRE < 34	0	0%
High Risk	BRE > 33	33 < BRE < 45	3	0%
Unknown	Not Inspected	Not Inspected	660	83%

Rocky River Watershed

Recommended Further Analysis & SW Master Plan

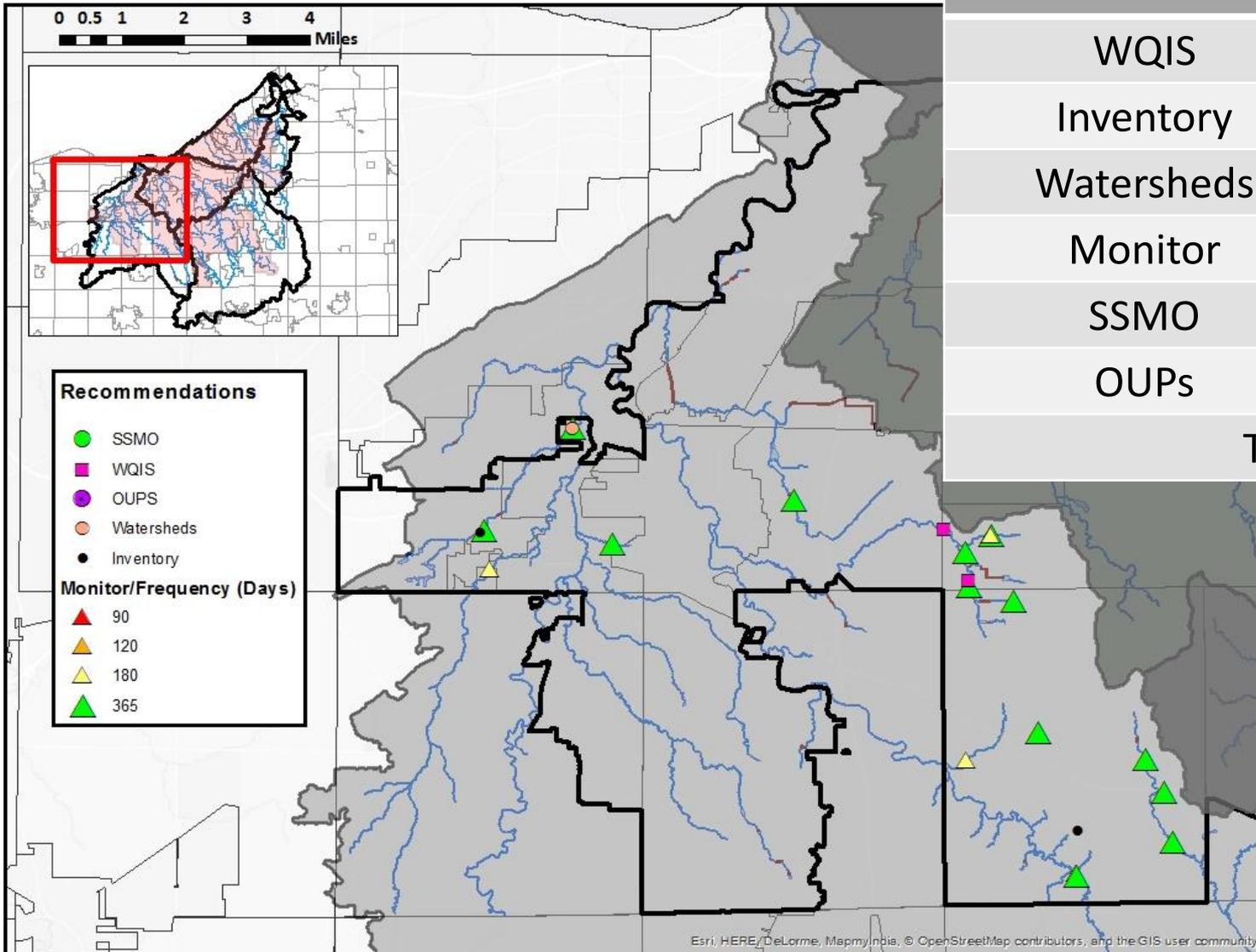


Recommendations	Count
Further Analysis	10
SWMP	4
Total	14

Rocky River Watershed

Recommended Next Steps

Recommendations	Count
WQIS	2
Inventory	2
Watersheds	1
Monitor	16
SSMO	4
OUPs	
Total	21



Stormwater I&M

Next Steps

- Track all recommendations to completion
- Continue inspecting assets without condition scores
- Coordinate with asset owners to collect record drawings and historical inspections



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Stormwater I&M

Next Steps

- 2016 State of the Infrastructure Report
- Inspect assets at the BTU level
- Update storm event inspection routes



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Agenda

- Welcome
- Program Updates
- Community Cost-Share
 - Policy, Application, and Review Process
 - Program Forms
 - Example Projects
- Stormwater Construction Plan
- Stormwater Master Plans
- Phase II Stormwater Services
- What's Next

Community Cost-Share

- \$5,923,528.40 available across communities
- Eleven approved projects, totaling \$559,950.32
- Outreach to communities offering assistance



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Community Cost-Share

- Program Policy
- Process Overview
 - Project Eligibility
 - Ineligible Projects
 - Application Overview
 - Reimbursement Overview



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Community Cost-Share

- Program Forms
 - Application
 - Progress Report
 - Budget Modification Request
 - Reimbursement Request
 - Cover Sheet
 - Deliverable Expense Worksheet



Community Cost-Share Community Resources Website

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



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**Community Cost-Share Program
APPLICATION**

Member Community Information

Community: _____

Primary Project Contact:
(Name & Title) _____

Mailing Address: _____

Phone Number: _____

Email: _____

Project Information

Project Title: _____

Address or Location of Project: _____

Project Start Date: _____

Project End Date: _____

Community Cost-Share Fund Request: _____

Submission Date: _____



Community Cost-Share

- Application...
 - Project Narrative (1,000 words)
 - Ability to Provide Long-Term Maintenance (500 words)
 - Visibility & Public Outreach (500 words)
 - Budget Summary
- Vendor Registration



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Vendor Registration

Prior to submission, ensure that the Member Community is a registered vendor with the District. Vendor Registration can be done by accessing http://www.neorsd.org/isupplier_homepage.php and completing the New Vendor Registration. If unsure of the Member Community vendor status, by initiating the New Vendor Registration a message of active registration will appear if currently registered as a vendor.

Project Budget

Project Expenses	Community Cost-Share Expense	Line Item Description
Professional Services		
Personnel <i>(Member Community staff only)</i>		
Subcontract		
Equipment		
Materials		
Other		
TOTAL	\$	



Community Cost-Share

- Agreement
 - Template agreement tailored to project request
 - Legal review and execution timing
 - Projects must be pre-approved to be eligible for reimbursement



Community Cost-Share

Garfield Heights

- ***East 135th Sanitary Sewer Replacement***
- Acute SSO/Illicit Discharge
- 8" sanitary sewer / excavation / roadway repair
- ***\$131,022.94 approved***
- Budget Modification Request for increased costs



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Community Cost-Share

Parma

- ***Coventry-West Creek Impervious Surface Removal***
- Chronic sewage-stormwater basement flooding adjacent to West Creek tributary
- Demolition of 3 single-family homes (10,030 sq.ft. of IA)
- ***\$37,023.90 approved w/ budget modification***
- Budget Modification Request for increased costs



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Community Cost-Share



Your

Questions



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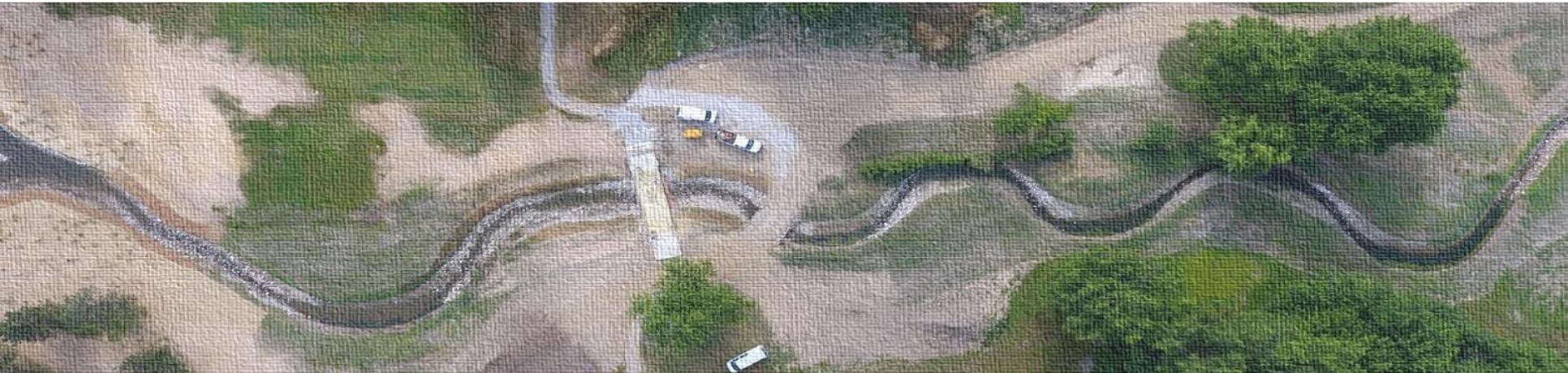


