

**NORTHEAST OHIO REGIONAL SEWER DISTRICT**

**REGIONAL STORMWATER MANAGEMENT PROGRAM**

**Regional Stormwater Management Program:**  
Watershed Advisory Committee  
Chagrin River  
October 26, 2016

 *Your Sewer District* **Keeping our Great Lake great.**



## 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 Management Plan Review
  - Stormwater I&M
- 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



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## 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 Fall 2016 Update



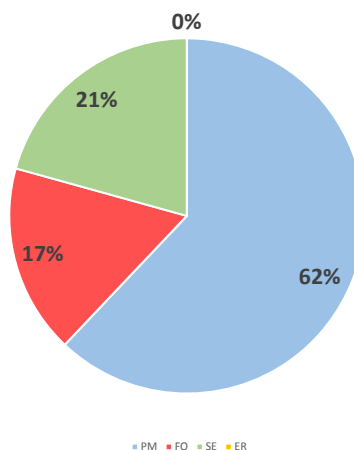
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## Chagrin Watershed 2016 Inspections

	Chagrin
PM	18
FO	5
SE	6
ER	0
	29

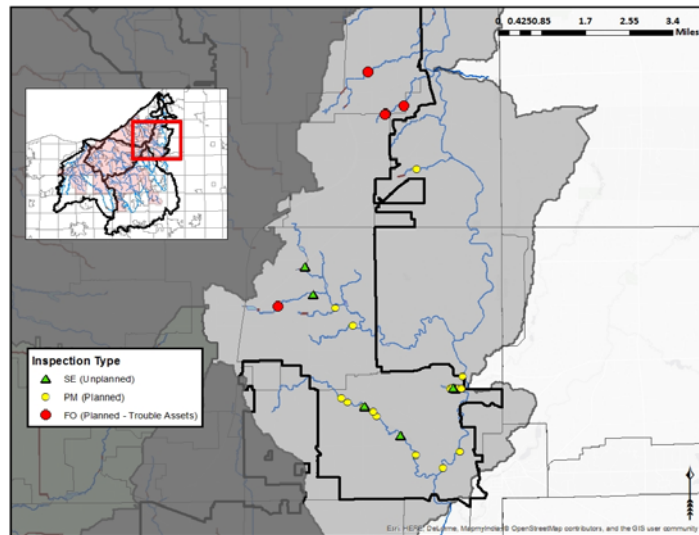
**Legend:**  
 SE = Customer Call  
 PM = Planned Inspection  
 FO = Follow-up on a Problem Asset  
 ER = Emergency Response





# Chagrin Watershed

## 2016 Inspections



# Beechers Brook

Asset ID: BE00021 (Mayfield)



## Structural Integrity

Streambank Erosion  
Slope Failure

## Recommendation

Further Analysis  
Monitoring

# Pepper Creek

Asset ID: PC00218 (Pepper Pike)



## Structural Integrity

Scouring near Pipe Outlet  
Damage Pipe Sections

## Recommendation

Further Analysis  
Monitoring



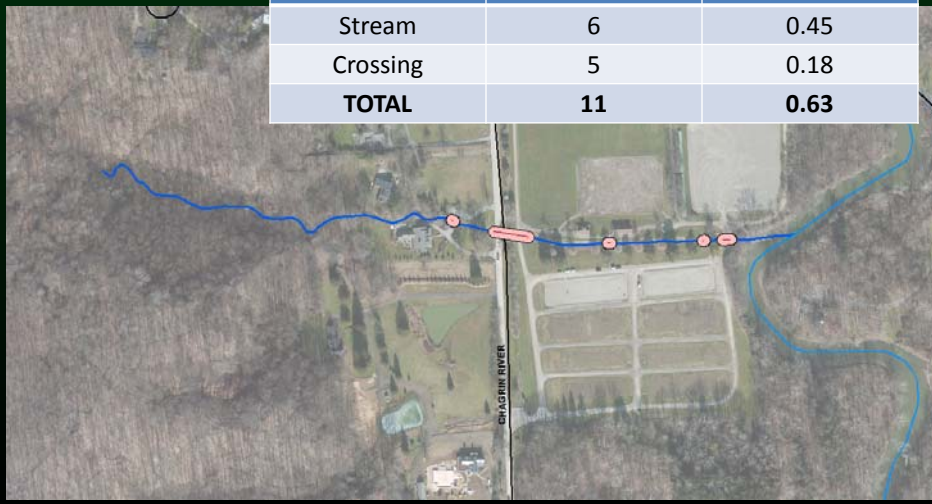
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# New RSS Assets

