IEPA Grant 21WWCTIRR01 OUTREACH MEETING The City of Cahokia Heights

Outreach Meeting Agenda



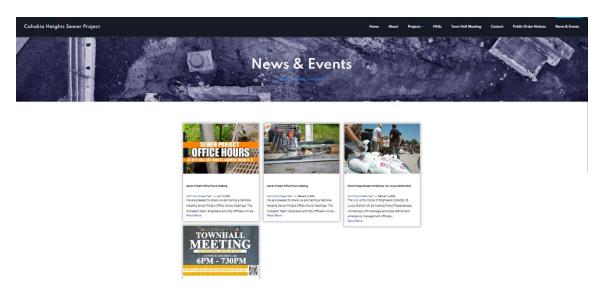
- OVERVIEW OF THE MEETING AGENDA AND WASTEWATER COLLECTION AND TRANSPORT INFRASTRUCTURE REHABILITATION AND RESTORATION PROJECT PRESENTED BY ANTONIO BAXTON
- INTRODUCTION OF THE PROJECT MANAGER FOR WATER AND SEWER PROJECTS, NEWLY HIRED CITY ENGINEER, AND ADDITIONAL PROJECT ENGINEERS PRESENTED BY EDWARD HIGHTOWER
- WATER INFRASTUCTURE PROJECTS PRESENTED BY SANDY BERNARD OF LOCHMUELLER GROUP LLC
- SEWER INFRASTRUCTURE PROJECTS PRESENTED BY CURTIS ZURLIENE OF TWM INC
- CAHOKIA HEIGHTS DEPARTMENT STAFF TRAINING AND CERTIFICATIONS UPDATE PRESENTED BY SHARLIN PFEFFER
- WATER TOWER AND PUMP STATION PROJECTS PRESENTED BY JAMES NOLD OF HURST ROSCHE
- CAHOKIA HEIGHTS MAIN SANITARY SEWER TRUNKLINE SLIP LINING PROJECT PRESENTED BY JACOB CONWAY OF THE U.S. ARMY CORPS OF ENGINEERS
- ILLINOIS EPA GRANT CONSTRUCTION ACTIVITIES, ENGINEERING TIMELINE AND BID PROCESSES PRESENTED BY **JAMES NOLD OF HURST ROSCHE**

WEBSITE



Cahokia Heights Sewer Project - Cahokia Heights Sewer Project





Grants Supporting Infrastructure Improvements

City of Cahokia Heights - Community Presentation

Introduction

• The City of Cahokia Heights is addressing critical infrastructure challenges through significant grant funding. These efforts aim to:

- Enhance public services.
- > Ensure environmental compliance.
- Promote community resilience.

\$10 Million IEPA Grant

• Purpose: Upgrade sanitary sewer infrastructure.

- Key Benefits:
- Eliminate sanitary sewer overflows (SSOs).
- Reduce system surcharges and backups.
- Minimize maintenance costs.
- Enhance wastewater service reliability.

\$8.5 Million and \$6.5 Million DCEO Grants

 Purpose: Fund essential repairs to water, sewer, and drainage systems.

- Key Benefits:
- Improve infrastructure reliability.
- Address long-standing community issues.
- Enhance efficiency in essential services.

Pending Grants Overview

- \$20 Million Community Change Grant
- > Tackle environmental and climate inequities.
- > Implement pollution reduction strategies.
- Support community-led projects.

- \$12 Million St. Clair County CDBG-DR Grant:
- > Address stormwater flooding in Piat Place.
- Enhance infrastructure resilience.

Pending Grants Overview

- \$6 Million DCEO Grant
- > Support water, sewer, and broadband infrastructure improvements.
- > Foster long-term resilience in critical services.

Pending Grants Overview

- Additional DCEO Grants (\$650,000)
- >\$200,000 for city infrastructure improvements (Project No. SD240055).
- >\$300,000 for city infrastructure improvements (Project No. SD240409).
- >\$150,000 for city infrastructure improvements (Project No. SD240050).

Conclusion

- The City of Cahokia Heights remains committed to leveraging grants to:
- > Enhance infrastructure.
- Protect the environment.
- Improve quality of life for all residents.

 These efforts ensure a resilient and sustainable future for the community.