Agenda

- Welcome
- Program Updates
- Community Cost-Share
- Stormwater Construction Plan
 - Status of 2016 Projects
 - Proposed Near Term Projects
- Stormwater Master Plans
- Phase II Stormwater Services
- What's Next



2016 CONSTRUCTION PLAN





STORMWATER CONSTRUCTION PLAN 2016 STATUS UPDATE



Stormwater Construction Plan: 2016

Procurement Design Construction

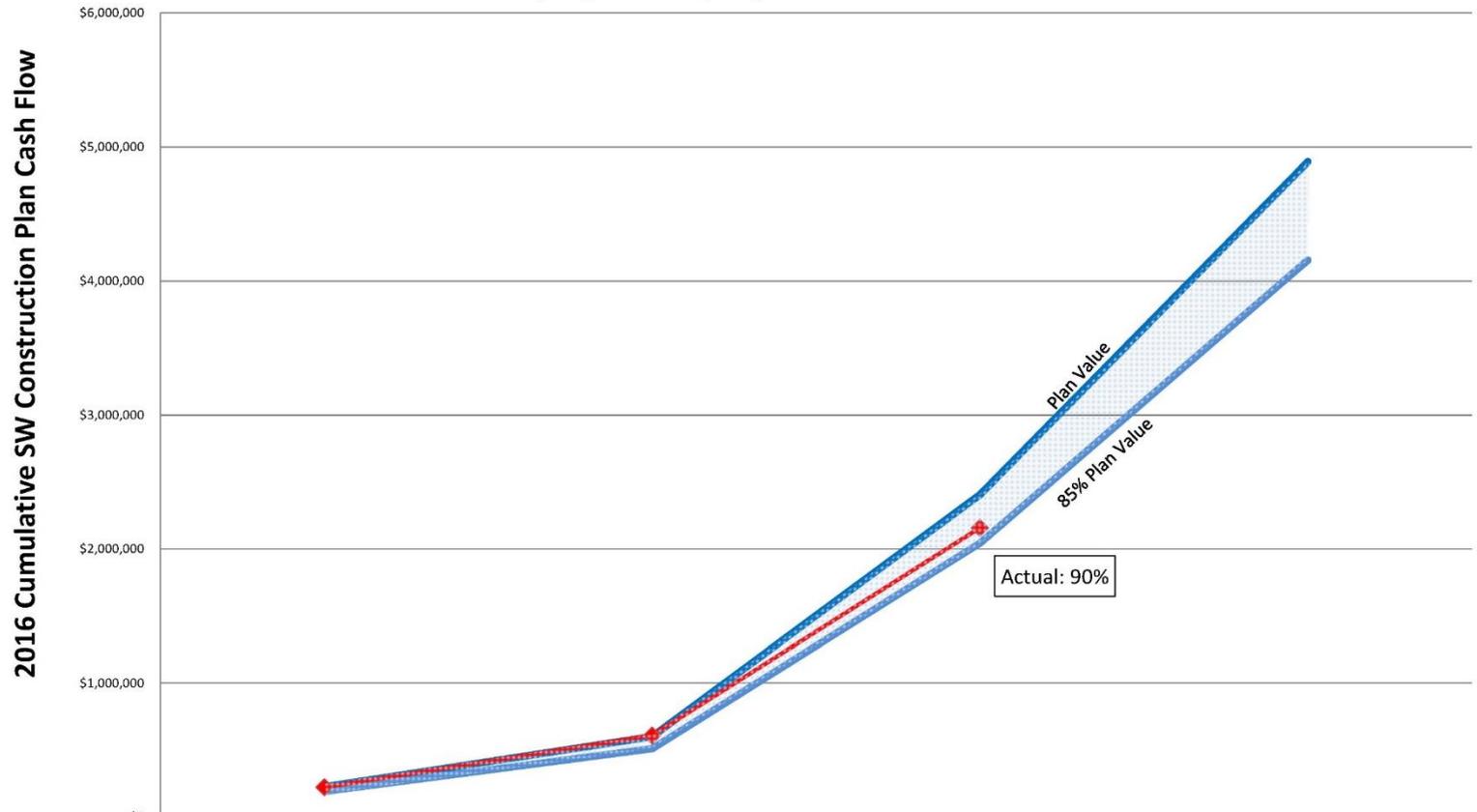
Status at close of Q3		Estimated Construction Cost	Procurement	Design	Construction
1311	Highland Park Golf Course Stream Restoration Other Funding (grants, wastewater budget, community funded, etc.)	\$1,700,000			Tracking to meet substantial completion date of 11/23/2016. 97%
1413	Chevrolet Blvd. Detention Basin Other Funding (grants, wastewater budget, community funded, etc.)	\$1,702,405			Met substantial completion date of 10/26/2015. 100%
1487	Shaw Brook Culverted Stream Rehabilitation Other Funding (grants, wastewater budget, community funded, etc.)	\$950,000		On schedule 100%	
1364	Euclid Creek Concrete Spillway EC00008	\$362,097		100%	
1365	Shaker - Green Lake Dredging DB00101	\$2,700,000		98%	On schedule
1320	Shaker Lakes Dam Rehabilitations DB00056 & DB00101	\$3,600,000		90%	
1410	Doan Brook Stream Stabilization DB00029 & DB00021	\$2,350,000		On schedule 30%	
1411	Big Creek Stabilization BC00032	\$6,000,000		20%	Tracking behind schedule due to coordination issues with CSX Railroad.
1409	Colombo Park BC00299	\$1,000,000		30%	Design NTP approximately 3.3 months behind but expect to meet overall schedule by construction award.
1412	Cuyahoga River at Towpath Bank Stabilization CR00132	\$1,500,000		On schedule 50%	
1369	Beechers Brook and Pepper Creek Bank Stabilization CW00021 & CW00146	\$2,750,000	60%		Advanced commencement of procurement. Approximately 6 months ahead of schedule.
1490	Hemlock Creek Bank Stabilization	\$1,500,000	80%		Advanced commencement of procurement. Approximately 3 months ahead of schedule.
1491	Mill Creek Bank Stabilization MC00125	\$1,000,000	80%		Advanced commencement of procurement. Approximately 3 months ahead of schedule.
TBD	Baldwin Ck Bank Stabilization BD00259, BD00257	\$1,200,000	5%		
TBD	Baldwin Ck Bank Stabilization BD00297	\$300,000	5%		
TBD	Emerald Parkway Culvert Rehabilitation	\$2,000,000			This is project will most likely have a short term repair as well as a long-term, permanent solution.