Moreland Hills

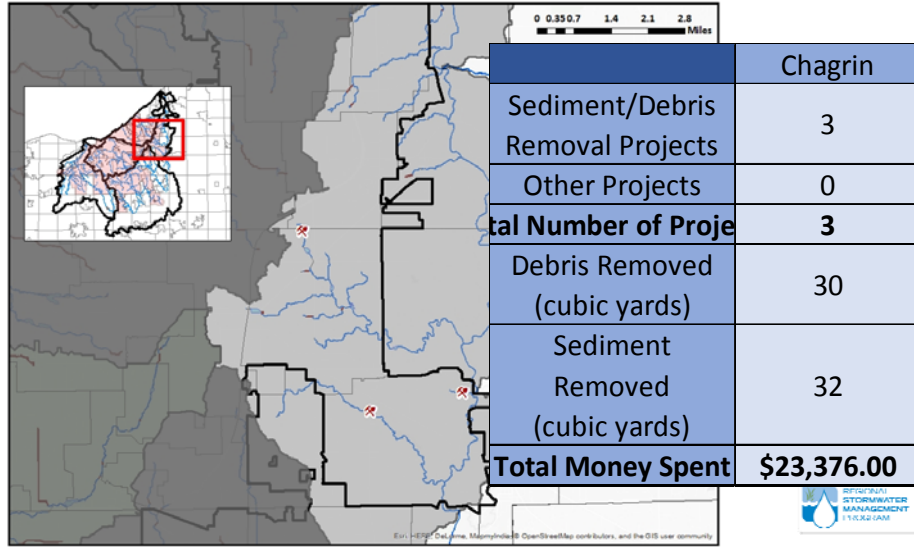
Asset Class Type	Number of Assets	Length in Miles
Stream	6	0.45
Crossing	5	0.18
<b>TOTAL</b>	<b>11</b>	<b>0.63</b>





# Chagrin Watershed

## 2016 Maintenance Projects



# Debris Maintenance

Asset: W100244 Willey Creek (Moreland Hills)



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# Debris Maintenance

Asset: CT00217 Small Tributary of Chagrin River (Moreland Hills)

