



120-inch Water Main Break (WMB) MI-ACE 23

**Cheryl Porter – Chief Operating
Officer for Water & Field Services**

A93D

120-inch Water Main Break Largest size transmission main in GLWA system

- 4:30am on Saturday, August 13, 2022
- 23 communities impacted
- 935,000 estimated people
- One business in Greenwood
- One business in Imlay Township
- BWA issued

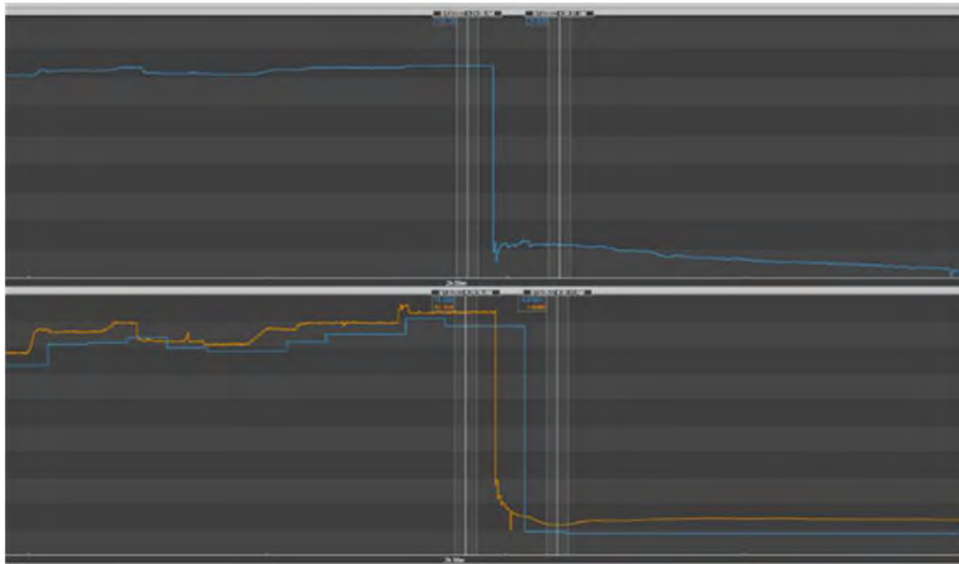
A93D



How GLWA knows there is a WMB?

Monitoring from System Control

- Lake Huron Discharge
- Imlay Pump Station



The Field Team at work



Great Lakes Water Authority



Click to add text



Sunday, August 14, 2022

- Water main break isolated
- Preparation for repair begin



GLWA Office of Emergency Preparedness

- Activated GLWA virtual Emergency Command Center (ECC) with Incident Commander (IC)
- Establish AM/PM Operational Periods with IC
 - Daily Morning Briefs – 9:00 am
 - Daily Afternoon Briefs – 4:00 pm
- Direct contact with Emergency Managers of affected jurisdiction
 - St. Clair County
 - Macomb County
 - Oakland County
 - Lapeer County
- Direct contact with Michigan State Police (MSP), District Coordinator
- Establish a Unified Command with MSP