STORMWATER CONSTRUCTION PLAN 2016 PROJECTS



**Total Stormwater Construction Plan
(Planning, Design, & Construction)
Cash Flow Projection
Qtr 1, 2016 - Qtr 4, 2016**



	Qtr 1, 2016	Qtr 2, 2016	Qtr 3, 2016	Qtr 4, 2016
Cumulative SW Construction Plan: Plan Value	\$225,953	\$600,635	\$2,405,366	\$4,890,583
Cumulative SW Construction Plan: 85% Plan Value	\$192,060	\$510,540	\$2,044,561	\$4,156,996
Cumulative SW Construction Plan: Actual	\$222,103	\$609,144	\$2,157,615	



STORMWATER CONSTRUCTION PLAN 2016 PROJECTS



Northeast Ohio
Regional Sewer District

2016 Stormwater Construction Plan

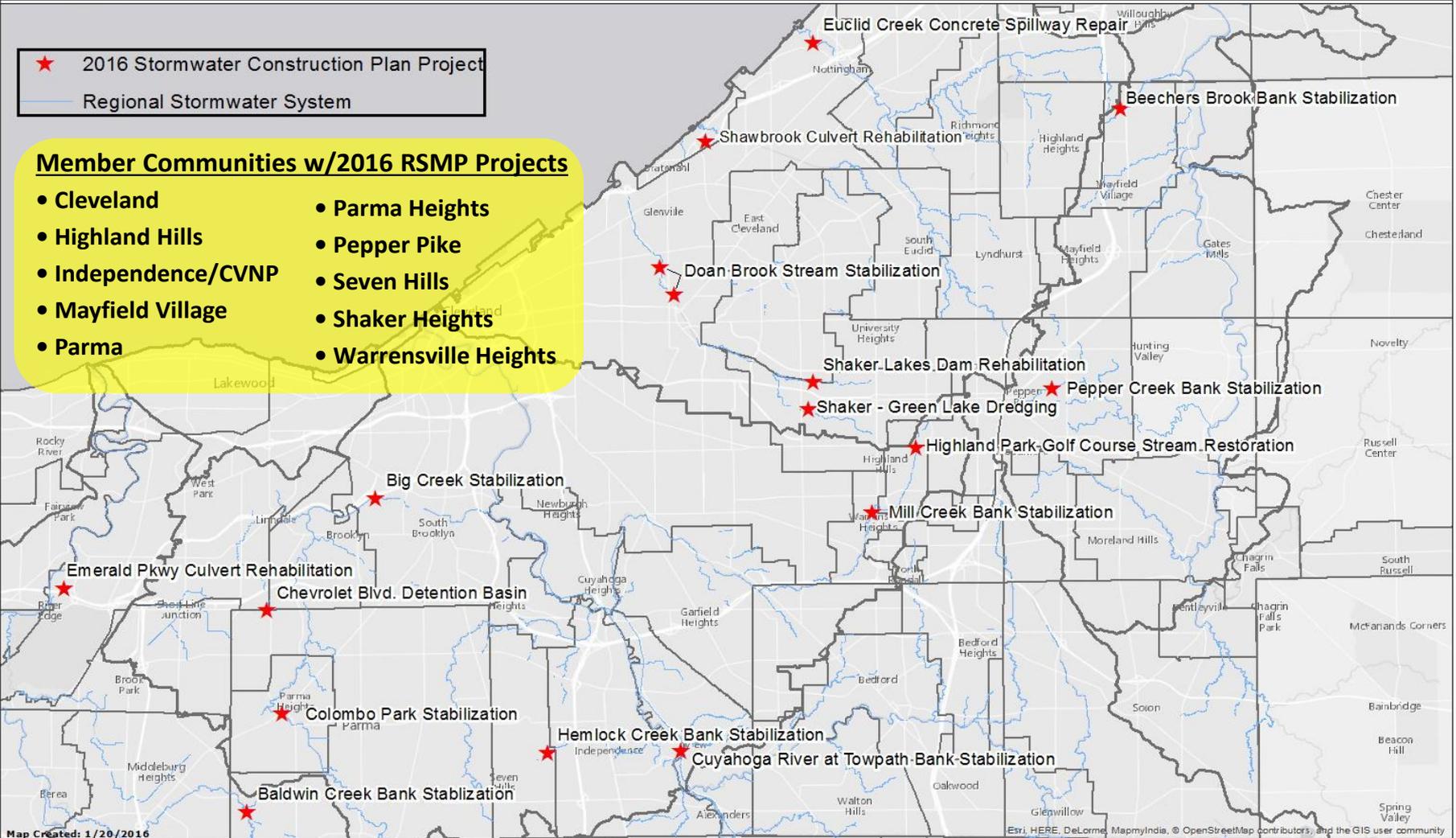
1:115,000



- ★ 2016 Stormwater Construction Plan Project
- Regional Stormwater System

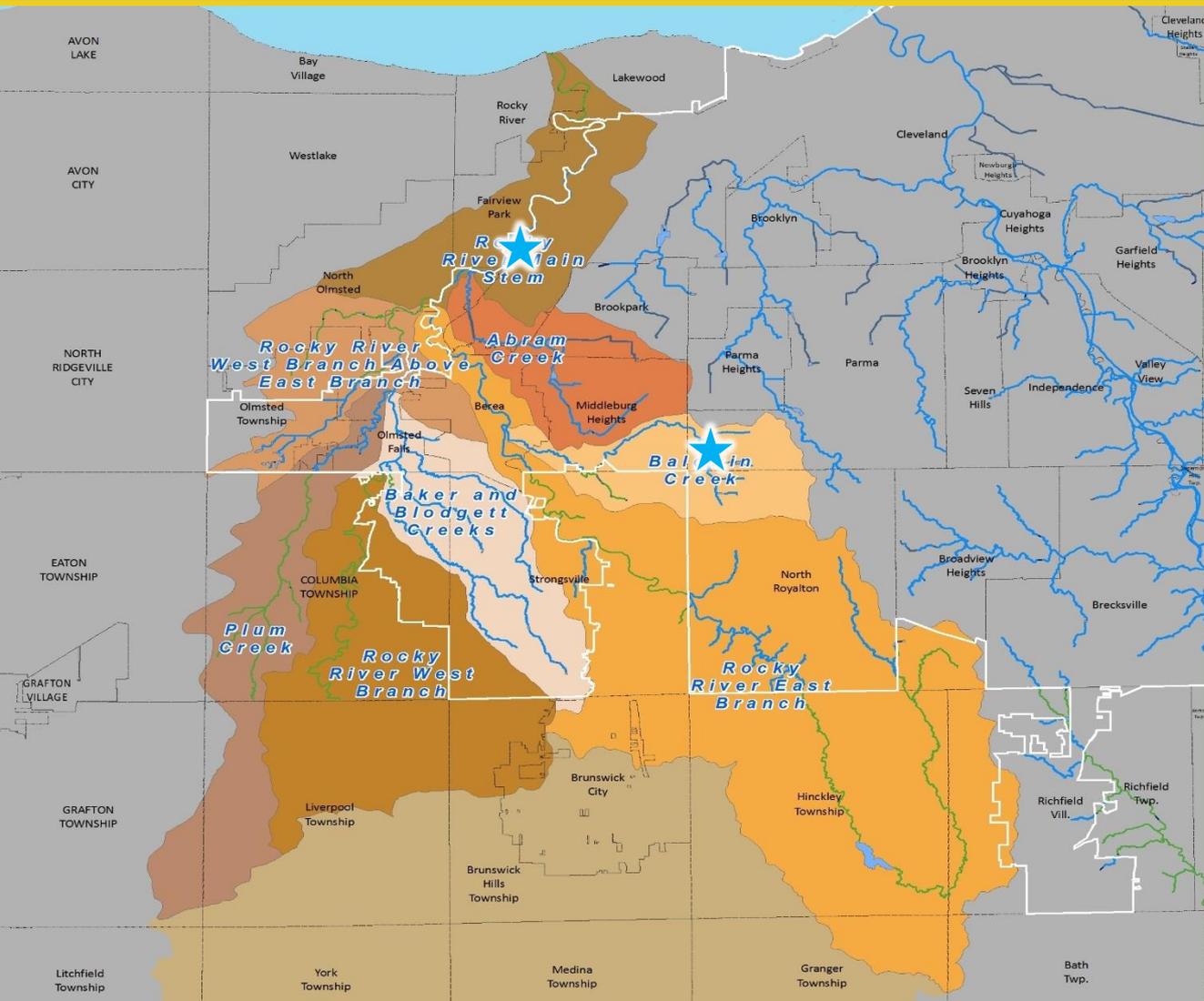
Member Communities w/2016 RSMP Projects

- Cleveland
- Highland Hills
- Independence/CVNP
- Mayfield Village
- Parma
- Parma Heights
- Pepper Pike
- Seven Hills
- Shaker Heights
- Warrensville Heights