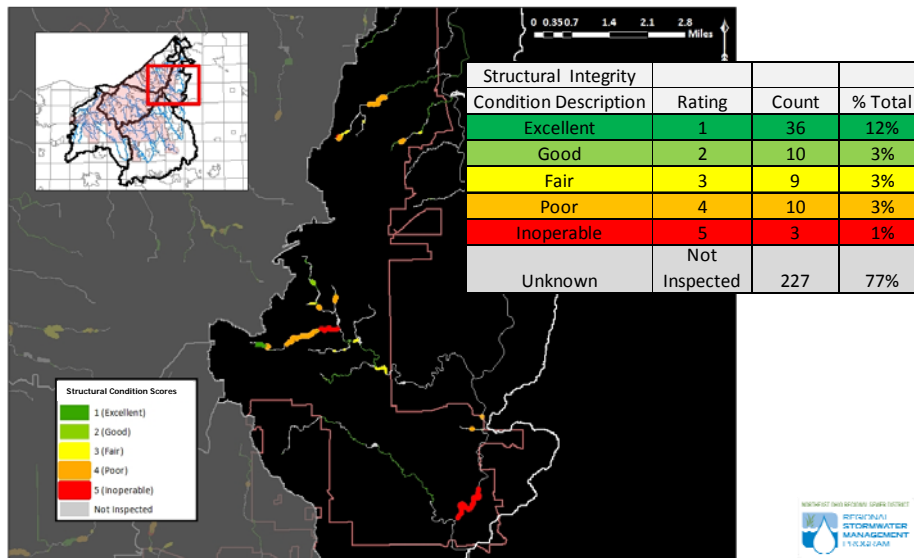


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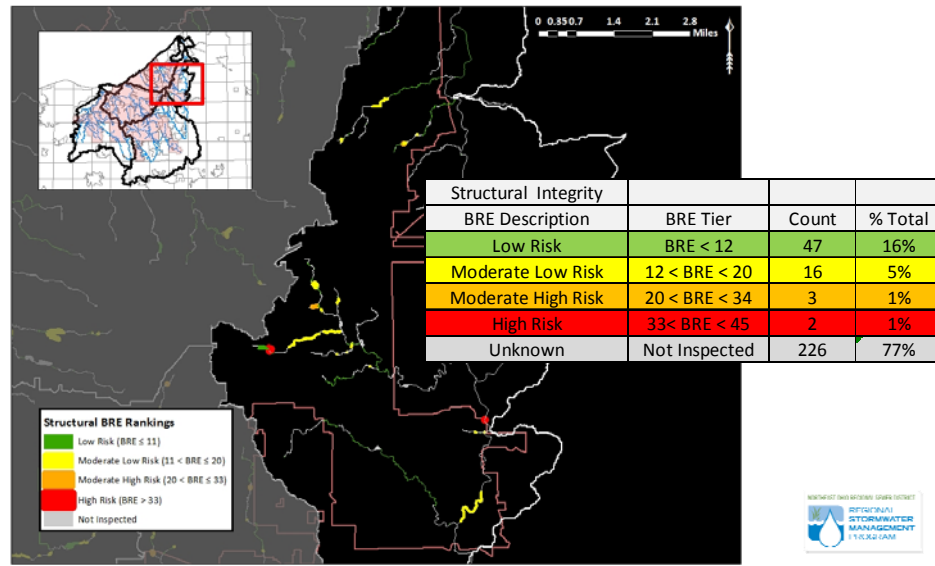
## Chagrin Watershed