Ongoing Drinking Water Projects

For

The City of Cahokia Heights



Falling Springs Road Water Tank Rehab

- Updates
 - Initial Abrasive Blasting Complete

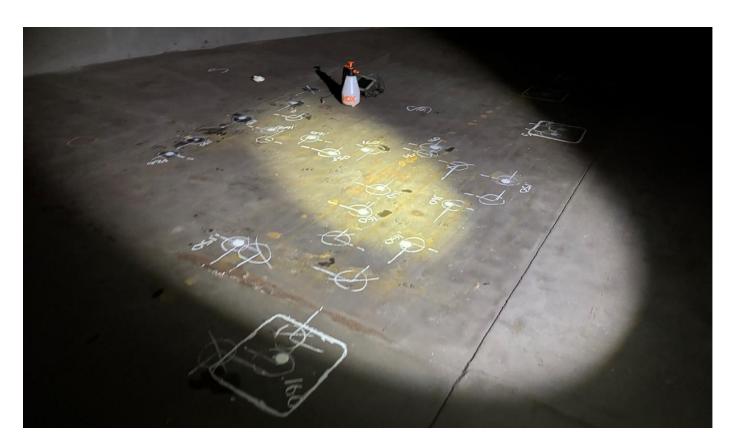






Falling Springs Road Water Tank Rehab

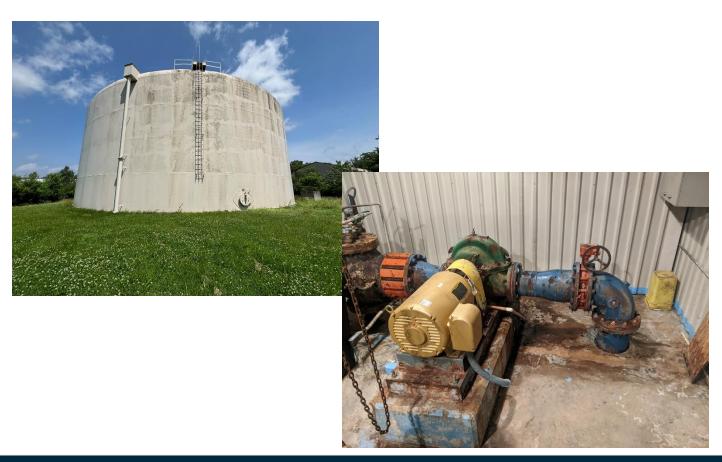
- Updates
 - Floor Scanning Complete
 - Patch Plate
 Recommendations
 based on 20-year
 Thickness





Falling Springs Road Water Tank Rehab

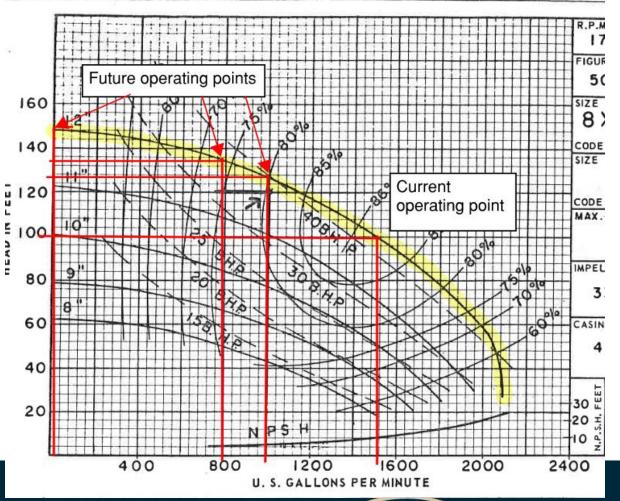
- Updates
 - Project awarded to Neumann Contractors
 - Included Booster Pump Replacement