STORMWATER CONSTRUCTION PLAN 2016 PROJECTS



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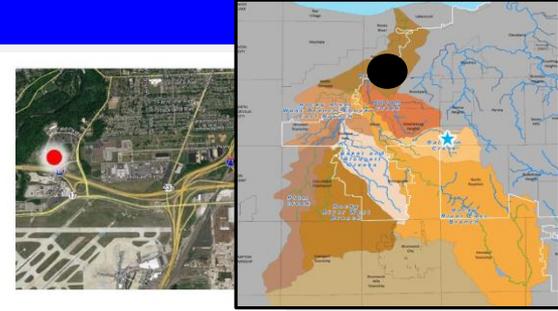
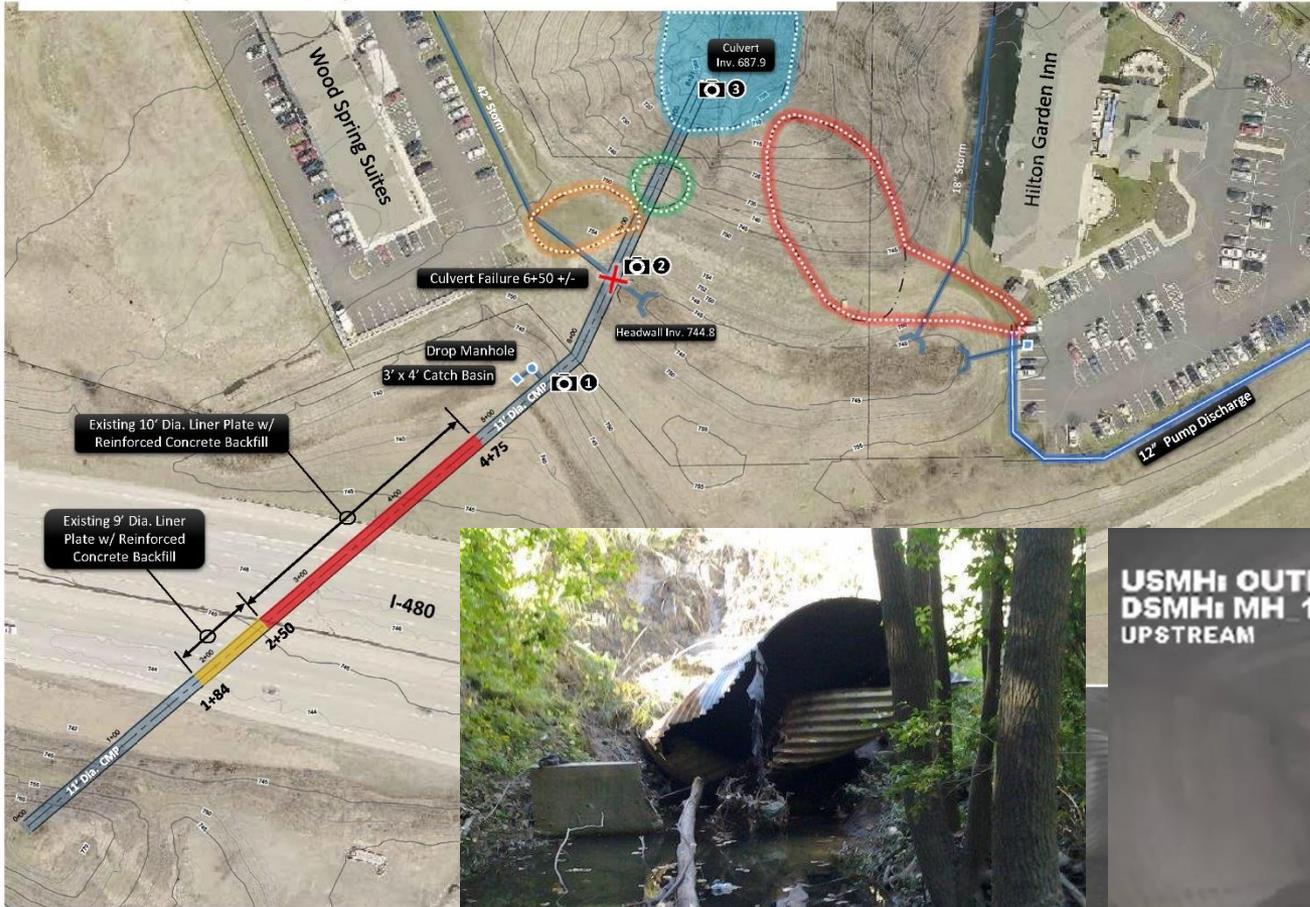
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design

EMERALD PKWY EMERGENCY CULVERT REPLACEMENT



-  Area of Visible Ground Movement
-  Sink Hole
-  Limits of Pumping Operation
-  Retained Water

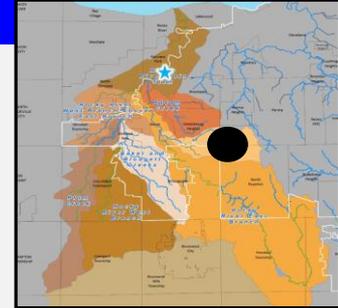


USMH_i OUTFALL 1
DSMH_i MH 1
UPSTREAM



design

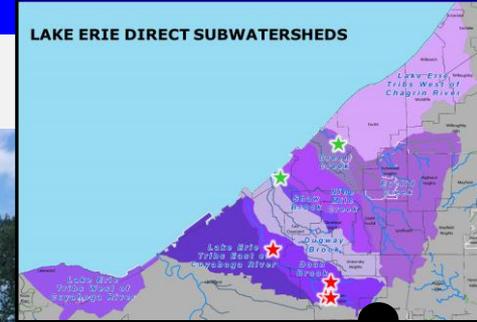
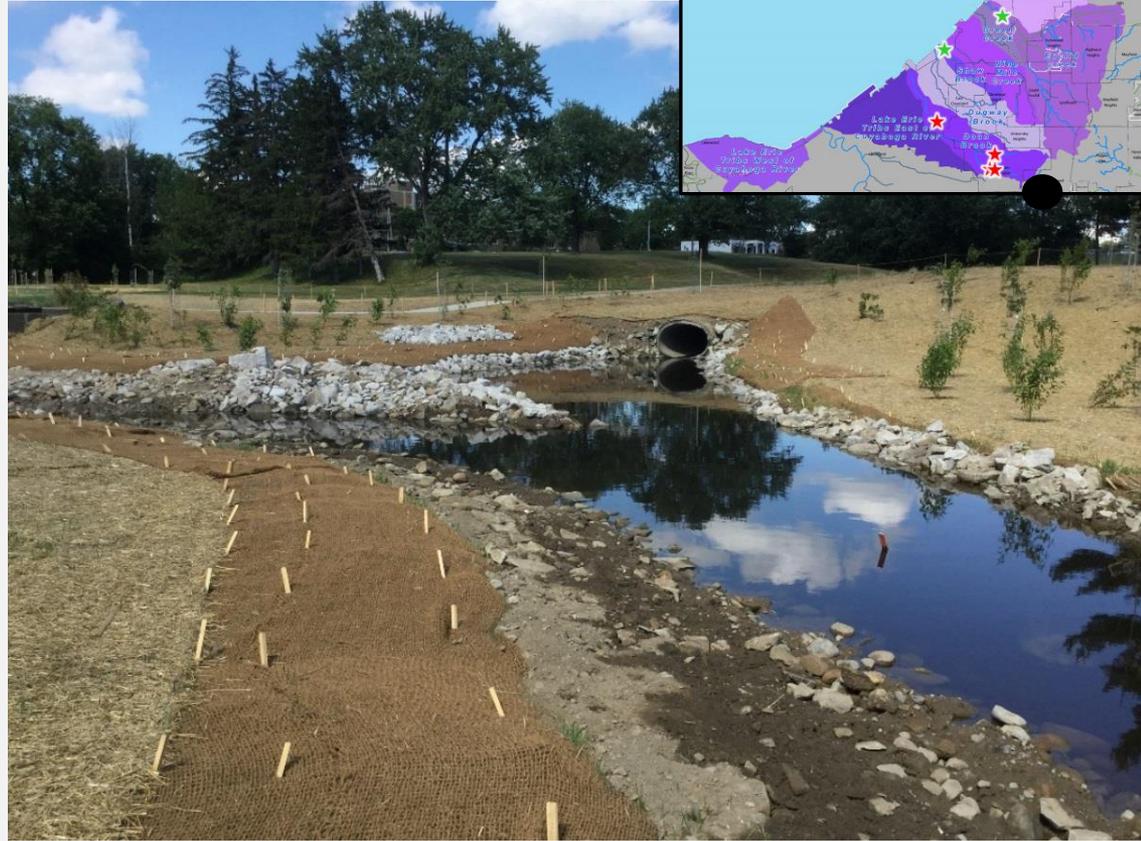
BALDWIN CREEK BANK STABILIZATION