Structural Integrity Condition Ratings



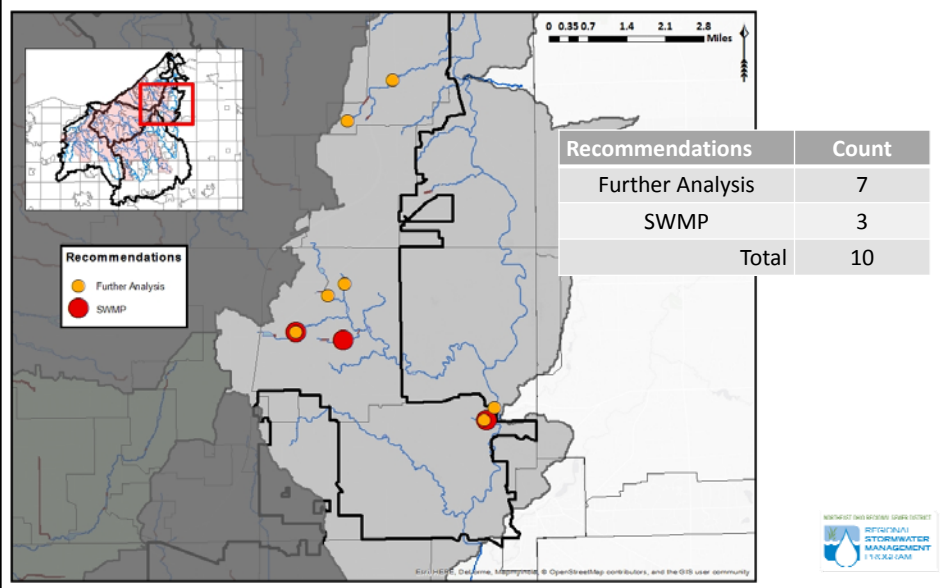
# Chagrin Watershed

## Structural Integrity BRE Rankings

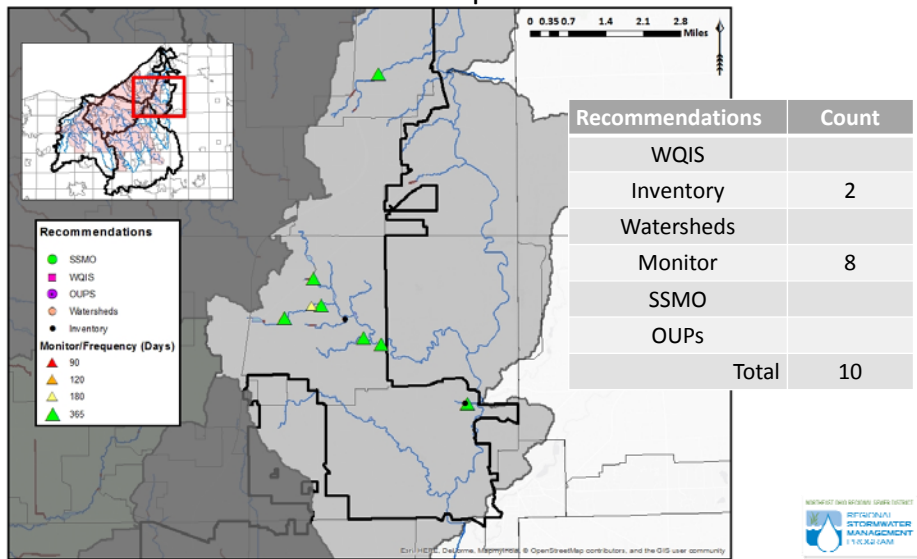


# Chagrin Watershed

## Recommended Further Analysis & SW Master Plan



## Chagrin Watershed Recommended Next Steps



## 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



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# Community Cost-Share Community Resources Website

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



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Community Cost-Share Program  
Application

### 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: \_\_\_\_\_

Rev 5/2016
1




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## 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




Community Cost-Share Program  
Application


**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.recornd.org/supplier\\_homepage.php](http://www.recornd.org/supplier_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		
<b>TOTAL</b>	\$	



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## 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 135<sup>th</sup> 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



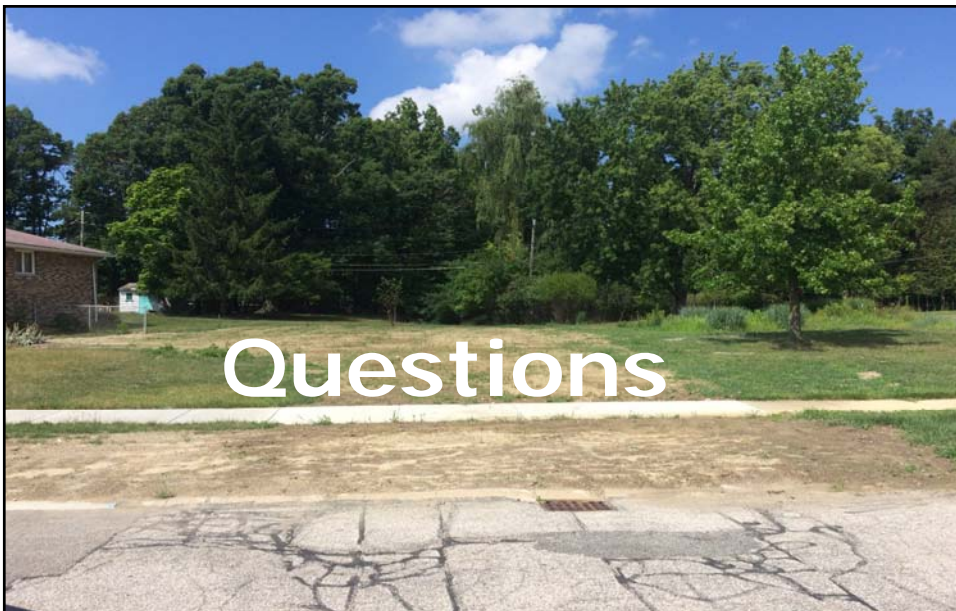
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## Community Cost-Share



## Questions



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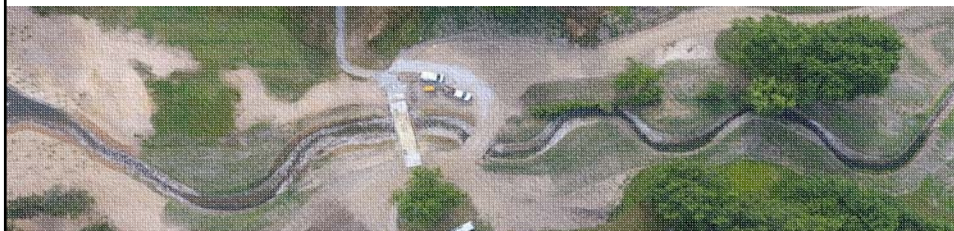
# Agenda

