



Water Transmission Incident Review & Response

Review of the 36", 42", and 54" Water Main Breaks

Peter Fromm, Director of Water Transmission

November 20, 2025

54" Water Main Break

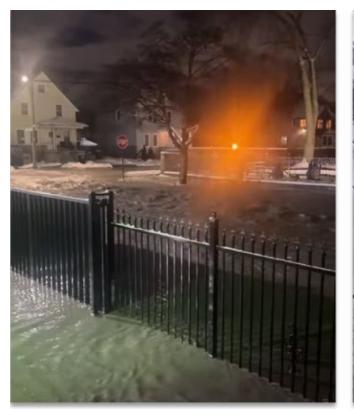
February 17, 2025





Morning of the Break

Community's Perspective February 17, 2025





3:38 AM 7:30 AM



First 48 Hours: Response Timeline

Feb. 17, 2025

Notification to GLWA at Approx. 4:00am

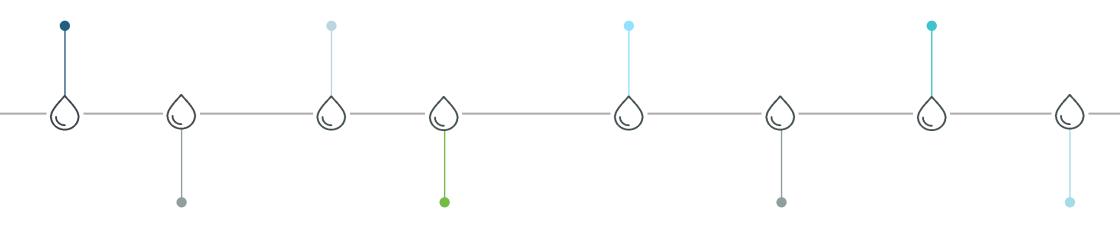
Feb. 17, 2025

GLWA located isolation valves at Approx. 6:30am

Feb. 17, 2025

Dewatering at Break Location started at Approx. 5:00pm Feb. 18, 2025

GLWA starts Excavation & Shoring to Remove the Broken Main at Approx 1:00pm



GLWA on-site at Approx. 5:35am

Feb. 17, 2025

GLWA initial isolation at Approx. 7:30am

Feb. 17, 2025

GLWA full isolation at Approx. 12:20pm

Feb. 18, 2025

Repair of Main Continues

Feb. 18, 2025



Water Main Break Location













Pipe Isolation and Repair











Repair In Process











Site Restoration











Visual Summary

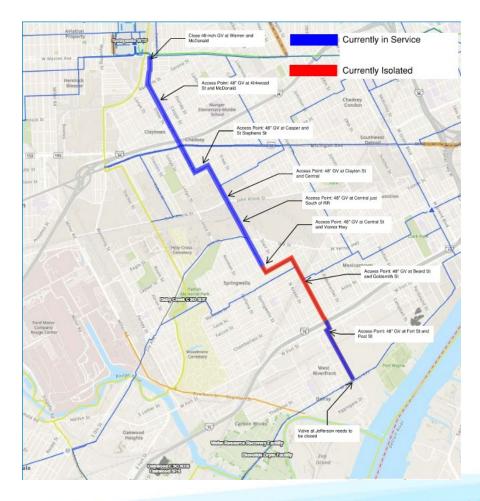
Before and After Comparison





Next Steps for Renewal

- ♦ Field Testing to determine the length of the 54" that needs to be renewed
- ♦ Pipeline Assessment of the 54"
 - Inspection of Pipeline
 - 3D LiDAR Scanning of Pipeline
- **♦** 54" Pipeline Lining Project







36" Water Main Leak Overview

July 5, 2025





36" Leak Repair Timeline



July 5, 2025

Great Lakes Water Authority notified about 36" leak.



July 7, 2025

GLWA & Member Partners began isolating the leak. Chesterfield open emergency connection to New Haven



July 9, 2025

GLWA completed the Isolation. Chesterfield CH-03 fed Lenox Township.
Chesterfield isolated 12" water main. Contractor started repair.



July 11, 2025

Repair completed and GLWA started filling main.



July 13, 2025 & July 14, 2025

Water Quality samples were taken.



July 15, 2025

Re-opening the 36" water main.