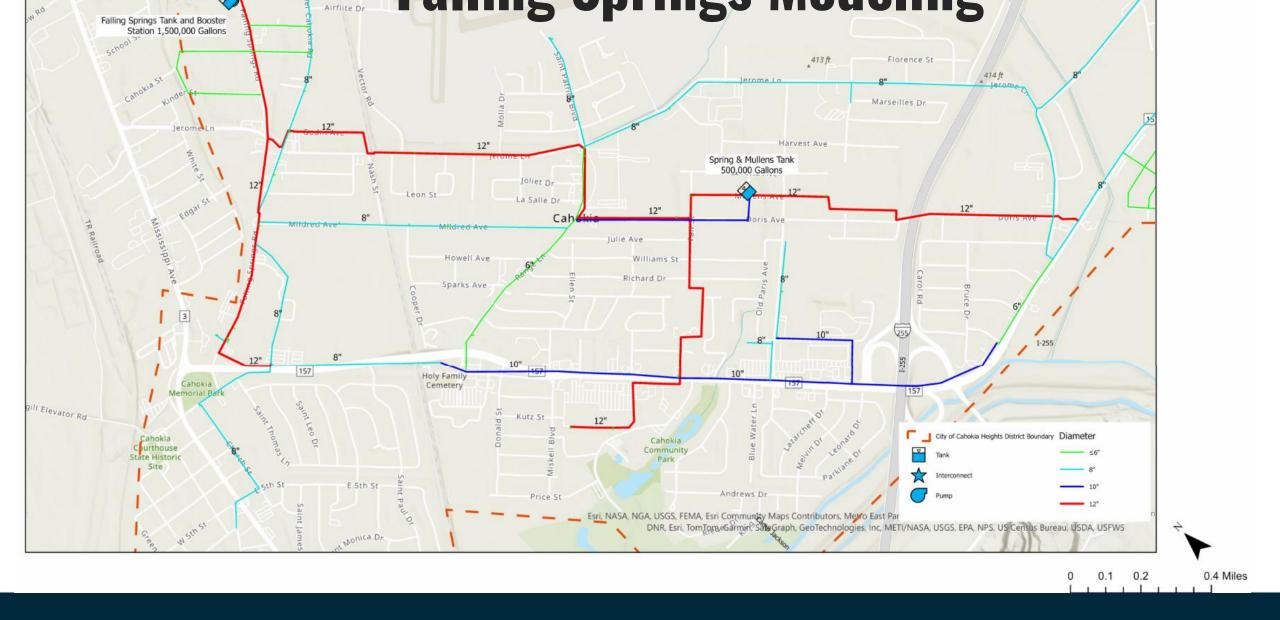


Falling Springs Booster Pump Replacement

- Booster pumps will be redesigned
 - Tank impacts pump design
 - Design to maximize emergency storage volume









Falling Springs General

- Tank in Service When...
 - Tank Rehabilitation Complete
 - Booster Pump Replacement Complete

• Chem Feed/Mixing Equipment Installed









Falling Springs Schedule

- Tank Design & Permitting Schedule
 - Design Complete: December 2024
 - IEPA Construction Permit: January 24, 2025
- Booster Pump Design & Permitting Schedule
 - Design Complete: March 31, 2025
 - IEPA Construction Permit: March 4, 2025
- Construction Schedule
 - Notice to Proceed: March 31, 2025
 - Substantial Completion: December 31, 2025







Water Main Replacements/Extension

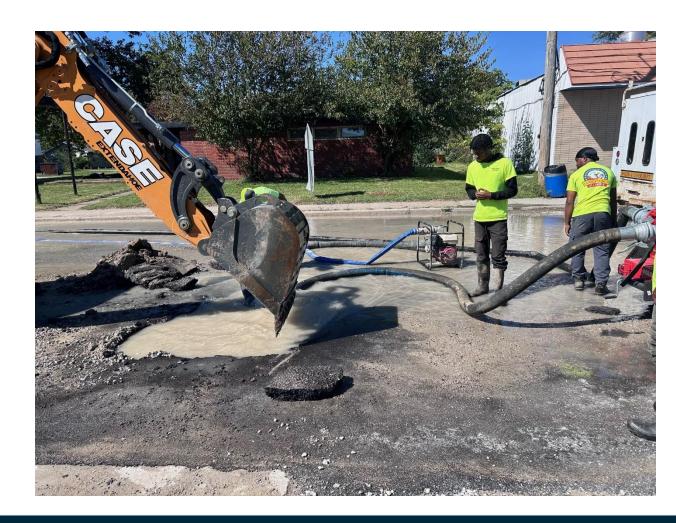
- 7 Water Main Projects
 - White & Mary Loop
 - Loren & Carol Loop
 - Parks College to St. Paul
 - Julian
 - Edwards
 - Kinder
 - Range Lane