- 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

 **Northeast Ohio  
Regional Sewer District**





## STORMWATER CONSTRUCTION PLAN 2016 STATUS UPDATE



### Stormwater Construction Plan: 2016

Status at close of Q3

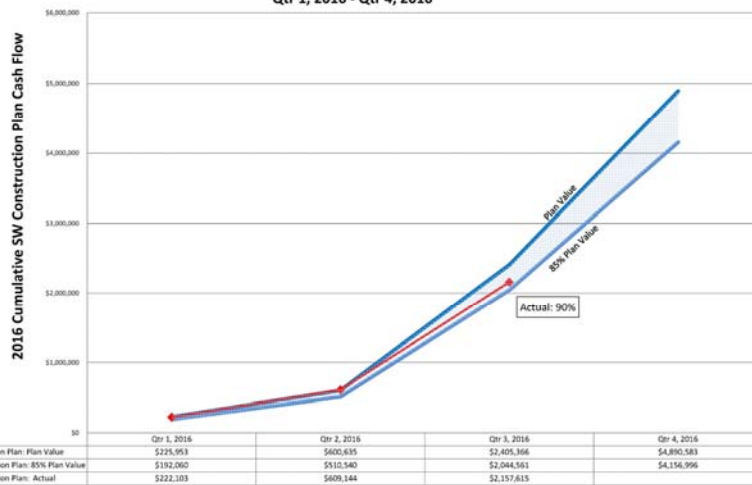
	Estimated Construction Cost	Procurement	Design	Construction
1311 Highland Park Golf Course Stream Restoration (Other funding agency, wastewater budget, community funds, etc.)	\$1,700,000			Tracking to meet substantial completion date of 12/15/2016. 97%
1413 Chevrolet Blvd. Detention Basin (Other funding agency, wastewater budget, community funds, etc.)	\$1,702,405			Met substantial completion date of 10/06/2016. 100%
1487 Shaw Brook Culverted Stream Rehabilitation (Other funding agency, wastewater budget, community funds, etc.)	\$950,000		On schedule	
1364 Euclid Creek Concrete Spillway EC00008	\$362,097		On schedule	
1365 Shaker - Green Lake Dredging DB00101	\$2,700,000		On schedule	
1320 Shaker Lakes Dam Rehabilitations DB00056 & DB00101	\$1,600,000		On schedule	
1410 Doan Brook Stream Stabilization DB00029 & DB00021	\$2,350,000		On schedule	
1411 Big Creek Stabilization BC00032	\$6,000,000		Tracking behind schedule due to coordination issues with CCR Removal. 10%	
1409 Colombo Park BC00299	\$1,000,000		Design NCP approximately 2 months behind but expect to meet overall schedule for construction award. 10%	
1412 Cuyahoga River at Towpath Bank Stabilization CR00132	\$1,500,000		On schedule	
1369 Beechers Brook and Pepper Creek Bank Stabilization CW00021 & CW00146	\$2,750,000	88%	Advanced commencement of procurement. Approximately 6 months ahead of schedule.	
1490 Hemlock Creek Bank Stabilization	\$1,500,000	88%	Advanced commencement of procurement. Approximately 6 months ahead of schedule.	
1491 Mill Creek Bank Stabilization MC00125	\$1,000,000	88%	Advanced commencement of procurement. Approximately 3 months ahead of schedule.	
180 Baldwin Ck Bank Stabilization BD00259, BD00257	\$1,200,000	0%		
180 Baldwin Ck Bank Stabilization BD00297	\$300,000	0%		
180 Emerald Parkway Culvert Rehabilitation	\$2,000,000		This is project will most likely have a short term negative as well as a long term negative impact.	



