

The City of East Peoria Storm Water Management Plan

December-2022

By



Patrick N. Meyer & Associates, Inc.

15109 West Bittersweet Court Brimfield, Illinois 61517 Office/Mobile: 309-696-1935 Email: pmeyer@mtco.com

Introduction

The City of East Peoria was fortunate to be the recipient of \$30,000 of funding thru the Tri-County Regional Planning Commission (TCRPC) for enhancing the City's Storm Water Management System. Patrick N. Meyer & Associates, Inc. (PNMAI) was selected as the consultant from the attached Request for Qualifications. (Exhibit A)

Findings

Cooperation amongst the City, TCRPC, and PNMAI was key for the success of this project. Initial conversations with the City produced a primary focus on the outfalls in one of the many bluff areas as noted on the map. (Exhibit B) TCRPC and PNMAI developed a list of attributes (Exhibit C) to be collected and the inventory commenced. Some of the attributes are purely characteristics of the material, while other attributes were collected for IEPA's NPDES (Illinois Environmental Protection Agency's National Pollutant Discharge Elimination System) purposes. PNMAI was also able to collect photographs of each outfall. As outfalls were being collected, PNMAI was fortunate to be able to collect other missing information for the Storm Water Management System. Inventory of the storm water features proved to be tedious and dangerous at times. Outfall inventory challenged the staff with thick brush and steep slopes. Traffic was also a concern on busier streets. PNMAI was able to collect over 300 outfalls. Most notably, there were four attributes that might signal immediate action.

A-Level of Erosion B-Televise C-Buried D-Pipe Condition

The Level of Erosion was classified as such. The approximate percentage of the total collected is also noted.

Level 1-Severe Erosion (>5 ft)	$\sim 10\%$ of all outfall were Level 1
Level 2-Medium Erosion (1-5 ft)	$\sim 25\%$ of all outfall were Level 2
Level 3-No erosion, fully protected	~65% of all outfall were Level 3

This is likely the most important attribute. The Level 1-Severe Erosion sites were the most concerning. Some outfalls were noted to have up to 30 ft of erosion present. Some of these severely eroded spots were dangerously close roadways and/or residential/commercial buildings. We expect to further this discussion with a City/TCRPC/PNMAI field trip to the high priority severely eroded locations. The highest priority Level 1-Severe Erosion sites will likely need to be addressed with stone riprap and heavy equipment. Some Level 1-Severe Erosion and most Level 2-Medium Erosion locations could be addressed with log check dams. Exhibit D typifies erosion issues. Exhibit E denotes past photographs of riprap projects. Exhibit F includes information and examples regarding log check dams.

Televising and Buried were was also noted attributes. PNMAI identified both of these attributes since some of the pipe locations were either unknown as far as direction or they were buried. The City could utilize this list to perform further investigation to enhance the inventory. A photograph of a buried pipe is in Exhibit G.

The last attribute that might require immediate action is the Pipe Condition. PNMAI noted the conditions of pipes as to whether they were rusted and/or they had holes. Pipe Condition concerns occurred mostly in Corrugate Metal Pipes (CMP). The history of CMPs began with installation in the 1970's. CMPs have traditionally been less cost for material and for installation purposes. However, they are believed to have a 40 year life span. We are now 50 plus years since the first installation. The harsh Midwest winters promote the necessity of salt on the roads; the salt also takes its toll on the metal of the CMPs. Many of the Level 1 Erosion spots listed above were a cause of CMP failures. It would seem proactive for the City to identify these CMPs and pre-empt failures of Level 1-Severe Erosion by investing in pipe-

rehabilitation such as CIPP (Cured In Place Piping). CIPP is simply installing a liner in an existing pipe without digging. See Exhibit H for an example of a deteriorated CMP. Exhibit I contains CIPP projects.

The Future-A Plan of Action

Patrick N. Meyer & Associates, Inc. suggests the following plan of action regarding the City of East Peoria's Storm Water Management System.

- Field Trip to physically see the high priority Level 1-Severe Erosion locations. Identify funding to address the high priority Level 1-Severe Erosion locations. Exhibit J identifies the top 10 of 30 high priority projects with approximately \$1.2 million. This exhibit also includes location maps and photographs.
- Establish a schedule for City staff or contractors to televise outfall pipes (including the ones noted in the inventory as Televised and Buried), establish a condition of the pipes and a priority for CIPP. Establish funding for this task.
- 3. Seek funding to continue the inventory of the Storm Water Management System. There is approximately 70% percent of the City's storm water infrastructure to be inventoried.

<mark>Exhibit A</mark>



Request for Qualifications East Peoria Stormwater Planning Management

Tri-County Regional Planning Commission requests statements of qualifications from qualified firms to provide professional services to assist updating the City of East Peoria's Stormwater Management System.

Statements of Qualifications will be accepted until 4:00 pm, June 17, 2022. Statements of qualifications received after that date and time will not be considered.

Background

Tri-County Regional Planning Commission (TCRPC) of Peoria, Illinois proudly serves Peoria, Tazewell, and Woodford counties as the "Steward of the Regional Vision." TCRPC studies the needs and conditions of the region and develops strategies that enhance the area's communities. TCRPC offers a forum for leaders of area government to define regional issues, set regional goals, and cooperatively implement plans.

TCRPC is the Metropolitan Planning Organization (MPO) for the Peoria-Pekin urbanized area. As the MPO, TCRPC carries out the continuing, cooperative, and comprehensive (3-C) transportation planning process required by law. TCRPC carries out this process by preparing regional plans and programs with the assistance of an MPO Technical Committee.

The MPO receives federal funding from the U.S. Department of Transportation. A portion of the FY 2022 allocation has been set aside for this project. The initial proposed compensation for this project is \$30,000. Due to the federal funding source, all work related to the project must be completed by December 31, 2022.

Project

There are many locations throughout the City of East Peoria where erosion and sedimentation create problems for surface transportation. The project goal is to collect accurate data on storm sewer outfalls to help access the degree to which the City's storm sewer infrastructure contributes to the erosion and siltation issue. The analysis will factor in other contributors, such as topography, filling operations, normal sheet drainage, or poor property management.

There are areas in the city where storm sewer pipes become plugged with siltation, causing stormwater and silt to flow over the streets and flood the roadways. Some of these locations have speed limits of 40mph and surprise traffic with water and debris in the roadway.

In some cases, it is known the siltation is coming from private property. In other cases, it is natural siltation, but the degree to which the city outfalls are contributing to the problem is unknown. The City's contribution to this issue will be assessed by expanding our inventory and knowledge of the storm sewer infrastructure. The ultimate goal is to develop a plan to mitigate the siltation and flooding along streets to improve roadway safety.

With funding provided by Tri-County Regional Planning Commission, the City of East Peoria is requesting a consultant to aid in their stormwater asset inventory initiative. East Peoria has completed approximately 75% of its existing stormwater infrastructure and is seeking assistance with areas within the city with the most need along the bluffs. These areas are but are not limited to Illini Heights, Bloomington Rd, Pekin Ave, Fondulac Dr, Springfield Rd, and Washington St.