Water Main Schedule

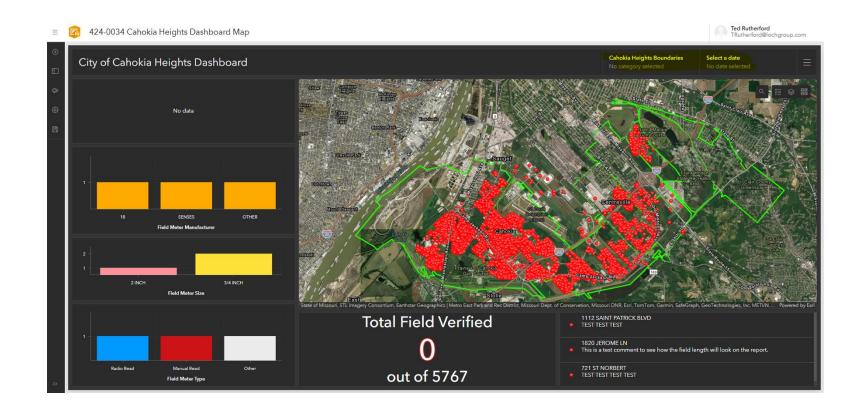
- Design & Permitting Schedule
 - IEPA Construction Permit: 3/01/2025
 - Design Complete: 3/31/2025
- Water & Sewer Department Priorities for Construction
 - Loren & Carol Street
 - White & Mary Street
 - 200 Block of Edwards Street
 - 200 Block of Julian Avenue
 - 100 Block of Kinder Street
 - Parks College to St. Paul Drive
- Construction Schedule
 - Notice to Proceed: 4/01/2025
 - Substantial Completion: 9/01/2025





Water Meter & Hydrant Replacements

GIS Database Developed
Next Step is Field Verification





THOUVENOT, WADE & MOERCHEN, INC

Exceptional Service – Nothing Less Since 1946

Projects for the City of Cahokia Heights

Curt Zurliene. PE 1/22/2025



Sanitary Sewer Repair Project

Quick Hits

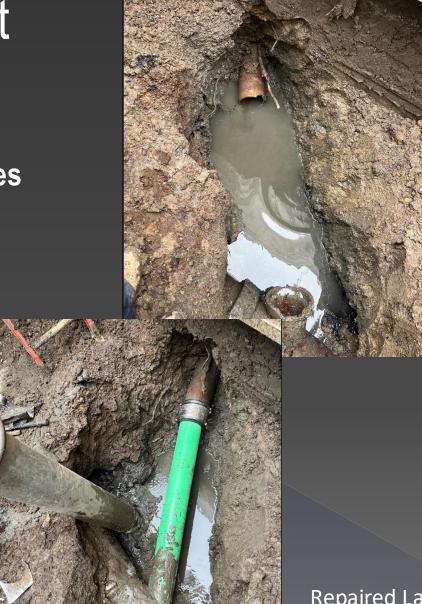
- Point Repairs/Reach Replacement
- 10 repairs, about 8 areas
- IEPA WWCTIRR Program Grant
- Schedule
 - Bids received 10/18/24
 - Awarded to Hank's Landscaping
 - Notice to Proceed 12/24
 - Completion by 5/25



Sanitary Sewer Repair Project

Work Includes

- Repairing a small section (point repair)
 - Or replace all pipe between manholes
- Repair/replace lateral connections
- **Dewatering**
 - Work in the dry
- Bypass pumping
 - Minimize service disruptions
- **Site Restoration**
 - Neat final appearance

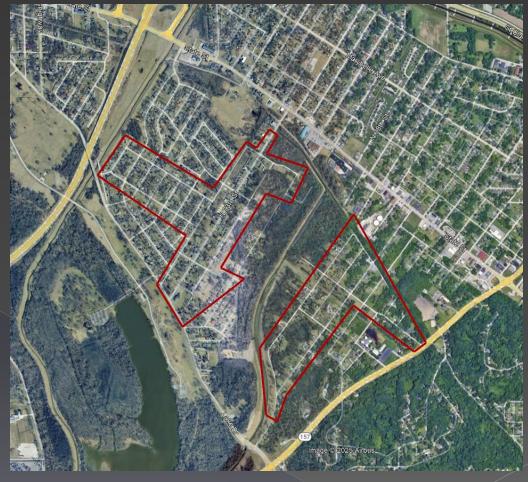


Broken Lateral

Repaired Lateral

Part of ARPA Grant

- Approximately 30,000 feet of sewer
- Clean/CCTV
 - Remove sediment & obstructions
 - Assess sewer condition
 - Identify active connections, etc
 - Verify CIPP design parameters
- CIPP (cured-in-place pipe)
 - •50-year lifespan
 - Improve structural condition
 - Reduce infiltration
- Some brush removal/site restoration



Approximate Work Areas

Project Benefits

- Pipe Integrity
 - "New Pipe" within old pipe
 - Extended lifespan without removing old infrastructure
- Increased capacity
 - Reduced inflow & infiltration (storm & groundwater)
 - Water that shouldn't be there
 - More room for wastewater