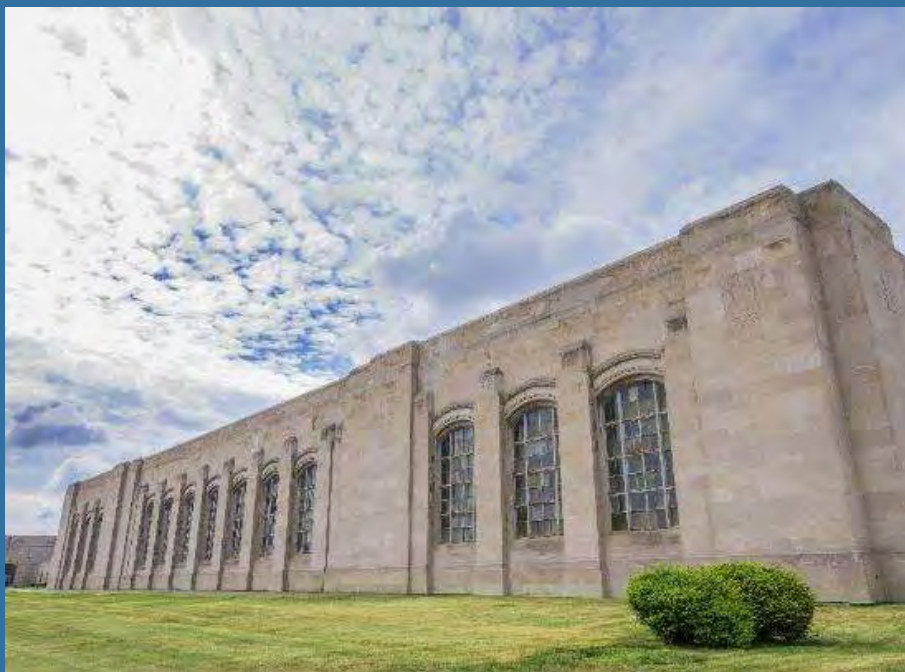


**MI State Police
Emergency
Management and
Homeland Security
to handle bottled
water distribution**





**Working to
remove
damaged
pipe**

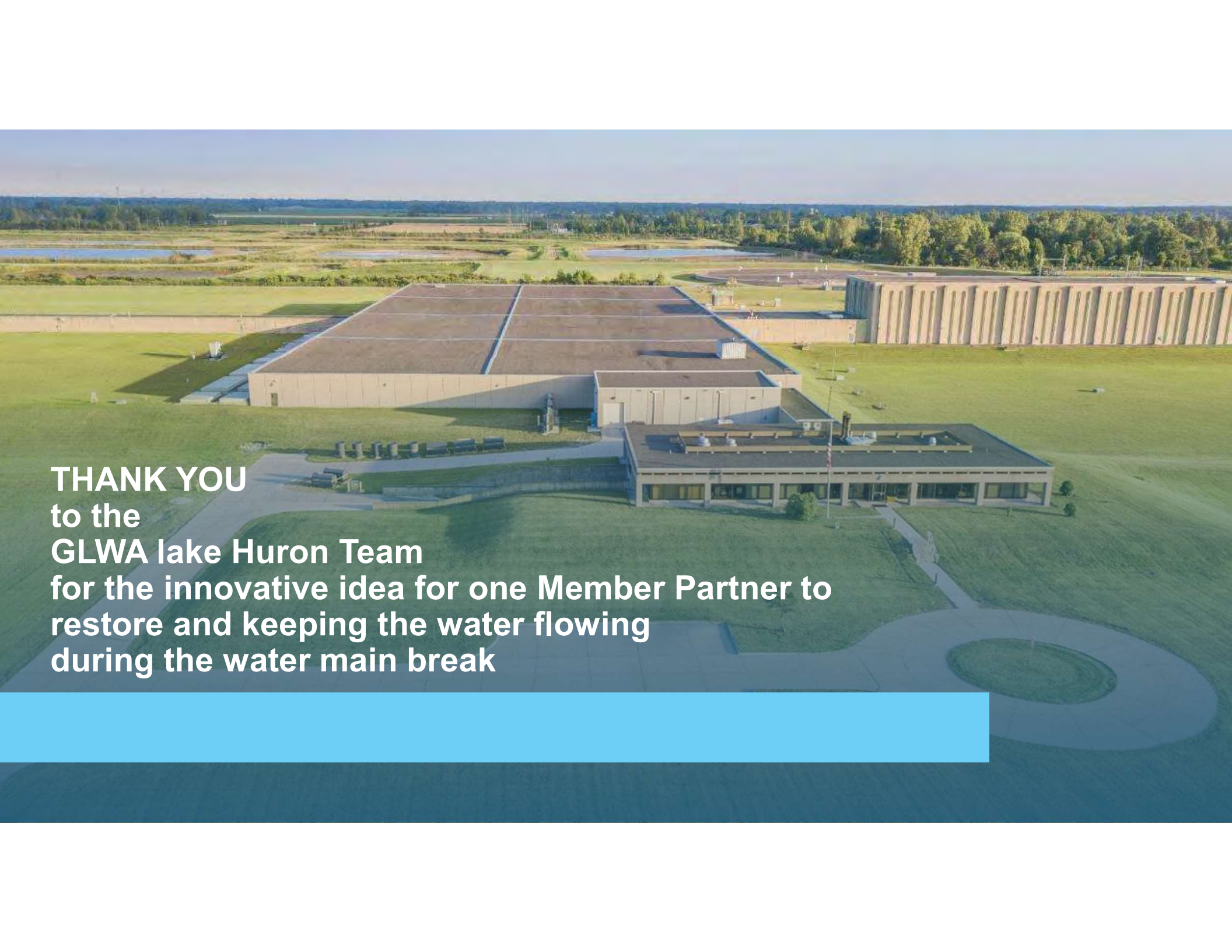


THANK YOU
to the
GLWA Springwells and Northeast Teams
for keeping the water flowing during the water main break