construction

HIGHLAND PARK GOLF COURSE STREAM RESTORATION





construction

HIGHLAND PARK GOLF COURSE STREAM RESTORATION



Highland Park Golf Course Stream Restoration Project

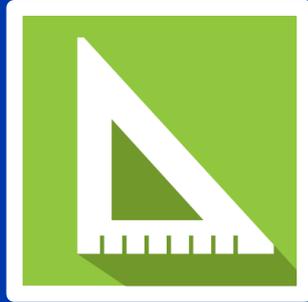


PROJECT COST: \$1,699,400

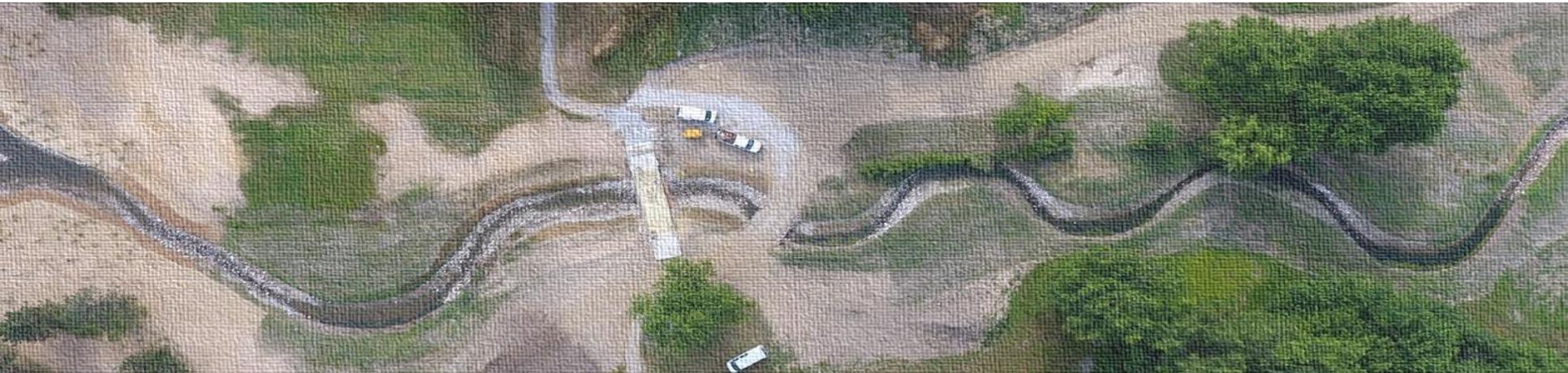
Funded by the Ohio EPA Water Resource Restoration Sponsor Program, the Northeast Ohio Regional Sewer District, and the US Forest Service



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QUESTIONS





Doan Brook Stream Enhancement, Cleveland

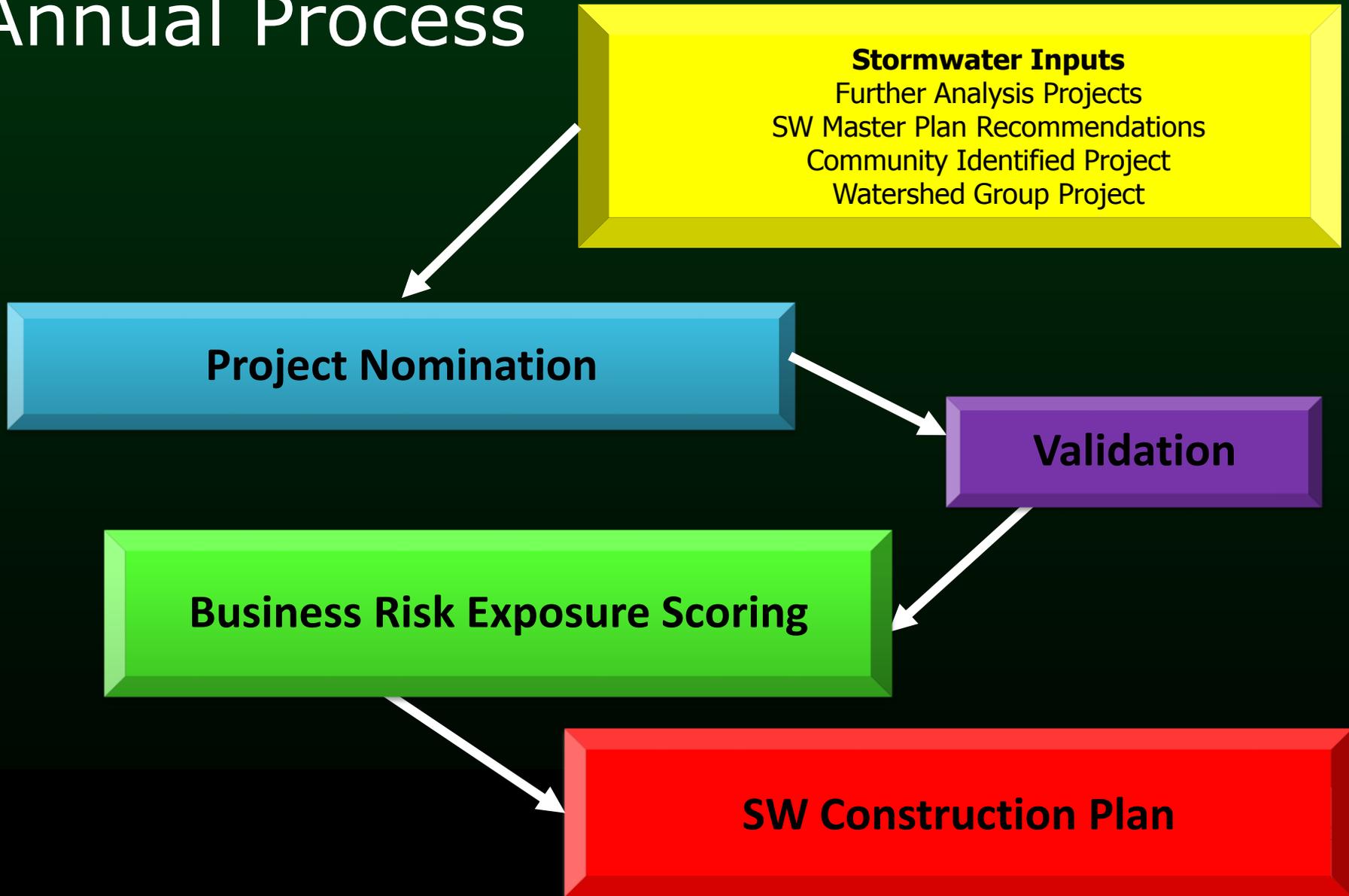
Stormwater Construction Plan Proposed Projects



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Stormwater Construction Plan Annual Process



Community Identified Project

Submit Project information to the Sewer District

- Budget
- Project Summary
 - Problem being addressed
 - Explanation of the extent of specific improvements along the RSS
 - Site maps