Inflow and Infiltration

Sanitary Flow

After Remediation

Following Reallocation of Recovered Capacity

Inflow and Infiltration

Sanitary Flow

Sanitary Flow

Sanitary Flow

Sanitary Flow

Schematic of Impact of I&I reduction (Courtesy of Civica)



Clockwise from upper left:

- A cleaned reach prior to CIPP (Note tap on left)
- 2) CIPP lined reach
- 3) CIPP reach with reinstated lateral
- 4) CIPP main with lateral liner

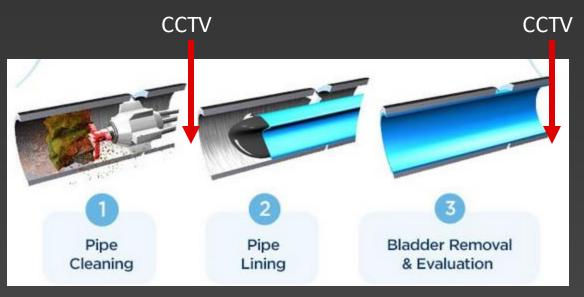
Part of ARPA Grant

- Schedule
 - Bid & Award 12/2024
 - Awarded to Insituform
 - Notice to Proceed 2/2025
 - Begin Work Spring 2025
 - Completion of Work Summer 2026



Left: Tap Lining Schematic (Courtesy of Rehab Zone)

Right: Main Line End Seal (Courtesy LMK Tech.)



General Work Process (Courtesy of Nu-Flow)







City of Cahokia Heights Water & Sewer Department

We are happy to announce that we now have 4 employees that have completed their certification in collection systems, meeting all request of the USEPA.





CRITICAL INFRASTRUCTURE PROJECTS SEPARATE FROM THE IEPA WASTEWATER GRANT

- Drinking Water Storage and Disinfection
- Other Drinking Water System Infrastructure
- Stormwater Management and Flood Control
- Sewer Repairs Funded Outside the IEPA Grant
- Pump Station Repairs Funded Outside the IEPA Grant



PROJECTS SEPARATE FROM THE IEPA GRANT

DRINKING WATER SYSTEM

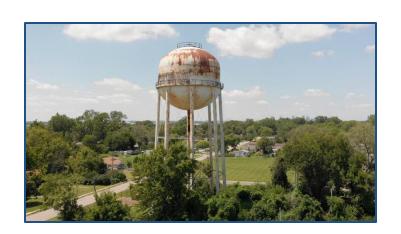
- CURRENT (Design and Funding in Progress) \$12 Million
 - Water Towers
 - Booster Disinfection Systems
 - New Hydrants and Meters
 - Line Extensions
 - SCADA System
- COMPLETED
 - Water Tower Rehab Church Road \$900,000

Water Tower Rehab and Restoration – Church Road – Completed April 2024 - \$900,000

- Inspection and Report on Conditions
- Critical Safety Repairs
- Containment
- Pressure Cleaning, Sandblasting, Painting
- Foundation and Structural Repairs
- Access and Safety Improvements
- New Mixing System
- Security Fencing and Grounds Improvements



Water Tower Rehab and Restoration – Church Road – Completed April 2024



















PROJECTS SEPARATE FROM THE IEPA GRANT

STORMWATER MANAGEMENT and FLOOD CONTROL

- CURRENT (Design and Funding in Progress) \$20 Million
 - New Storm Sewers and Culverts
 - Major Drainage Ditch Cleanout and Regrading
 - Capacity Increase in Harding Ditch
 - Roadside Drainage Improvements and Street Paving

COMPLETED

- Storm Sewer Improvements and Paving Piat Place
- Roadside ditch cleanout Ping Pong