This project would inventory storm sewer infrastructure in selected areas, such as outfalls, pipes, inlets, maintenance holes, and flow. The inventory would include the collection of relevant attributes, such as grate size, pipe size, material, location description, photo attachments, and notes. Along with the data collection, the selected consultant will perform an analysis to understand the extent of the sedimentation and erosion issues. The goal is to ensure that the City's stormwater management system is up to date and includes all relative infrastructure and attributes.

Ideally, televising pipes to narrow down pipe types among concrete, PVC, and metal would be included to aid in understanding problem areas within the existing stormwater system and mitigate any problems.

Scope of Services

Negotiation of the final scope of services will occur upon consultant selection, but the project should include the following elements.

- 1. Storm Sewer Infrastructure Inventory
 - a. Identify areas of concern regarding missing storm sewer infrastructure.
 - b. Inventory storm sewer infrastructure in a GIS database, including relevant attributes such as pipe sizes, material, digital photographs, erosion severity, illicit discharge, etc.
- 2. Storm Sewer Assessment
 - a. Analyze existing storm sewer data and GIS data collected to understand the extent of the erosion and sedimentation issues impacting surface transportation.
 - b. Identify areas of concern regarding outfall locations.
- 3. Develop Cost Estimates for Future Project Work
 - a. Develop a budget to inventory the remaining areas of the city.
 - b. Develop a budget to identify future pipe televising probability.
 - c. Develop a budget to review available property/easement data to assess access, safety concerns, and topography. Prepare a template for site access if no easements exist.
 - d. Develop preliminary cost estimates, including cultural and natural review and environmental documentation.

Please note that the City of East Peoria is open to utilizing their GIS Intern for assisting in data collection. TCRPC is able to supply East Peoria's GIS Intern with one Trimble R2 GPS Unit with a Trimble VRS Network Subscription and assist with processing the storm sewer data.

Deliverables

This contract will result in the following deliverable:

- GIS Database of Storm Sewer Infrastructure
- Analysis and conclusion report
- Cost estimate for future project expansion

Submittal Contents

TCRPC will only consider submissions limited to 15 pages (not including resumes) and containing the following:

- Name, address, telephone number, email, and website of firm.
- A Statement of Qualifications of:
 - The firm and any subcontractors (if any).
 - The lead team member; and
 - The individuals to be assigned to the project.
- At least three (3) examples of similar projects the firm has completed in the last 5 years.
- Business references from these projects, including client's name and telephone number shall be included; and
- Identification of any potential subcontracted services as necessary.

Please submit two (2) physical copies and one (1) digital PDF with all submittals.

All submittals shall be sealed and identified as East Peoria Stormwater Management and addressed to:

Michael Bruner Planner Tri-County Regional Planning Commission 456 Fulton Street, Suite 401 Peoria, IL 61602

Contract Development

Tri-County Regional Planning Commission will enter into a contract for professional consulting services based on a fixed-price to the selected consultant for a Scope of Services to be negotiated and finalized once the consultant is chosen. Incremental payments to the consultant will be made at the completion of major tasks with a "not to exceed" contract amount. Ten (10) percent of the contract price will be held as final payment upon delivery of the final products. The exact payment schedule will be negotiated and determined as part of the contract.

TCRPC is not liable for any costs incurred by a consultant in responding to this Request for Qualifications or for any costs associated with discussions required for clarification of items related to this RFQ.

The contract shall not be considered executed unless signed by the authorizing representative of TCRPC.

Selection Process

TCRPC reserves the right to accept or reject any or all statements of qualifications. All submittals become the property of TCRPC upon receipt. TCRPC will evaluate each statement of qualifications according to the following factors and 100-point scale:

1. (25 points) Experience and Technical Competency

The consultant's response should reflect qualifications and experience necessary to successfully develop and execute a Scope of Services. Reviewers will also assess the applicability and relevance of the consultant's experience and previous projects.

2. (25 points) Familiarity with Project Type

The consultant's response must demonstrate a level of familiarity with the proposed project and an understanding of the planning challenges posed by the project.

3. (25 points) Record of Success

The consultant's response should demonstrate success on similar projects and provide examples of similar work.

4. (15 points) Local Knowledge

The consultant should demonstrate familiarity with the City of East Peoria and Greater Peoria in their response.

5. (10 points) References

The consultant's response should include at least 3 references, with contact information.

All submittals will be reviewed by a committee made up of representatives from TCRPC and The City of Peoria. All statements of qualifications will be scored and ranked; however, the committee IS NOT bound to select the highest-scoring submittal. TCRPC reserves the sole right to invite one firm to the contract development stage or to reject all candidates that submit.

Project Schedule

- June 3, 2022 Request for Qualifications is announced
- June 17, 2022 Deadline for submittal of statement of qualifications
- Week of June 20, 2022 TCRPC & City of East Peoria evaluate responses and select consultant; TCRPC approves contract with consultant
- July 1, 2022 Work begins
- December 31, 2022 All project work is completed by this date

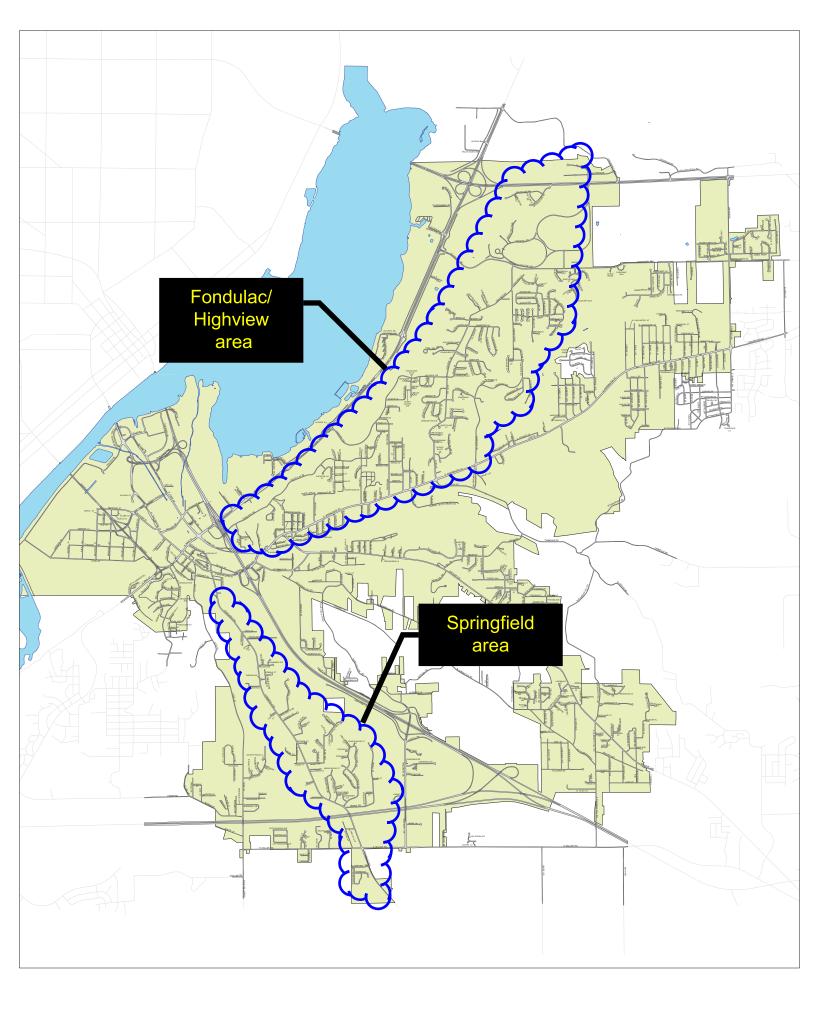
Compliance with Laws

The selected firm agrees to be bound by all applicable Federal, State, and Local laws; regulations; and directives as they pertain to the performance of the contract.