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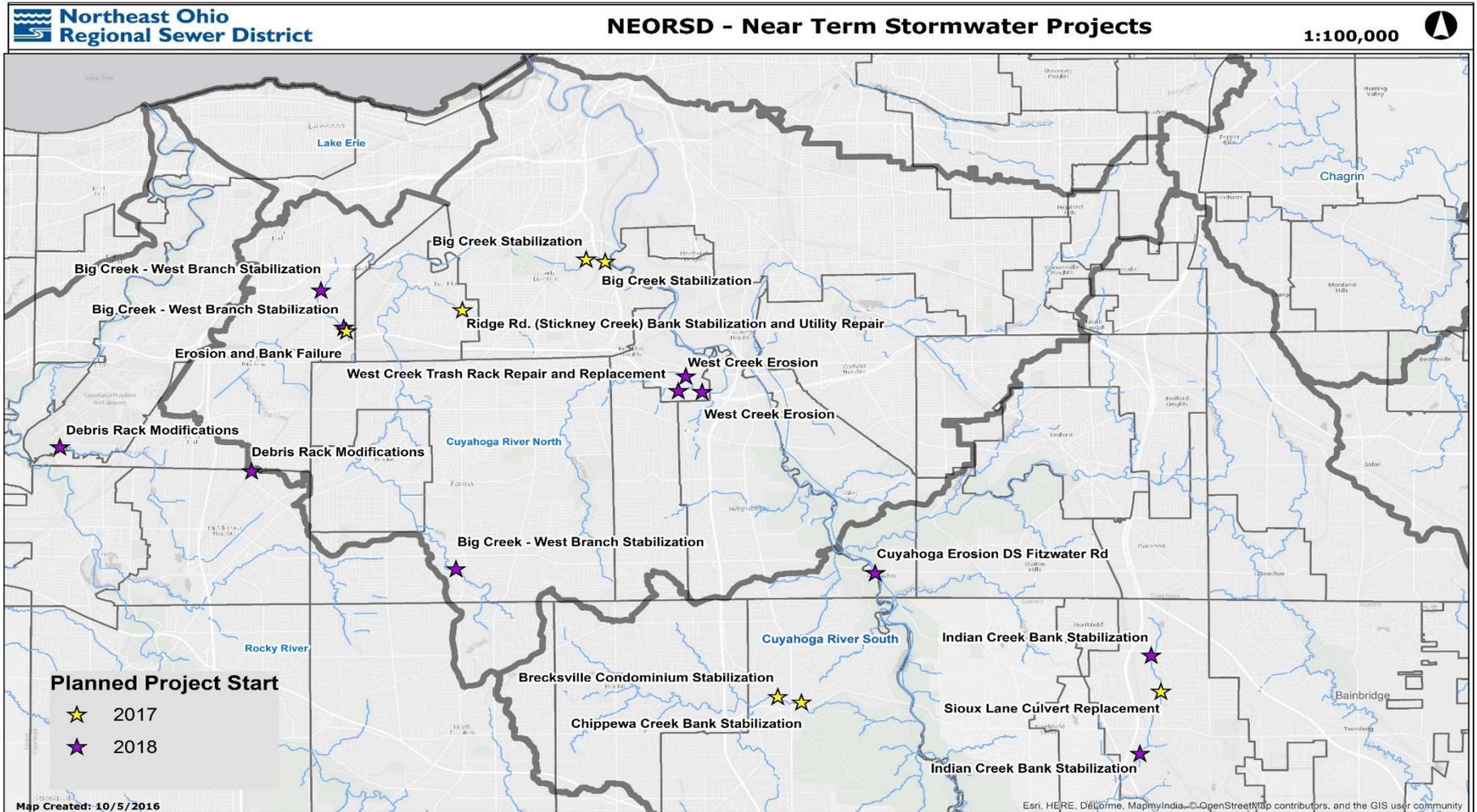


Community Identified Project

- Background Information
 - Studies and planning documents which support the need, and the proposed solution
 - Site geotechnical studies, wetlands, water quality, and listed endangered species
 - Existing and proposed preliminary hydrology and hydraulics
 - Permitting (if initiated)
 - Risks or constraints
 - Known stakeholder outreach or input
 - Current photos of the project site

Stormwater Construction Plan

Proposed Projects



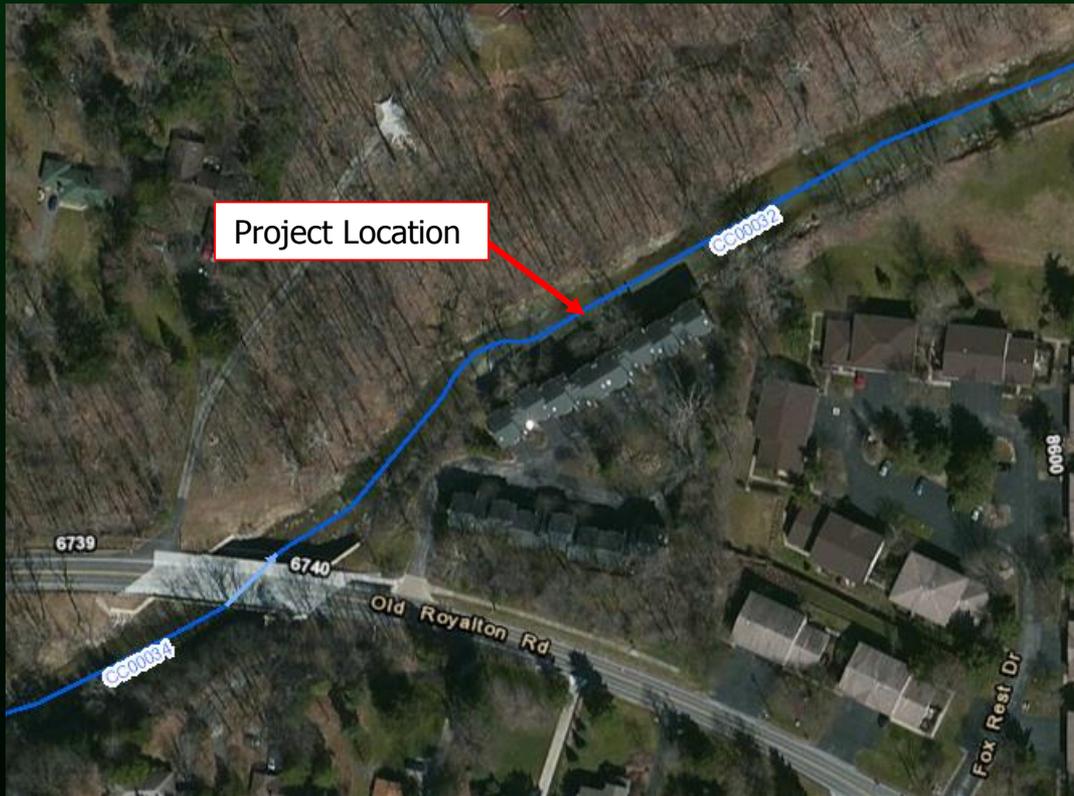
Ridge Road Bank Stabilization Stickney Creek (Brooklyn)



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Condominium Stabilization Chippewa Creek (Brecksville)



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Debris Rack Modification Abram Creek (Cleveland)- 2018