Paving and Storm Sewer Repair – Piat Place – Completed September 2024









PROJECTS SEPARATE FROM THE IEPA GRANT

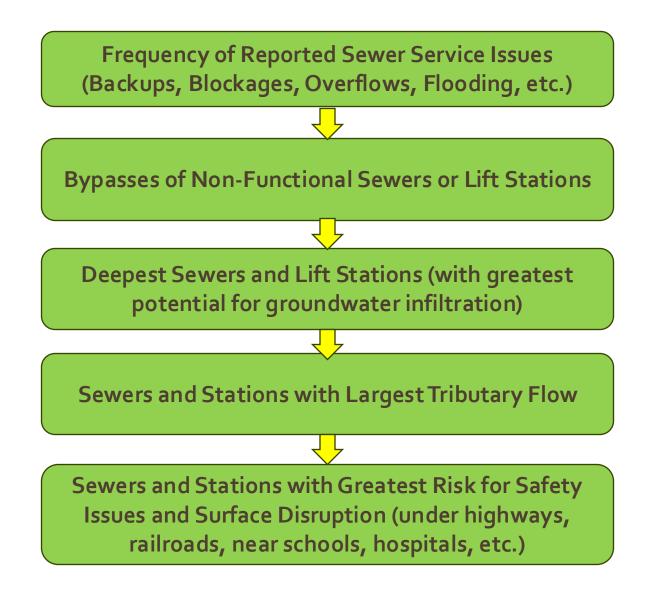
SANITARY SEWER AND PUMP STATION REPAIRS

- CURRENT (Design and Funding in Progress) \$35 Million
 - Sewer Repairs
 - Pump Station Rehab/Replacements
 - Sewer and Trunkline Cleaning, TV, CIPP
 - Interceptor Sewer
 - SCADA

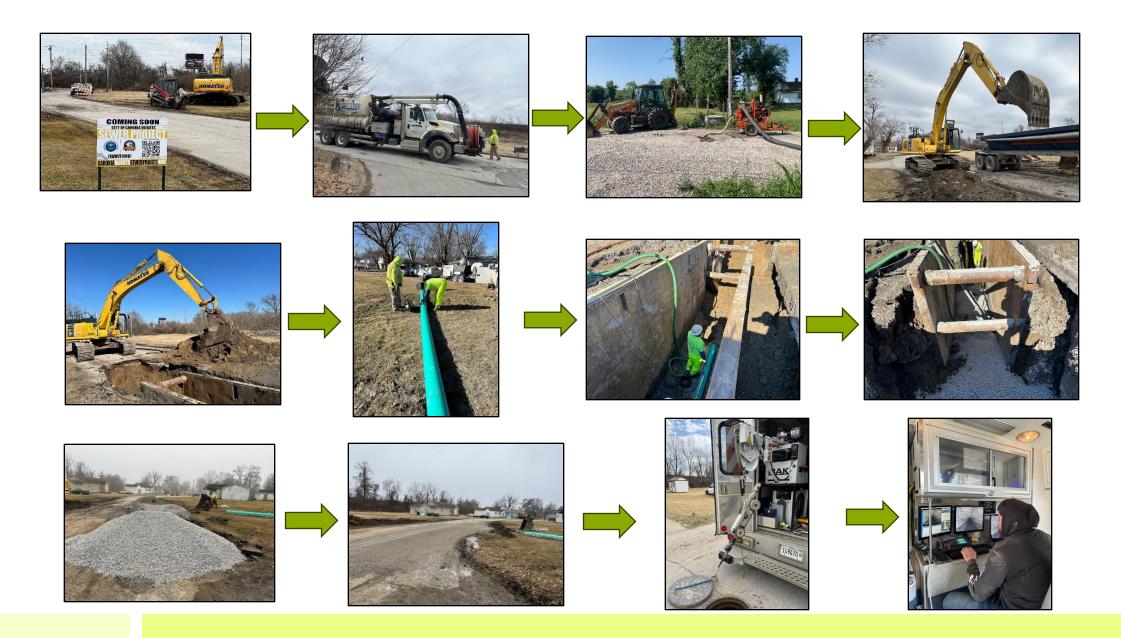
COMPLETED

- Sanitary Sewer Repairs 5 locations \$500,000
- Pump Station Repairs/Replacements 12 locations \$2,000,000

PROJECT LOCATION SELECTION AND PRIORITY



Typical Sewer Repair (N. 63rd St. – completed in May 2024)



Typical Pump Station Rehab/Replacement

(N. 82nd St. –two stations completed in October 2023)



































Typical Cleaning, Televising, CIPP Lining of Sewer Lines

(various locations completed in 2023, Main Trunkline started in April 2024)





Jerome Lane Emergency Sewer Repair



- Failure and subsidence of manhole on main trunkline
- Damage became visible after heavy rains July 2024
- Damage to street, curb & gutter, guardrail
- Large power pole with transformer close by
- Across Jerome Lane from school and school bus depot
- Large line (24" diameter) approx. 19 feet deep
- Repair required:
 - New manholes and trunkline sections
 - Several dewatering wells to lower groundwater levels to enable repair
 - Deep excavation with shoring
 - Traffic re-routing
 - Street restoration
- Completed in December 2024, except for paving