## STORMWATER CONSTRUCTION PLAN 2016 PROJECTS



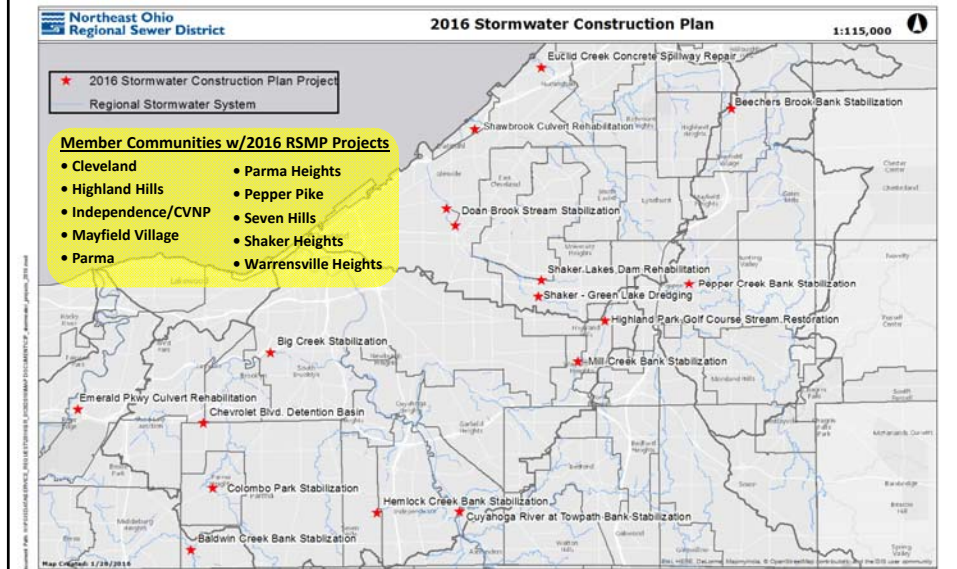
Total Stormwater Construction Plan  
(Planning, Design, & Construction)  
Cash Flow Projection  
Qtr 1, 2016 - Qtr 4, 2016



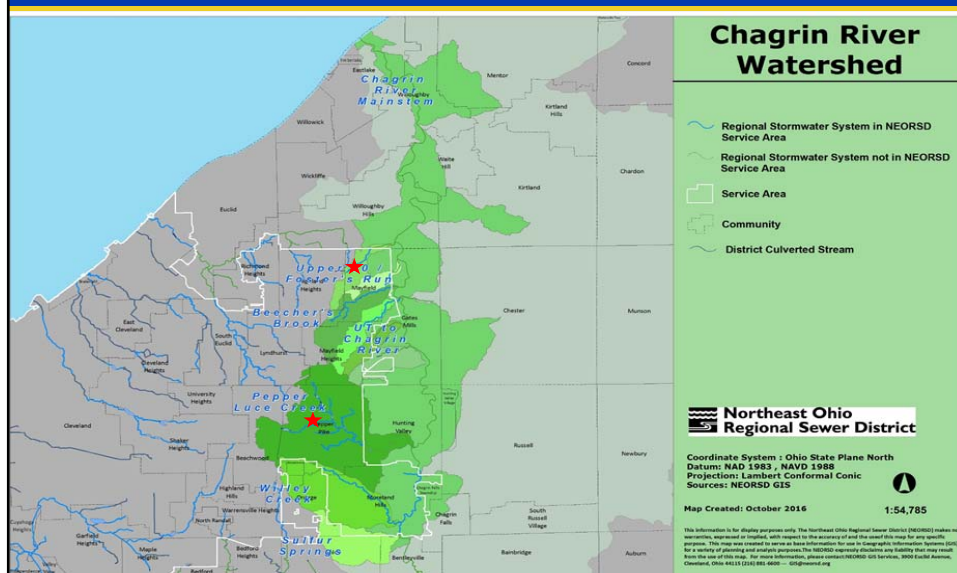




## STORMWATER CONSTRUCTION PLAN 2016 PROJECTS



## STORMWATER CONSTRUCTION PLAN 2016 PROJECTS






**construction**



## BEECHERS BROOK BANK STABILIZATION










**construction**



## PEPPER CREEK BANK STABILIZATION







construction

## HIGHLAND PARK GOLF COURSE STREAM RESTORATION

NORTHEAST OHIO REGIONAL SEWER DISTRICT  
 REGIONAL STORMWATER  
 MANAGEMENT PROGRAM



Before



During Construction





After

**Northeast Ohio  
Regional Sewer District**

construction

## HIGHLAND PARK GOLF COURSE STREAM RESTORATION

NORTHEAST OHIO REGIONAL SEWER DISTRICT  
 REGIONAL STORMWATER  
 MANAGEMENT PROGRAM

# Highland Park Golf Course Stream Restoration Project

### Northeast Ohio Regional Sewer District

### CITY OF CLEVELAND

Mayor Frank G. Jackson

Great Lakes  
RESTORATION

OhioEPA

WEST CREEK  
CONSERVANCY

USDA

U.S.