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Questions

Highland Park Golf Course Stream Restoration, Highland Hills

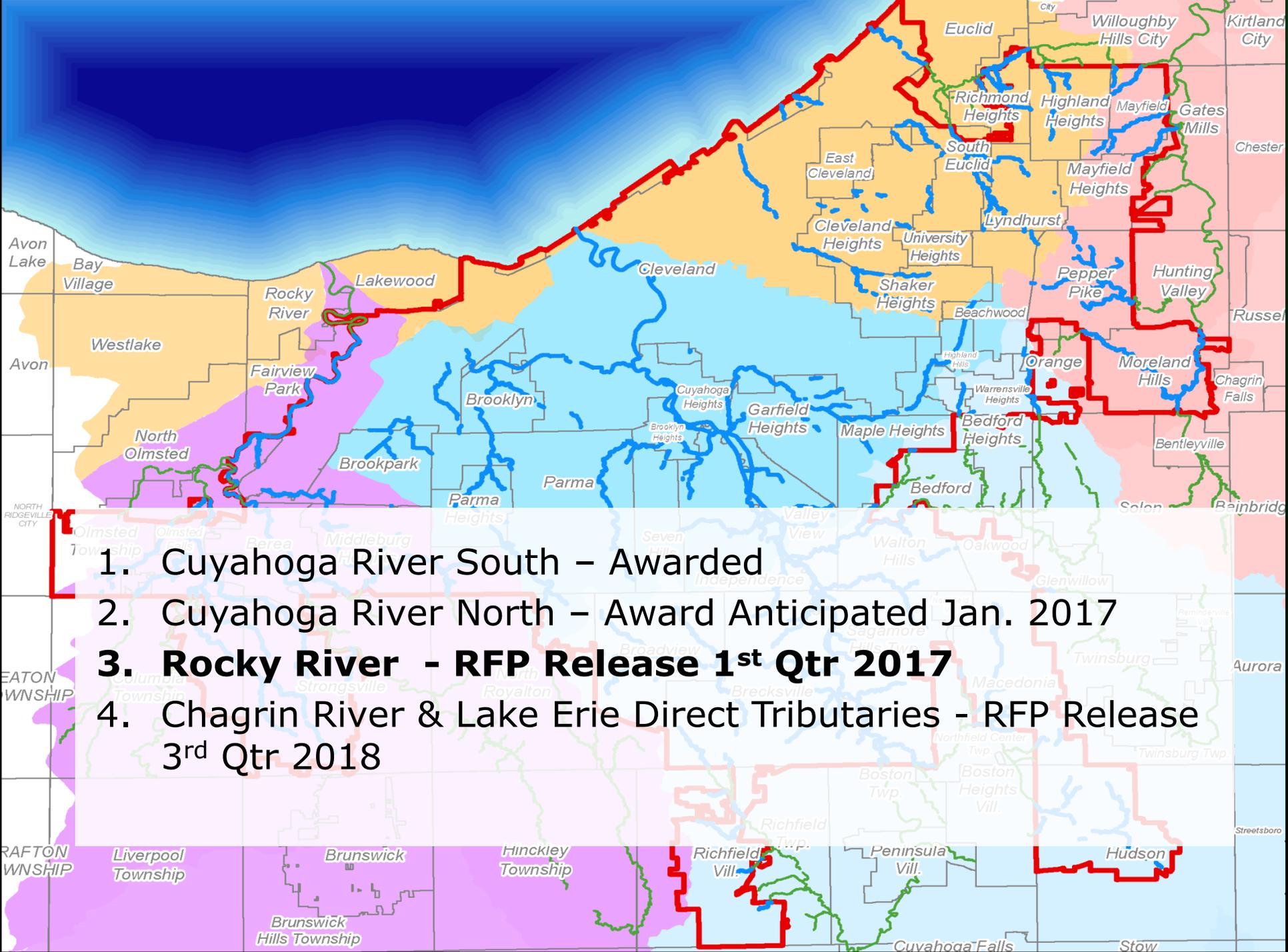
Agenda

- Welcome
- Program Updates
- Community Cost-Share
- Stormwater Construction Plan
- Stormwater Master Plans
 - Schedule
- Phase II Stormwater Services
- What's Next

Stormwater Master Plans

Goals and Objectives

- Operational Performance Evaluation
 - Identify areas of erosion and flooding through a combination of modeling, field assessments, and monitoring including portions of the LSS
- Alternatives Development and Evaluation
 - Comprehensive set of solutions to existing and future problems
- Development of Master Plan
 - Recommendations for policies, construction projects, and maintenance activities



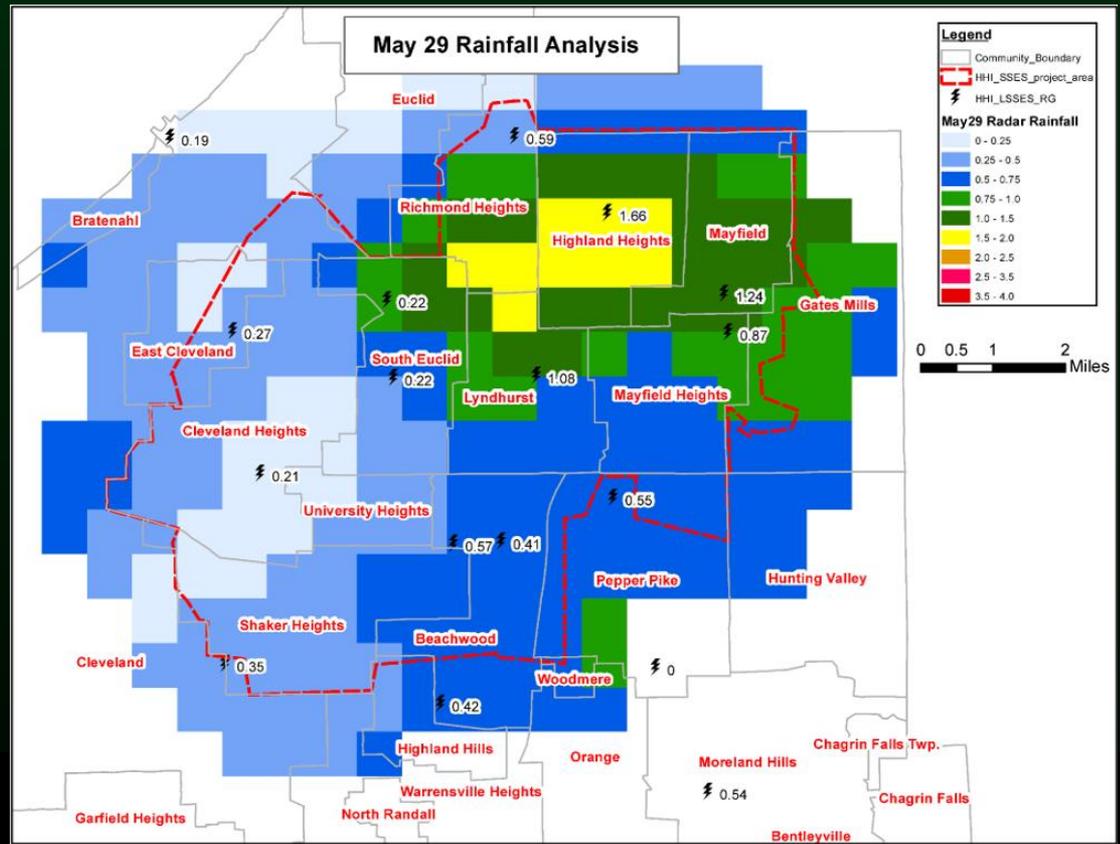
1. Cuyahoga River South – Awarded
2. Cuyahoga River North – Award Anticipated Jan. 2017
- 3. Rocky River - RFP Release 1st Qtr 2017**
4. Chagrin River & Lake Erie Direct Tributaries - RFP Release 3rd Qtr 2018

New Data Sources

LiDAR Data



Radar Rainfall



Cuyahoga River South SWMP

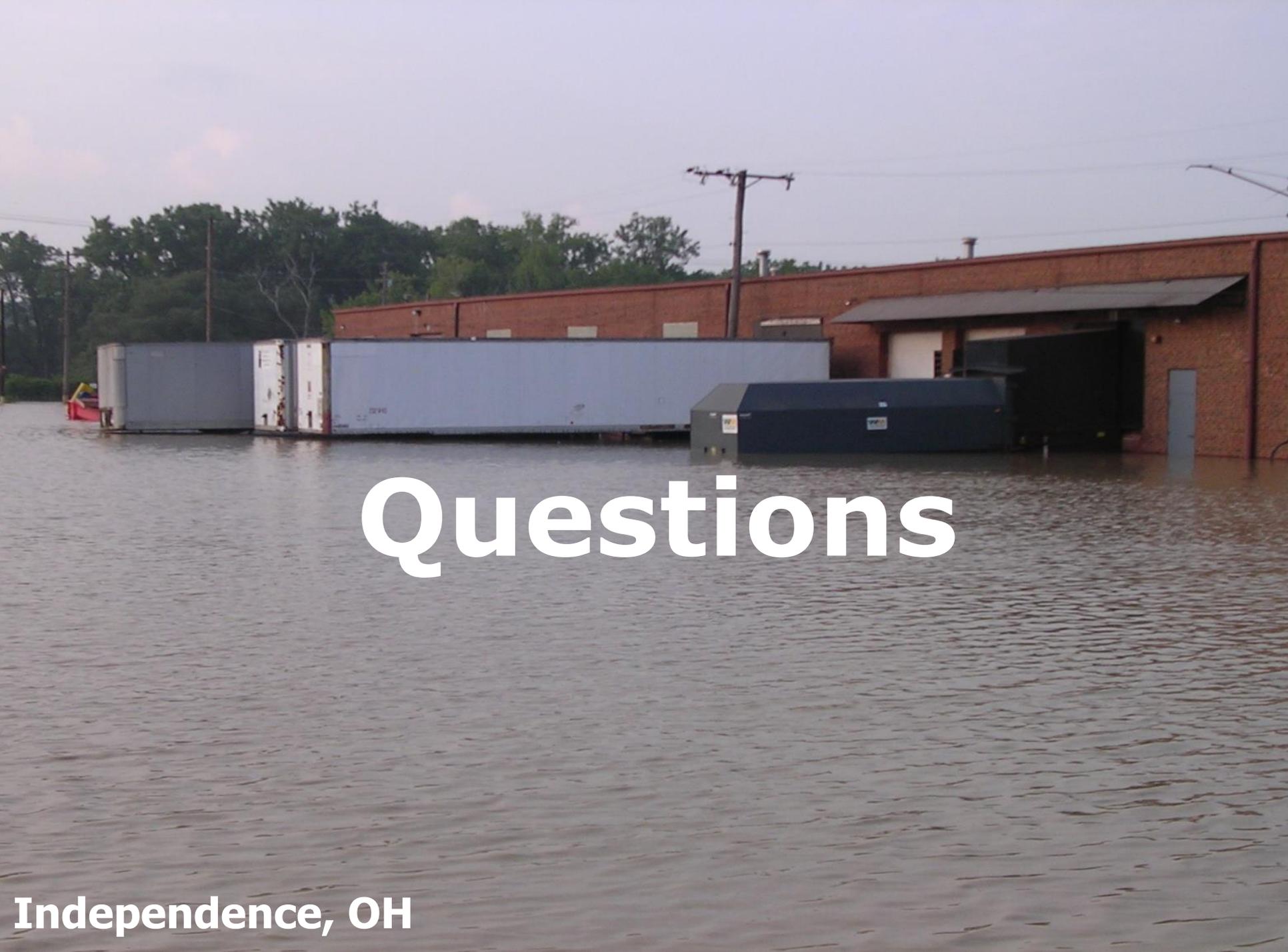
Data Requests/Needs

- Record drawings
- Inspection reports
- Previous studies
- Recent or future projects