July 18, 2025

Lenox Boil Water Advisory lifted

Chesterfield 12" water quality samples passed



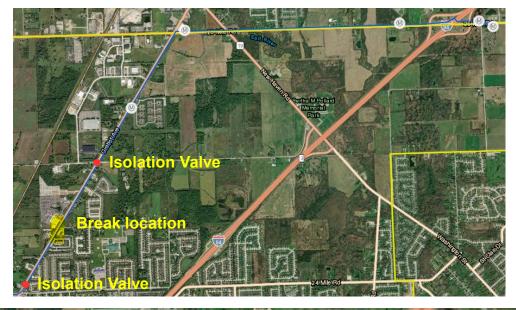
July 20, 2025

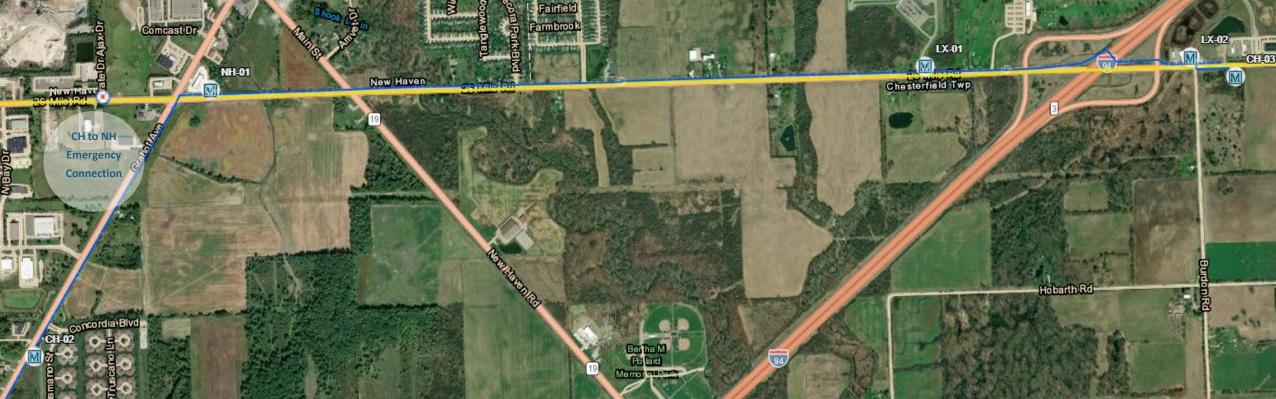
First State Bank Water Quality samples passed



36" Transmission Main

Pressure Flow Overview





36" LeakVisual Timeline















42" Water Main Repair Timeline



6:30am 42" main broke

GLWA arrived at 8:00 am

GLWA started isolating at 9:00 am

16" Insertion valve installed at 11 pm

Isolation continued throughout the night



At 3:00 am, Novi (NV-04) started to receive flow again.

At 1:30 pm, GLWA isolated at break site

At 2:00 pm, break site dewatered and repair started

Field crew worked to broken main



42" damaged pipe was removed and new pipe section installed

Installed linestop on 24" main and replaced 16" valve

Inspection of existing 42" pipe at break site

Bac-T Sample on 24"



42" repair continued

Prepared for inspection of 42" pipe

16" valve replacement started

Prepared for 30" valve replacement

Bac-T samples taken for the GLWA 24" main and Novi System



42" repair continued

Started Inspection on existing 42" pipe

30" valve replacement began

2nd round of Bac-T samples were taken from the Novi System

Bac-T samples passed for the 24" watermain



42" repair with man-way access

30" valve replacement continued

Water Quality lifted Boil Water Advisory in Novi

Valve Maintenance continues at WA-01

Inspection of existing 42" continued

September 25

September 26

Sept

September 27

September 28

September 29

September 30



42" Water Main Repair Timeline (cont'd)



Repair on 42" continued

30" valve replacement continued

Repair completed on valve to Walled Lake (WA-01)

Review initial inspection data began



42" repair site backfilled

30" valve replacement continued

Review of initial inspection data continued

Prepared for second inspection of existing 42"

Water Quality samples at WA-01 and CM-01

BWA lifted at Walled Lake & Commerce



Backfilled at 42" repair site

30" valve replacement continued with installation starting

BWA lifted in Wixom

Water Quality samples at WA-01 and CM-01

Inspection of existing 42" main

Repair Novi watermain at 30" valve location



Restoration Prep. at 42" repair site

30" valve replacement continued

Water Quality samples passed at WA-01 and CM-01

Prepare for new 42" valve cut-in east of break location



Site Clean-up

Dewatering Pump Watch



Restoration Prep. at 42" repair site

30" valve installation completed

Mob. to new 42" valve cut-in east of break location

GLWA continues to review inspection data

October 1



October 3



October 4



October 5





42" Water Main Repair Weekly Timeline (cont'd)