Jerome Lane Emergency Sewer Repair





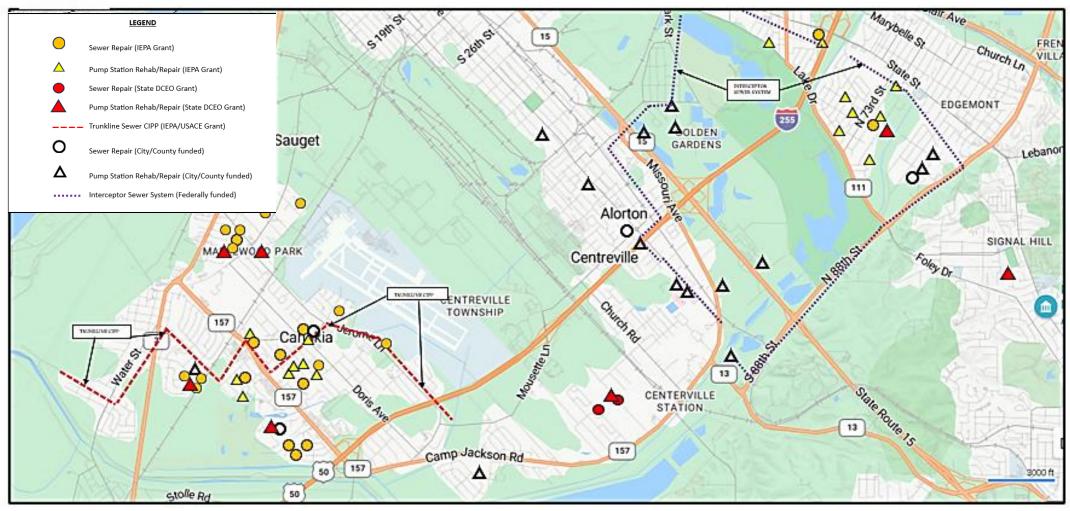






CITY OF CAHOKIA HEIGHTS—SANITARY SEWER SYSTEM IMPROVEMENTS – PROJECT LOCATIONS MAP











SECTION 219 ENVIRONMENTAL INFRASTRUCTURE ASSISTANCE











SECTION 219 – ENVIRONMENTAL INFRASTRUCTURE AUTHORIZATION



- Section 219 of the Water Resource Development Act (WRDA) of 1992, as amended.
 Program purpose is to provide Federal assistance to State and local governments in carrying out water-related infrastructure projects.
- Cahokia Heights falls within the Madison & St. Clair Counties, IL Project Authority
 - One current project under contract providing wastewater infrastructure assistance
- The Water Resources Development Act of 2024 contained two additions providing future opportunity for USACE and City to partner together.

WRDA 2024 Additions:

- Added stormwater management to the project scope.
- Authorization increased from \$100M to \$150M
- Enables a total maximum investment in the two county area of \$200M (\$150M FED; \$50M NON-FED)



CURRENT CONSTRUCTION SANITARY SEWER TRUNKLINE – CIPP LINING



PROJECT SCOPE

- Rehab approximately 3 miles of a 9-mile-long trunk sewer system
- Using Cured-In-Place Pipe (CIPP) Lining.
 - CIPP is a trenchless sewer rehabilitation method with no need to excavate and replace existing pipes.
 - This method eliminates defects in the sewer line such as cracks, offset joints, and structurally deficient segments.

PROJECT SCHEDULE

✓ Contract Award
 ✓ Construction Start Date
 Construction Completion
 **Still on Schedule

FEB 2024 APR 2024 Spring 2025

Budget

- FY23 Appropriation: \$3.5M Received (**Federal**)
- City's Cost Share: \$1.667M Received (Non-Federal)