Questions

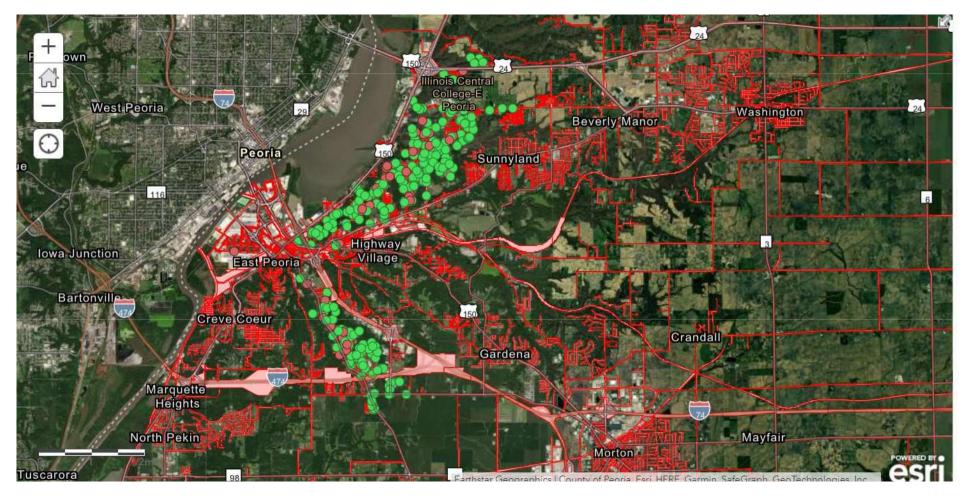
TCRPC staff will answer all questions related to this RFQ until 4:00 pm, June 15, 2022. All questions and answers will be posted publicly on TCRPC's website. Questions should be addressed to staff at <u>rfp-rfq@tricountyrpc.org</u>.

<mark>Exhibit B</mark>



Map of Project Area

(green dots reflect outfalls collected)



<mark>Exhibit C</mark>

List of Attributes

OBJECTID	Material Type	Diameter (inches)	Date Inspected	Outlet Name	Location	Pipe Condition	Erosion Condition
232	Corrugated Metal	15	11/12/2022 19:29			Very Poor	1 - Severe Erosion (>5ft)

Depth of Erosion (ft)		VI - Color	VI - Odor	VI - Clarity	VI - Float	VI - Settled Soli	VI - Suspended Solids?
30 ft	30	Clear	No	Clear	No	No	No

VI - Foama	VI - Oil Sheen?	VI - Other Commer	Field Inspected?	Headwall?	GlobalID	Notes	Headwall Notes
No	No	The pipe has extrer	Yes	No	0f44b5ce	Pipe sections ar	None

Ownershi	Status	Televise	Buried	x	у	
Public	Completed	No	No	-89.5446343	40.6339	

<mark>Exhibit D</mark>

example of Level 1-Severe Erosion-pipe was rusted through and caused erosion on a very steep hill example of Level 1-Severe Erosion-water eroded at end of pipe causing pipe to no support underneaththen pipe breaks off causing more erosion and repeating the process

example of Level 1-Severe Erosion-100 ft elevation change from the top of the pipe to the bottom of the ravine

apparent pieces of pipe that have broken off over the years.

gutter drains on hillside that need to go to the bottom of the hill



<mark>Exhibit E</mark>

example of dangerous ravine stabilization requiring riprap, specialized machinery, and highly skilled workers-125 ft elevation change from top of hill to bottom of hill

UCHI

example of dangerous ravine stabilization requiring riprap, specialized machinery, and highly skilled workers-125 ft elevation change from top of hill to bottom of hill



example of dangerous ravine stabilization requiring riprap, specialized machinery, and highly skilled workers-125 ft elevation change from top of hill to bottom of hill



final product of ravine stabilizationnearly 250 tons of riprap

<mark>Exhibit F</mark>

newly constructed log check dam---10 ft high

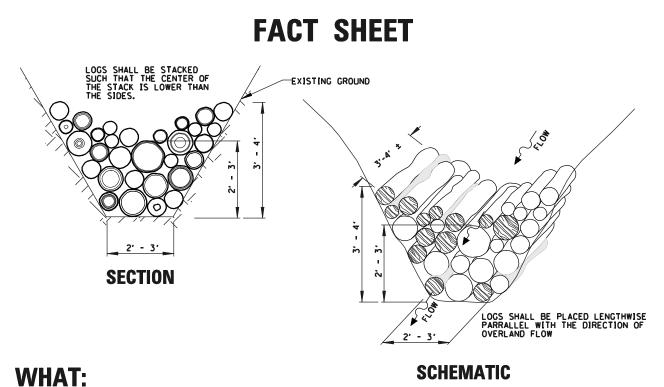
VAL

newly constructed log check dam---6 ft high 1 14





3 years old---gained back 2 ft of material



Small stack of logs placed in zero order or first order drainage ways that carry surface water flow only after storm events or snow melt.

WHY:

The logs are stacked to stabilize the slope grade, slow the water runoff, store a small amount of sediment, and reduce erosion.

WHERE:

Appropriate in ditches, swales, overland flow areas. Stabilizers can be placed in series down a slope such that the bottom of the upstream stabilizer is just above the top of the next downstream stabilizer. Do not place in watercourses, streams or major drainage ways.

DETAILS:

Maximum height should be approximately 3' to 4' with a 1' notch or V depression in the center to control flow.

MAINTENANCE:

Inspect during and after large storms or extended periods of rain. Inspect for erosion around top edges, scour and infilling. Re-arrange or remove logs to correct scour issues.

EXAMPLES:

Log check dams have been constructed and are available for viewing at the Camp Wokanda Demonstration Site.

Reference: USPWS Low Tech V Log Check Dam Standard								
CLIENT:	TITLE:						PROJECT	NO.
	LOG	GRAD	FS	TΔ	BILIZE	2	07-16	7
TRI-COUNTY REGIONAL PLANNING COMMISSION						-	SHEET	OF
FOREST MANAGEMENT SPECIFICATIONS	"LOW TEC	H "V"	LO	G	CHECK	DAM"	DRAWING	NO.
		DSGN.			SCALE:	1:10		
CHRISTOPHER B. BURKE ENGINEERING LTD. 202 NE Madison Avenue Suito 361 Peoria, Illinois 61602 (309) 676–9000					DATE:			
	(309) 676–9000	СНКД.			PLOT DATE:	7/20/2007		

pmeyer@mtco.com

From:	Figge, Gene <gene.figge@illinois.gov></gene.figge@illinois.gov>
Sent:	Wednesday, January 9, 2019 11:09 AM
То:	Patrick Meyer; Bennett, Todd; Thorp, Jason
Cc:	Huson, Todd; Jungles, Paul
Subject:	RE: [External] FW: Log Check Dams

I am fine with it, but that is not something you will ever get a formal blessing on from the Agency. That is the sort of thing we just do not do because as inspectors we are not omnipotent. All you will ever get is something along the lines of "it appears to be in compliance with the Act and Regulations." So, it appears to be in compliance with the Act and Regulations when executed in this manner.