EOC Meetings

36" Valve installation completed and vault structure continues

42" valve installation

42" Break site road restoration

Review of Inspection data



EOC Meetings

42" Valve Vault Structure Continues

36" Valve Vault Structure Continues

Prep. For 42" Inspection from E. Walled Lake to WX-01

42" from Haggerty Booster Station to 24" Back in Service

CM-01 & WA-01 Back in Service from the 24" Main



EOC Meeting

Road Restoration on W. 14 Mile

Inspection of the 42" from E. Walled Lake to WX-01

Site Clean Up



EOC Meeting

W. 14 Mile Re-Open

Review of Repair Alternative Options

Meeting with
Operation Group
(GLWA/Member Partners
/Stakeholders)



EOC Meeting

Final decision on Direct Replacement

Notice to Proceed with Direct Replacement

Meeting with Operation Group (GLWA/Member Partners/Stakeholders)



EOC Meeting

Kick-off Meeting for Direct Replacement

Meeting with Stakeholders & EGLE

Start of 42" Design

Meeting with Operation Group (GLWA/Member Part ners/Stakeholders)

Week of October 6

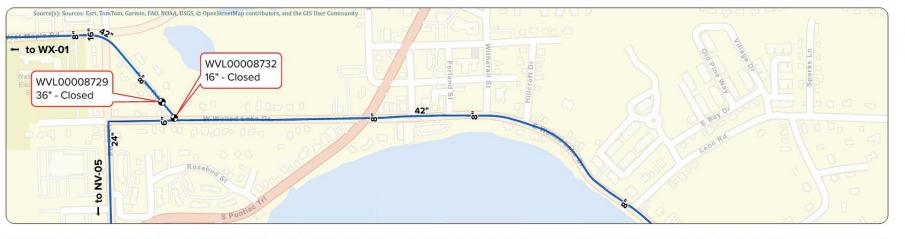


Week of October 20

Week of October 27

Week of November 3 Week of November 10



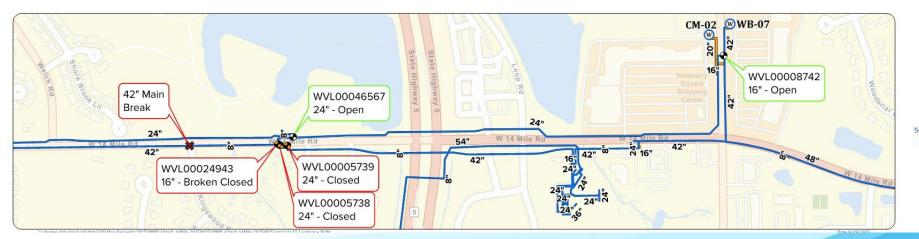


42" Main Break

- X Main Break Location
- WAMR Site
- Gate Valve
- Tapping Sleeve Valve
- GLWA Transmission Main
- GLWA Outlet Main
- GLWA Meter Inlet Main



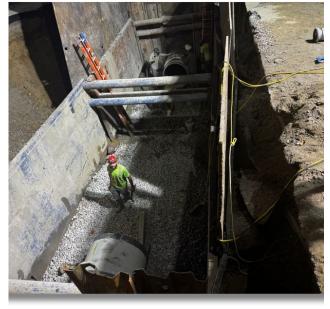


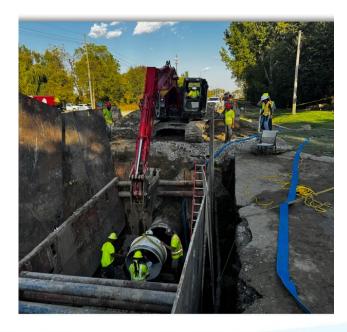


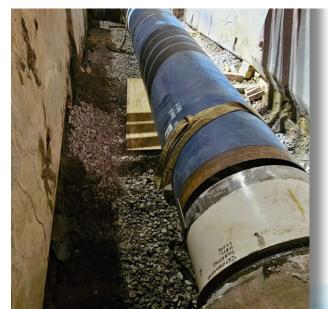


42" Main RepairVisual Timeline













42" Break Repair

Visual Timeline (cont'd)











42" Renewal Phase





CFRP - Carbon Fiber Reinforced Polymer AFO - Acoustic Fiber Optic