Highlights

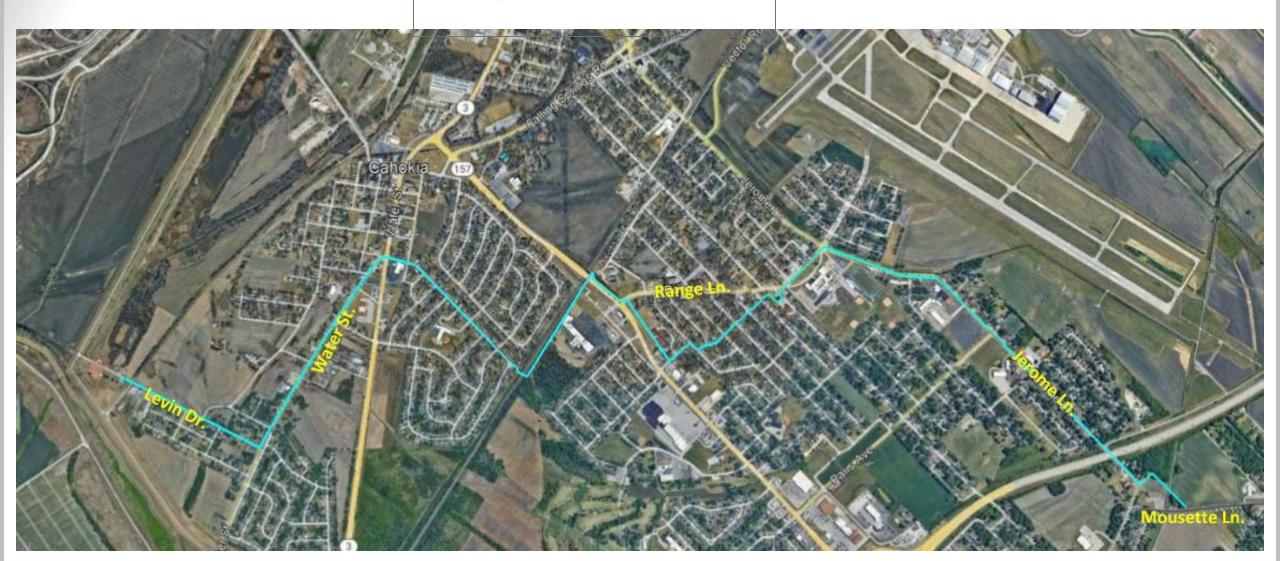
- Increased system capacity and resliency
- Improvements to access points that were found to be insufficient
- Cost Saving Sections of trunk sewer found to be previously lined and won't require lining. Funds intended for these sections are planned to be utilized on upstream segments within "Upper Limits"





Construction Completed

- 11,165 LF Cleaned
- 6,172 LF CIPP Installed





CONTRACTOR ACTIONS





Cleaning Efforts w/ vacuum Truck



Curing Liner with Steam

TRUNKLINE - UPPER LIMITS



UPCOMING WORK & FUTURE CAPABILITIES

FY24 Workplan Funds

- \$1.1M Received (Federal)
- City's Cost Share: \$360K (Non-Federal)
- Scope: Additional cleaning and lining of trunkline
- Spring 2025 Initiate contract work

Funds from previously lined segments

- Anticipate approximately \$600K-\$800K in cost savings
- Descope from current project areas and apply it to the upper limits

FY2025 Request

\$3.24M requested for rehab of the Trunkline Upper Limits

Future Work

• Strategic projects involving sanitary sewer mapping, future wastewater and stormwater improvements

U.S. ARMY

FOR MORE INFORMATION



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Jacob Conway Project Manager U.S. Army Corps of Engineers Mobile (Primary): 314-331-8501 Jacob.d.conway@usace.army.mil



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- mvs.usace.army.mil
- teamstl-pao@usace.army.mil

IEPA GRANT – STATUS AND LOOK AHEAD

(projected milestones)

			January 2025	February 2025	March 2025	April 2025
Bid Package Location						
	1	CIPP-01 Trunkline Section 1 – Levin Dr. to Jerome Ln. & Mousette Ln.	Continue Construction	Continue Construction	Continue Construction	Continue Construction
	3	SSR-03 thru 11 Nine Sewer Repair Locations	Continue Construction	Continue Construction	Complete Construction	
	4	PSR-01 thru 16 Sixteen Pump Station Locations	Finalize Equipment Orders	Waiting on equipment delivery	Waiting on equipment delivery	Waiting on equipment delivery
	5	SSR-13 thru 22 Ten Sewer Repair Locations	Finalize submittals, mobilize, locate utilities	Commence Construction	Continue Construction	Continue Construction

Conclusion

- THIS WILL BE THE FINAL OUTREACH MEETING FOR THE IEPA GRANT 21WWCTIRRo1.
- TO REVIEW ANY PAST PRESENTATIONS OR INFORMATION, PLEASE VISIT THE CITY OF CAHOKIA HEIGHTS WEBSITE Official City of Cahokia Heights Website City of Cahokia Heights Illinois
- FOR QUESTIONS REGARDING WATER OR SEWER PLEASE CONTACT:

Cahokia Heights Water & Sewer Department

2525 Mousette Cahokia Heights, IL 62206

Hours: Monday – Friday 8:30am – 4:30pm

M - F 8:30 - 4:30pm

Phone: 618.332.1222

Fax: 618.337.9519