### Mill Creek

Watershed Partnership

**PROJECT COST: \$1,699,400**

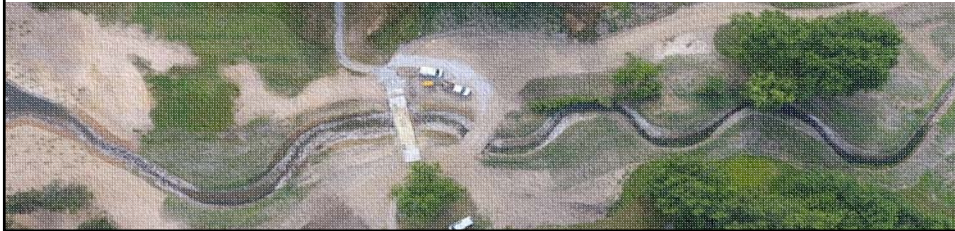
Funded by the Ohio EPA Water Resource Restoration Sponsor Program, the Northeast Ohio Regional Sewer District, and the US Forest Service

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## QUESTIONS

 **Northeast Ohio  
Regional Sewer District**



*Doan Brook Stream Enhancement, Cleveland*

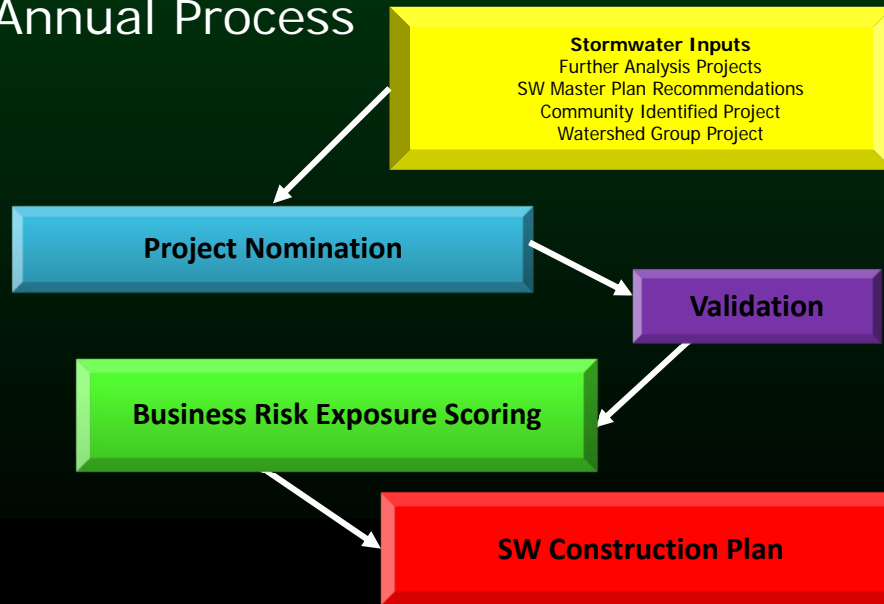
## Stormwater Construction Plan Proposed Projects



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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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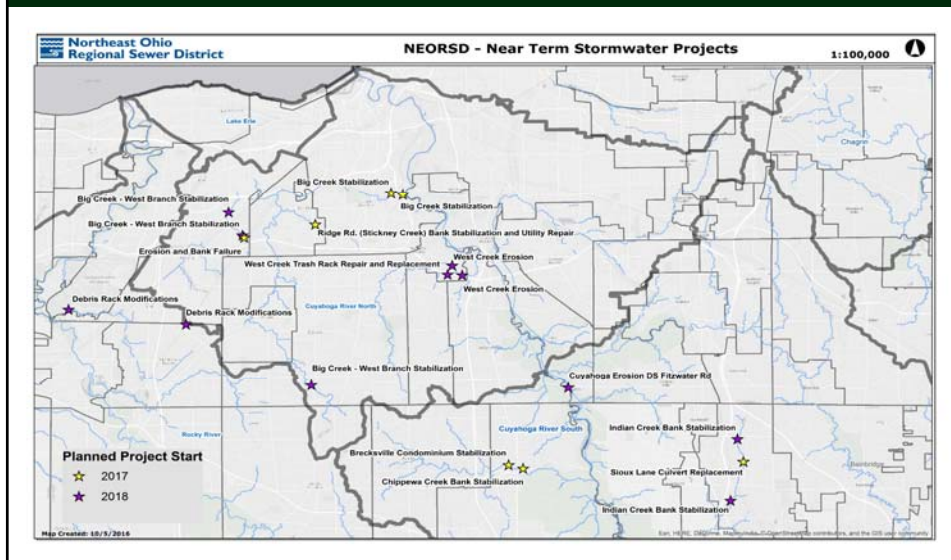