Gene Figge Environmental Protection Specialist 412 SW Washington Peoria, IL 61602 309/671-3070

From: pmeyer@mtco.com <pmeyer@mtco.com>
Sent: Wednesday, January 09, 2019 11:04 AM
To: Bennett, Todd <Todd.Bennett@Illinois.gov>; Figge, Gene <Gene.Figge@Illinois.gov>; Thorp, Jason <Jason.Thorp@Illinois.gov>
Cc: Huson, Todd <Todd.Huson@Illinois.gov>; Jungles, Paul <Paul.Jungles@Illinois.gov>
Subject: [External] FW: Log Check Dams

Todd/Gene/Jason...did you have any more thoughts regarding our log check dams...I would really like to get your blessings from both land and storm water...

Sincerely,

Patrick

Patrick N. Meyer & Associates, Inc. Patrick N. Meyer, P.E., M.B.A. From: pmeyer@mtco.com <pmeyer@mtco.com>
Sent: Wednesday, October 10, 2018 11:20 AM
To: 'Bennett, Todd' <<u>Todd.Bennett@Illinois.gov</u>>; 'Figge, Gene' <<u>Gene.Figge@Illinois.gov</u>>; 'jason.thorp@illinois.gov' <jason.thorp@illinois.gov>
Subject: Log Check Dams

Todd/Gene/Jason...

As we discussed, we have been recommending log check dams as a good way to naturally deter erosion. Here is an example standard and a real life example. We have seen a significant amount of sediment trap behind the log check dams in a relatively short amount of time...as much as 1 ft in a 2 years. I believe Todd supports the use of these...I wanted to send the attachments to Gene and Jason to help you realize the benefit. Please comment back.

Sincerely,

Patrick

Patrick N. Meyer & Associates, Inc. Patrick N. Meyer, P.E., M.B.A.

State of Illinois - CONFIDENTIALITY NOTICE: The information contained in this communication is confidential, may be attorney-client privileged or attorney work product, may constitute inside information or internal deliberative staff communication, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying of this communication or any part thereof is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the sender immediately by return e-mail and destroy this communication and all copies thereof, including all attachments. Receipt by an unintended recipient does not waive attorney-client privilege, attorney work product privilege, or any other exemption from disclosure.

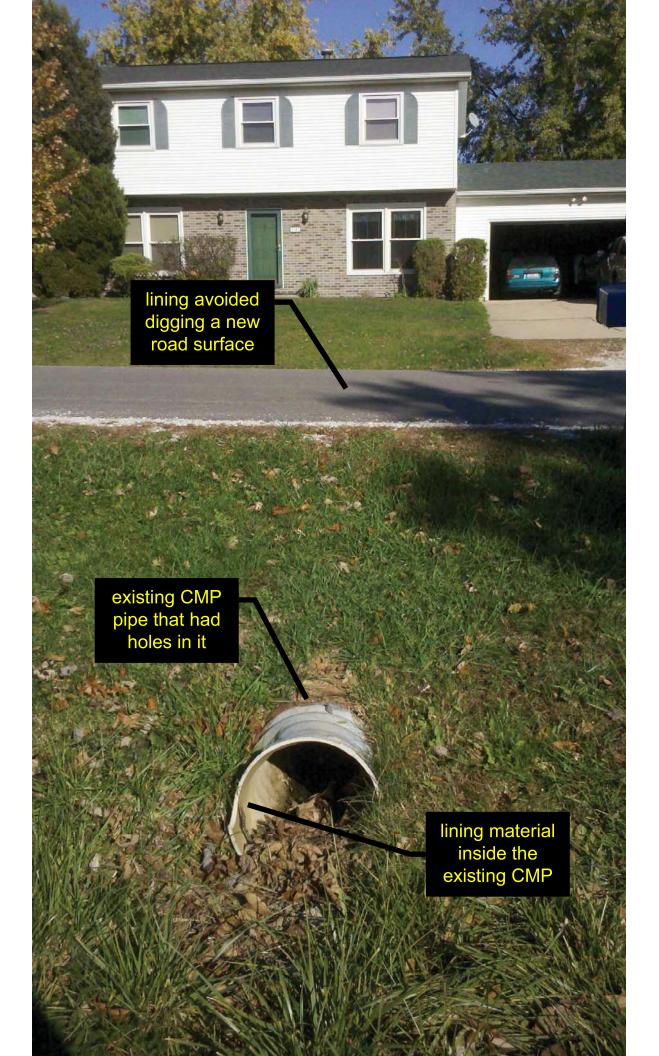
<mark>Exhibit G</mark>



<mark>Exhibit H</mark>

example of corrugated metal pipe that is rusted through-factors of deterioration include age and salt on metal

Exhibit I



existing CMP pipe that had holes in it

lining material inside the existing CMP



10/12/06 08:17 191.3 FT MH START: 11694 MH STOP: 11613

lining material creating a seamless pipe inside the existing deteriorated pipe

Exhibit J

High Priority Projects

						\$1	,175,000			
					Depth of					
	Material	Diameter	Pipe		Erosion					
OBJECTID	Туре	(inches)	Condition	Erosion Condition	(ft)	Co	st	Location	VI - Other Comments?	Notes
									The pipe has extremely	Pipe sections are coming
									SEVERE erosion occurring,	apart and is in proximity of
232	Corrugate	15	Very Poor	1 - Severe Erosion (>5ft)	30 ft	\$	200,000	Off of Harvey	up to 30 ft	building
										There is extreme erosion on
										the hillside behind the pipe,
										creeping towards the
									The pipe has bad rust and	road Also, not completely
									is broken near the bottom	sure on the pipe size,
									of the pipe Also, the end	somewhere close to a 18"
10	Corrugate	18	Very Poor	1 - Severe Erosion (>5ft)	20ft plus	\$	200,000	Off of Centennial Hill	section fell off	pipe
										The pipe itself is in good
									Severe erosion up to 14-15	shape but parts of the pipe
									ft and little to no standing	have come off due to
92	Corrugate	24	Very Poor	1 - Severe Erosion (>5ft)	14-15 ft	\$	75 <i>,</i> 000	Off of Illini	water	erosion
									This outfall has SEVERE	
	Corrugate		Poor		15 ft	\$,	Off of Terrace Ln		The pipe is rusting
260	Steel	13	Poor	1 - Severe Erosion (>5ft)	15 ft	\$	75,000	Off of Maria	Televise!	The pipe is rusted
									The pipe has severe	The pipe is rusting bad
214	Corrugate	15	Very Poor	1 - Severe Erosion (>5ft)	10-12 ft	\$	75,000	Off of Springfield Rd	erosion up to 10-12 ft	causing severe erosion
									There is major erosion at	
									the outfall due to break in	Pipes been broken in places
263	Corrugate	12	Fair	1 - Severe Erosion (>5ft)	12	\$	75,000	Off of Maria	pipe	and is eroding
										Belly of pipe is completely
										rusted out and is
									9-10 feet of erosion, no	completely falling apart as
94	Corrugate	18	Very Poor	1 - Severe Erosion (>5ft)	9-10	\$	150,000	Off of Illini	standing water	it's coming of the hillside.
									Bad erosion around the	
166	Corrugate	24	Poor	1 - Severe Erosion (>5ft)	10 ft	\$	150,000	Off of Oakwood		The pipe bottom is rusted
									Severe erosion occurring	Rusty with holes, may be
261	Corrugate	10	Poor	1 - Severe Erosion (>5ft)	10 ft	\$	100,000	Off of Maria	outside the outfall pipe	broken off in the pipe