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Questions

Independence, OH

Agenda

- Welcome
- Program Updates
- Community Cost-Share
- Stormwater Construction Plan
- Stormwater Master Plans
- Phase II Stormwater Services
 - Service Providers
 - Services to be Provided under RSMP
 - Program Structure
- What's Next

Ohio EPA Stormwater Program “Phase II”

- National Pollutant Discharge Elimination System (**NPDES**) Permit for Municipal Separate Storm Sewer Systems (**MS4s**)
- Requires communities to develop a stormwater management program that includes **Six Minimum Control Measures**
- All Sewer District Member Communities (except Linndale) included



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Six Minimum Control Measures

- MCM #1: Public Education and Outreach
- MCM #2: Public Participation and Involvement
- MCM #3: Illicit Discharge Detection and Elimination
- MCM #4: Construction Site Runoff Control
- MCM #5: Post-Construction Runoff Control
- MCM #6: Pollution Prevention/Good Housekeeping for Municipal Operations



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Sewer District Required to Provide Support to Communities for.....

- 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 Support through Cooperative Agreements with.....

- Cuyahoga County
 - Board of Health
 - Soil & Water Conservation District
- Summit County
 - Combined General Health District
 - Soil & Water Conservation District
- Lorain County Stormwater Management District
- Applicable watershed organizations specifically providing MCM #1 and #2 services



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Summary of Services

WAC Communities in Cuyahoga County

- **Cuyahoga County Board of Health**
 - MCM #3
 - MCM #6
- **Cuyahoga SWCD**
 - MCM #1
 - MCM #2
- **Applicable watershed organization**



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Agreement Structure:

Cuyahoga County Board of Health

- Step 1: Board of Health and Sewer District enter into cooperative agreement
 - Board of Health provides MCM #3 and #6
 - Sewer District pays Board of Health
- Step 2: Board of Health enters into agreements with interested communities
- Step 3: Sewer District approves services and pays Board of Health



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Next Steps for Board of Health: What to Look for in Late 2016

- Letter from Board of Health for 2017 cooperative agreement
 - As usual, if already receiving services
 - New, if not working with Board of Health
- Please note:
 - Sampling all outfalls with dry weather flow
 - Coordinating on source tracking
 - Only monitoring outfalls in Sewer District service area for partially served communities



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Agreement Structure: Soil & Water Conservation Districts

Ohio Soil and Water Conservation
Commission State Matching Fund Policy:

- Revenue received by SWCD from direct payments of stormwater utilities not matched
- Result: Tripartite contracting arrangement



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Agreement Structure:

Soil & Water Conservation Districts

- Step 1: SWCD, Sewer District, and interested community enter into agreement
- Step 2: Communities pay SWCD under agreement
- Step 3: Sewer District reimburses communities



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Next Steps:

What to Look for in Late 2016

- Letter from SWCDs offering services
 - As usual, if already receiving services
 - New, if not working with SWCD
- Please note:
 - Services available across communities
 - Coordinating on Phase II messaging
 - Different agreement in place if working with watershed organization



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Agenda

- Welcome
- Program Updates
- Community Cost-Share
- Stormwater Construction Plan
- Stormwater Master Plans
- Phase II Stormwater Services
- What's Next

What's Next...

- Sewer District staff in streams doing:
 - Inspections
 - Maintenance
- Design and construction of projects
- Community Cost-Share applications
 - Available funds indicated on handout
- Plan review of submitted SW Management Plans

What's Next...

- WAC Meetings
 - Cuyahoga River – North: October 12
 - Cuyahoga River – South: October 18
 - Lake Erie Direct Tributaries: October 19
 - Chagrin River Watershed: October 26
 - Rocky River Watershed: October 27

- Next Round in March 2017

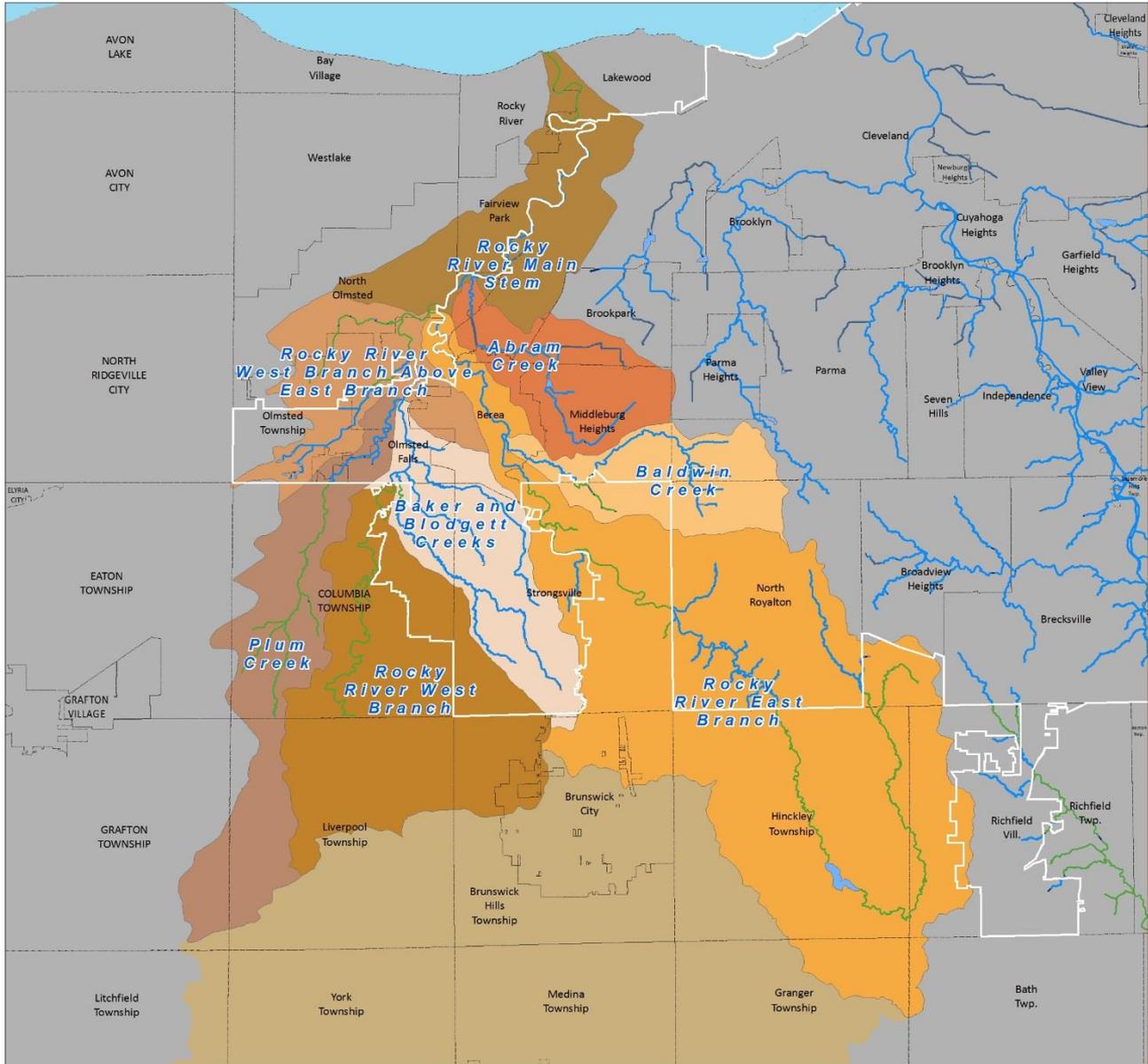
Questions

Jeff Jowett

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jowettj@neorsd.org

Stormwater Program: Community Resources

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



Rocky River Watershed

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



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

Map Created: October 2016

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