# Community Identified Project

- 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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# Stream Bank Stabilization Big Creek (Cleveland)



## Questions

*Highland Park Golf Course Stream Restoration, Highland Hills*

## Agenda

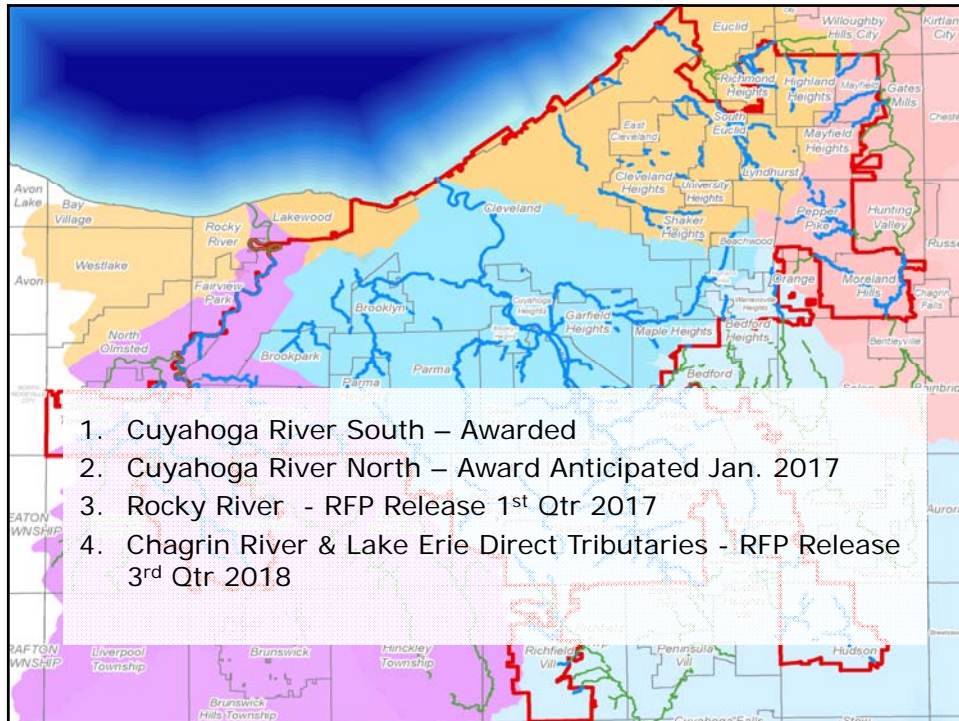
- Welcome
- Program Updates
- Community Cost-Share
- Stormwater Construction Plan
- Stormwater Master Plans
  - Schedule
- Phase II Stormwater Services
- What's Next

## 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



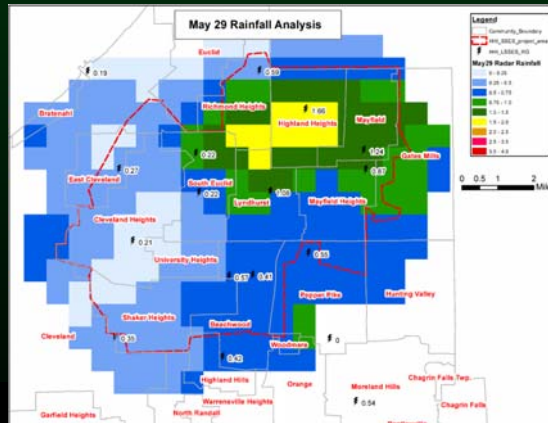


## New Data Sources

### LiDAR Data



### Radar Rainfall





## 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



## 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



## 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
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## 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

**Rachel Webb**

Senior Watershed Team Leader

216-881-6600 Ext. 6645

[webbr@neorsd.org](mailto:webbr@neorsd.org)

**Stormwater Program: Community Resources**

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