High Priority Projects

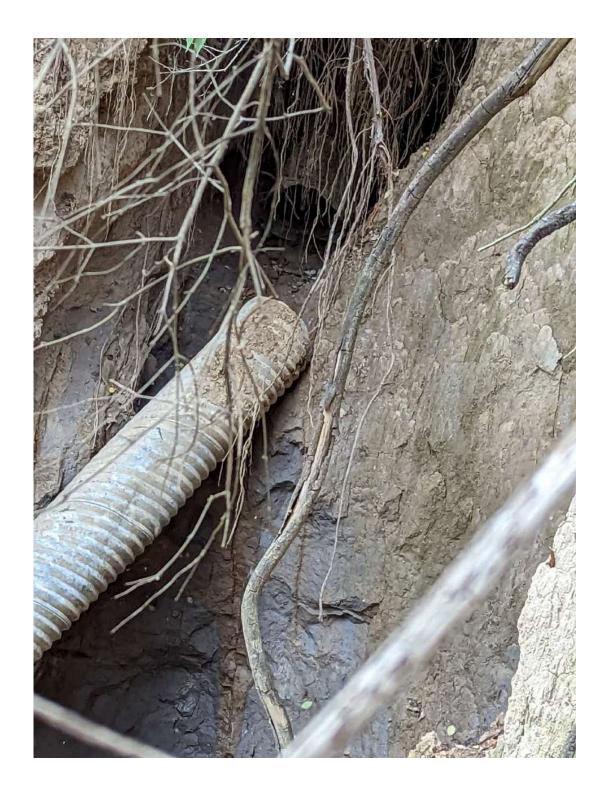
			Pipe		Depth of Erosion				
OBJECTID	Туре	(inches)	Condition	Erosion Condition	(ft)	Cost	Location	VI - Other Comments?	Notes
									Bad erosion and erosion
									creeping up on
								Severe erosion and pipe is	
262	Corrugate	10	Poor	1 - Severe Erosion (>5ft)	10 ft			rusted	10 ft away
								There is erosion approx 8ft	
								and no standing water in	shape with no visible
173	Corrugate	18	Good	1 - Severe Erosion (>5ft)	8 ft			the outflow pipe	damage
								There is severe erosion	
								and standing water	
227	Corrugate	24	Fair	1 - Severe Erosion (>5ft)	7-8 ft			outside the pipe	The pipe is in decent shape
								There is some severe	The pipe is in decent shape
								erosion outside the pipe,	with no visible damage, but
								approx 8 ft no standing	there is some severe
305	Corrugate	12	Fair	1 - Severe Erosion (>5ft)	8 ft			water	erosion happening
									The end pipe section has
									come off and erosion is
									occurring at the
									separation more pipe
									section will fall off as the
								There is severe erosion	erosion continues to eat
								around the outfall and	towards Pinecrest Dr to the
323	Concrete	24	Very Poor	1 - Severe Erosion (>5ft)	7-8 ft			going down the ditch	East
									Outflow not directly
								Several sections of pipe is	visible, but can see rest of
								broken off eroding hillside	
98	Concrete	24	Good	1 - Severe Erosion (>5ft)	7			approaching Illini Dr	water flow
								There is some severe	
								erosion occurring here,	The pipe itself looks to be in
220	Corrugate	18	Good	1 - Severe Erosion (>5ft)	6-7 ft			approx 6-7 ft	decent shape
			_					There is erosion approx 6ft	
165	Corrugate	15	Poor	1 - Severe Erosion (>5ft)	6 ft			with no standing water	bottom

High Priority Projects

	Material	Diameter	Pipe		Depth of Erosion				
OBJECTID	Туре	(inches)	1 '	Erosion Condition	(ft)	Cost	Location	VI - Other Comments?	Notes
								The pipe is severely	
								damaged broken off in	Has some erosion around
181	Corrugate	15	Good	1 - Severe Erosion (>5ft)	6 ft			many places	the outfall
								There is about 6 ft of	
								erosion and the pipe is	The pipe is in decent shape
292	Corrugate	12	Fair	1 - Severe Erosion (>5ft)	6 ft			hanging out 20 ft in	with no visible damage
299	Corrugate	12	Excellent	1 - Severe Erosion (>5ft)	6			sinkhole	
								The pipe has erosion	
								occurring down the	The pipe is in pieces coming
								hillside, approx 5-6 ft no	down the hillside and is
306	Corrugated	15	Very Poor	1 - Severe Erosion (>5ft)	5-6 ft			standing water	causing severe erosion
								Labeled as a 1 because of	Goes from a 18" CMP to a 18" Corrugated Plastic
									Pipe the CMP pipe is in
								i i i i i i i i i i i i i i i i i i i	decent shape, but as it
								belly of the gully, there is	switches to the Plastic pipe
								another major break in the	
								pipe, causing a hole to	there are multiple breaks in
								start eroding also erosion	the pipe, causing water to
								under the pipe as it goes	erode underneath the pipe
40	Corrugate	18	Poor	1 - Severe Erosion (>5ft)	3-5 ft			down the hill	from the break points
								This is not a pipe, but	
								there is erosion from	
								stormwater happening	There is bad erosion here,
215	Other		Poor	1 - Severe Erosion (>5ft)	5 ft			here	affecting road
								There is some erosion	
								outside the pipe, approx 3	
								ft there is some severe	TELEVISE! Pipe may be
								erosion by part of the	broken or damaged
								exposed pipe at the top of	
277	Corrugate	15	Poor	1 - Severe Erosion (>5ft)	3 ft			hill	outfall

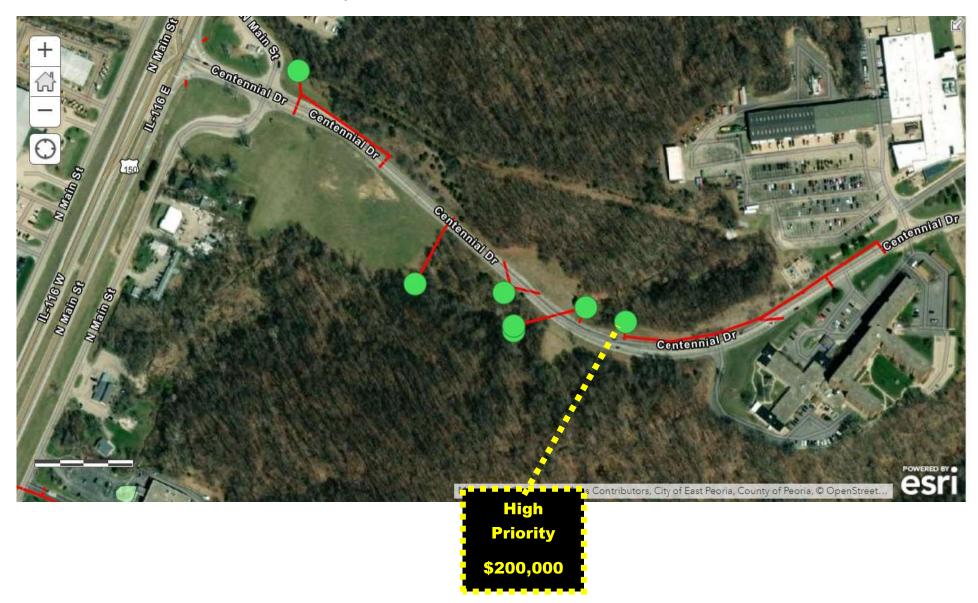
Object ID 232-Off of Harvey Ct



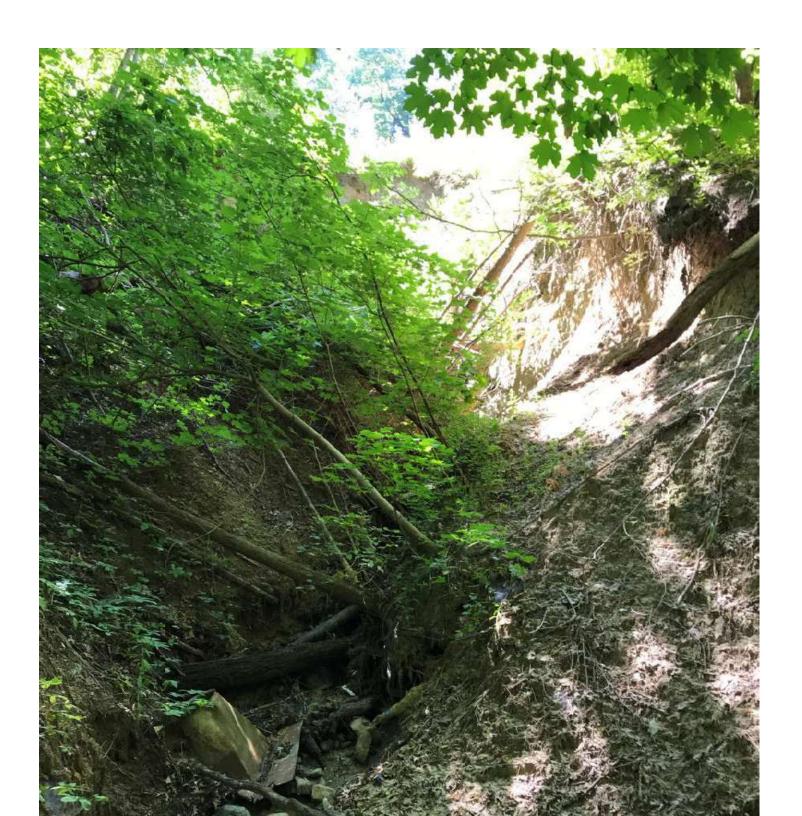




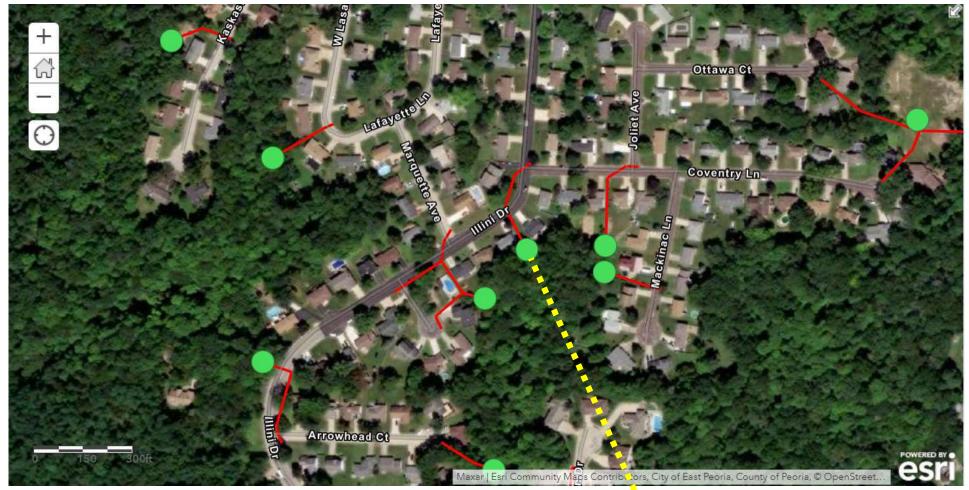
Object ID 10-Off Centennial Dr







Object ID 92-Off Illini Dr

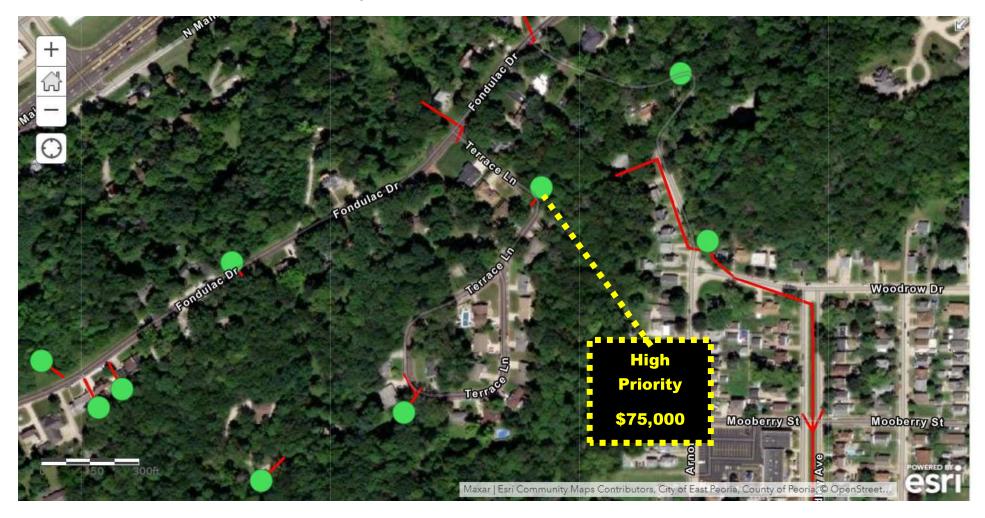






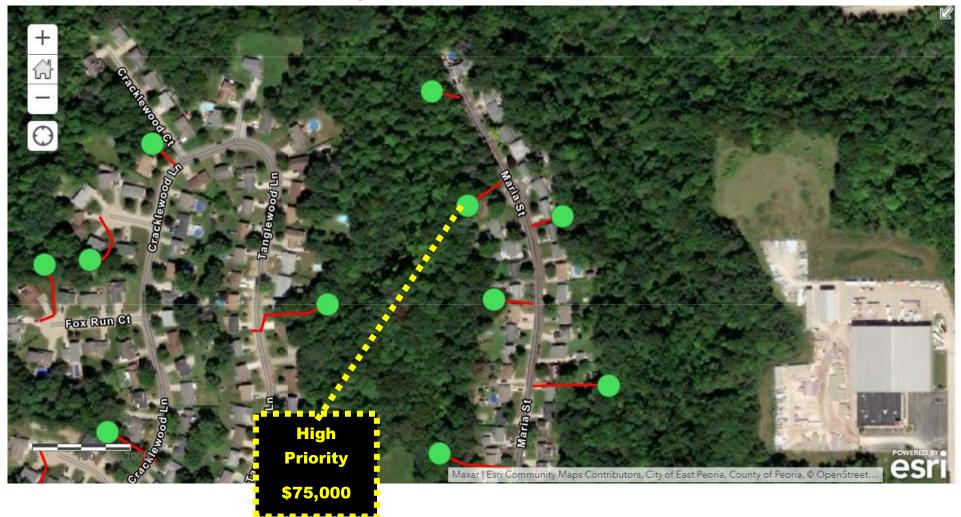


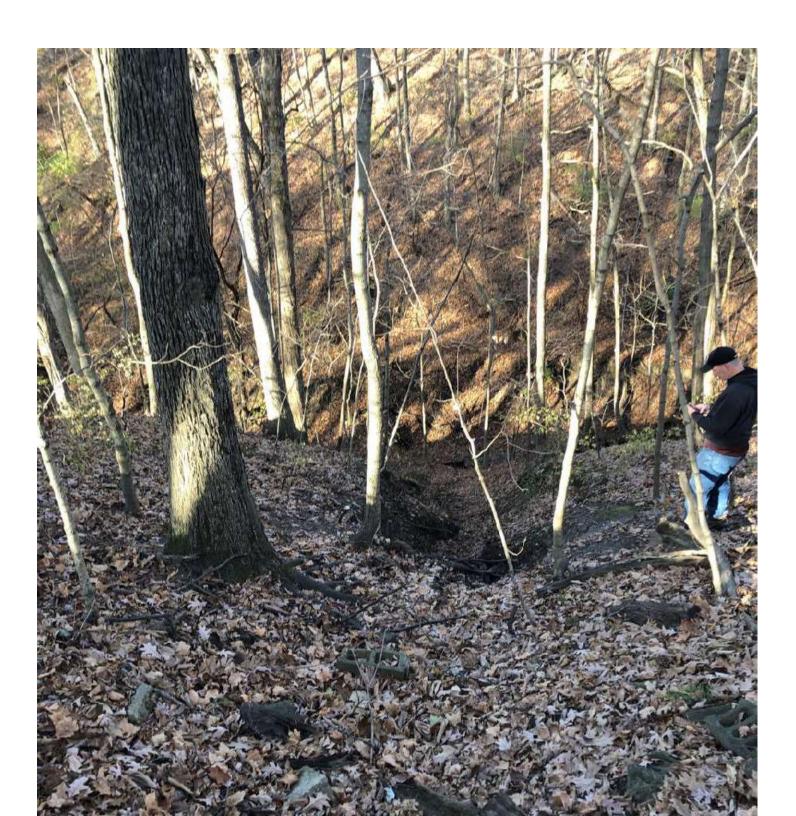
Object ID 194-Off Terrace Ln





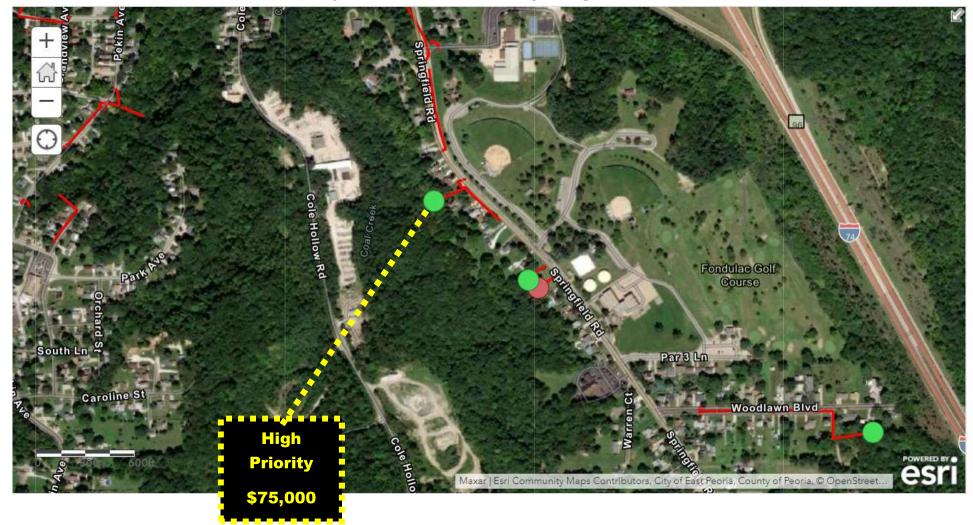
Object ID 260-Off Maria St

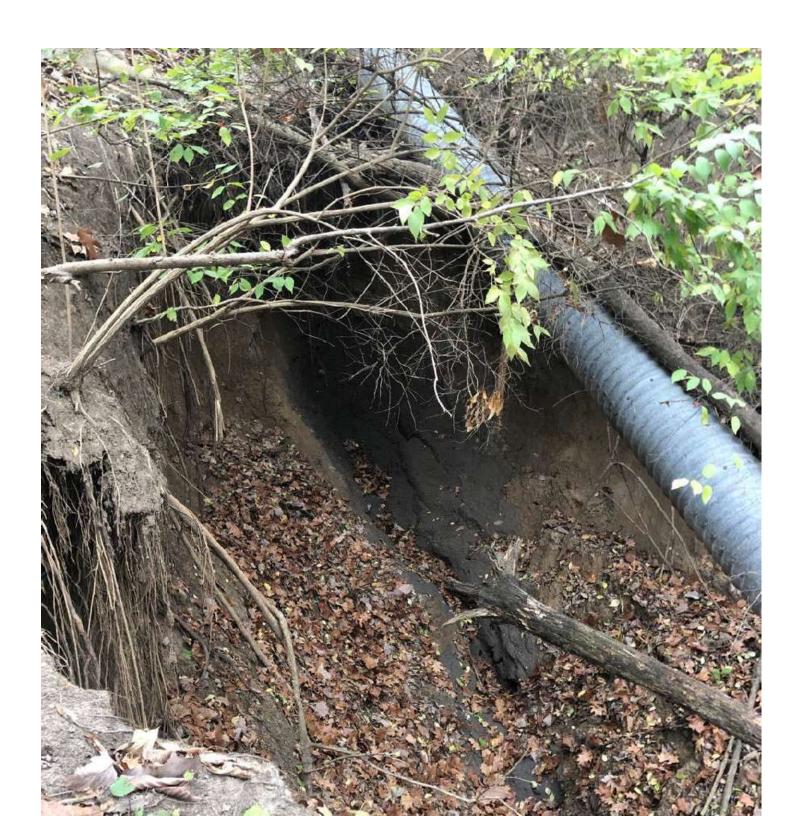




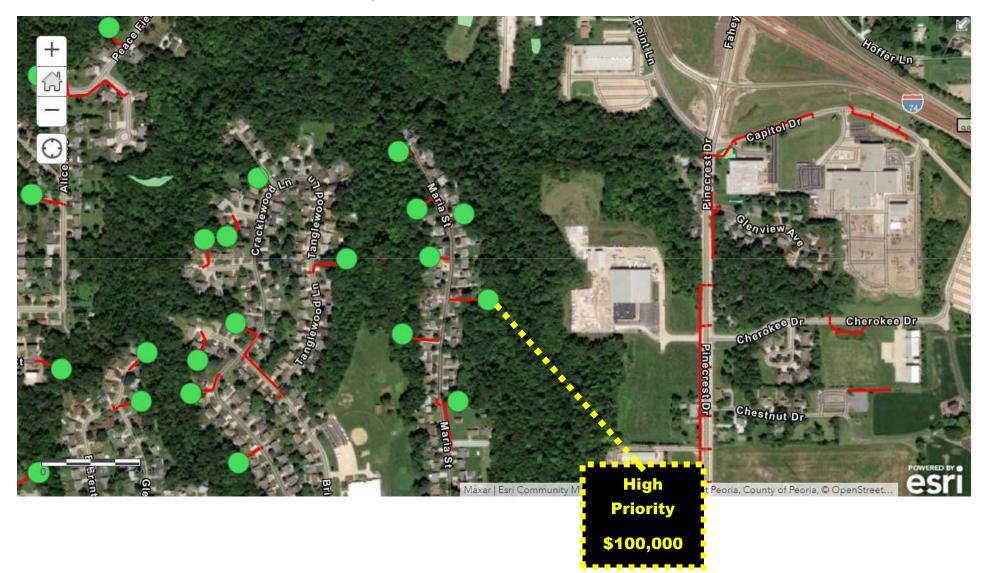


Object ID 214-Off Springfield Rd



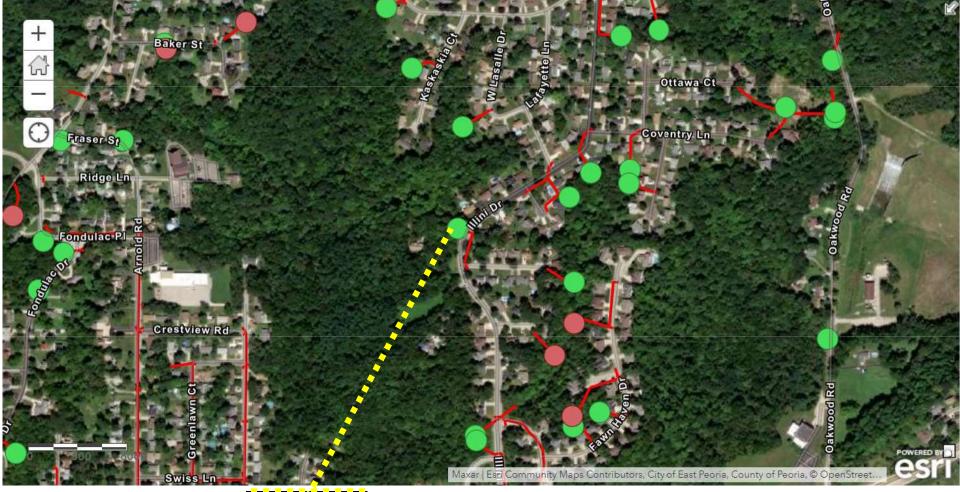


Object ID 263-Off Maria St





Object ID 94-Off of Illini Dr

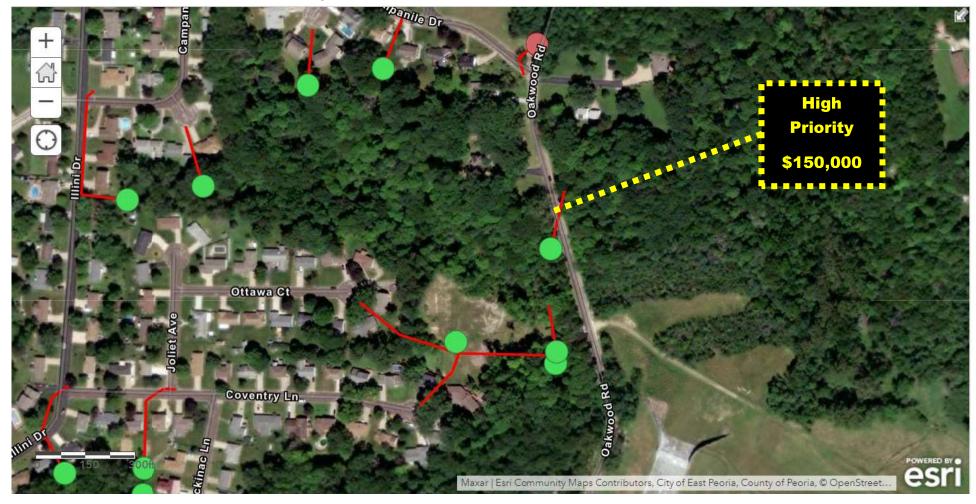


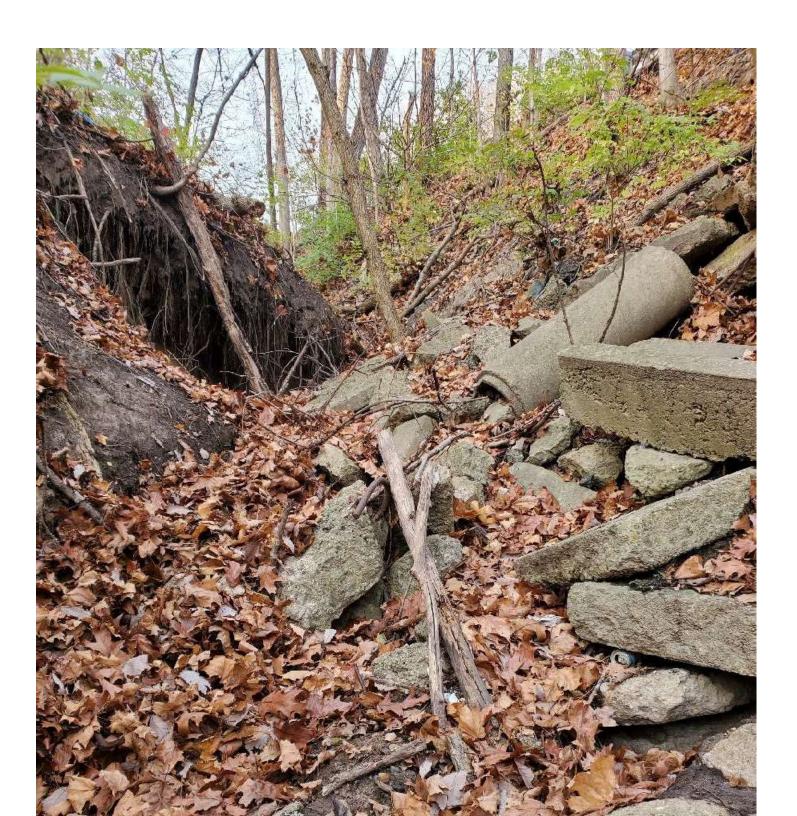






Object ID 166-Off of Oakwood Rd







Object ID 261-Off of Maria St