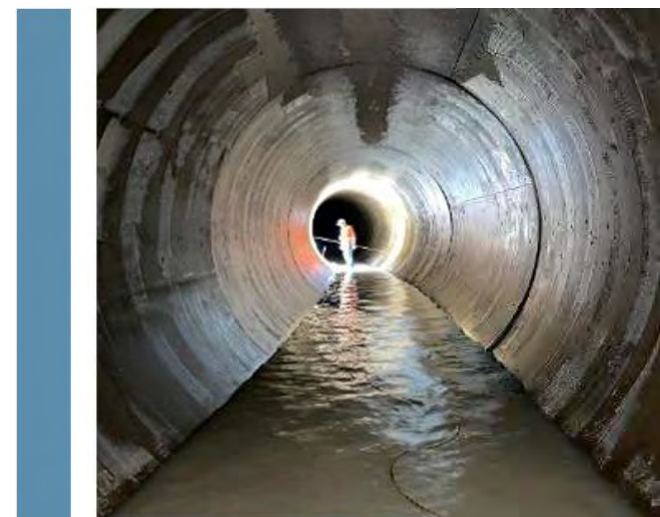
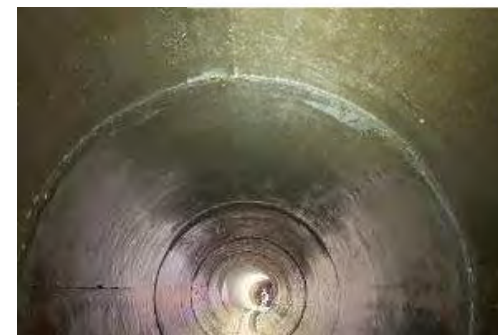


THANK YOU
to the
GLWA Southwest Team
for the service you render to our
customers in need of water





THANK YOU
to the
GLWA lake Huron Team
for the innovative idea for one Member Partner to
restore and keeping the water flowing
during the water main break



Inspection Time

12

WATER QUALITY LABORATORY

*Water from points throughout the regional system are
verified for quality & integrity beyond the treatment plant.*



The Water Quality Laboratory is a state-of-the-art facility that is responsible for a variety of testing, including all of the water quality parameters that are required by the National Sanitation Foundation's National Sanitation Foundation Water Quality Institute (NSFQI) and the American Water Works Association (AWWA).



**THANK YOU
to the
GLWA Water Quality Team
for testing the water to ensure water quality
and position us to lift the Boil Water Advisory**





Finalized the repair in 48-days

Appreciation expressed



This is just a note to say thank you for all your efforts to return normal water flow to all of us. I especially appreciate your promptness and diligence in making repairs in a timely manner. Also, your numerous updates to keep us informed about repair status and boil water advisory were helpful.

I am one satisfied Washington Township resident and GLWA customer. Again, thank you!

We are getting closer and closer to restoring full service. Please convey to all involved how grateful I am that they are Around the clock to complete the project.
Director Zech

Thank you for giving me back my sanity with enough water to shower and do a load of laundry I greatly appreciate you!

THANK YOU, THANK YOU, THANK YOU to the Great Lakes Water Authority for developing this workaround. This is an example of the concern for clients that all government organizations and businesses adopt.

Shelby Township, Michigan




120-inch Water Main Break (WMB) MI-ACE 23

**Biren Saparia – System & Resiliency
Director**



120-inch Water Main Break (WMB) MI-ACE 23

David Miller – Director of Public Works
Shelby Twp

An aerial photograph of a large body of water, likely the ocean, showing a prominent white wake or break in the center. The water is a deep blue color with visible ripples and waves. The text is overlaid on the left side of the image.

GLWA 120" WATER MAIN BREAK

A Community Perspective

- ▶ Shelby Township is located 12 miles north of Detroit
- ▶ We are 35 square miles in area, have a population of approximately 85,000 people with 33,000 residential, commercial and industrial accounts.
- ▶ We have 6 connection points to the GLWA system, approximately 350 miles of water main, a booster station and a 3.5 million gallon storage facility.
- ▶ Average Daily Use – Approx. 8.7 MGD

SHELBY TOWNSHIP – WHO ARE WE?



RING, RING, RING
IT'S 5:15 A.M. ON A SATURDAY



3.5 Million Gallon
Storage Facility

Put into service
4/1/2022

WHAT MADE THE DIFFERENCE:

GAVE US SOME BREATHING ROOM

Also a cheap plug for our new Storage Facility

- ▶ Identify Pressure Zones
- ▶ Adjust PRV Pressures and Valving to maximize existing pressures
- ▶ Shift water sources from one point of connection to another
- ▶ Reduce output pressure and lengthen pump time on Storage Facility

NEXT STEPS

Social
Media

Emails
& Text



FOR IMMEDIATE RELEASE

August 13, 2022

Media Contacts:

Molly Young / C: 248-917-2876 / molly.young@fleishman.com

Michelle Zdrodowski / C: 313-618-0552 / michelle.zdrodowski@glwater.org

**GLWA WORKING TO ISOLATE BREAK ON 120-INCH WATER TRANSMISSION MAIN
IN PORT HURON; BOIL WATER ADVISORY BEING ISSUED FOR 23 COMMUNITIES**

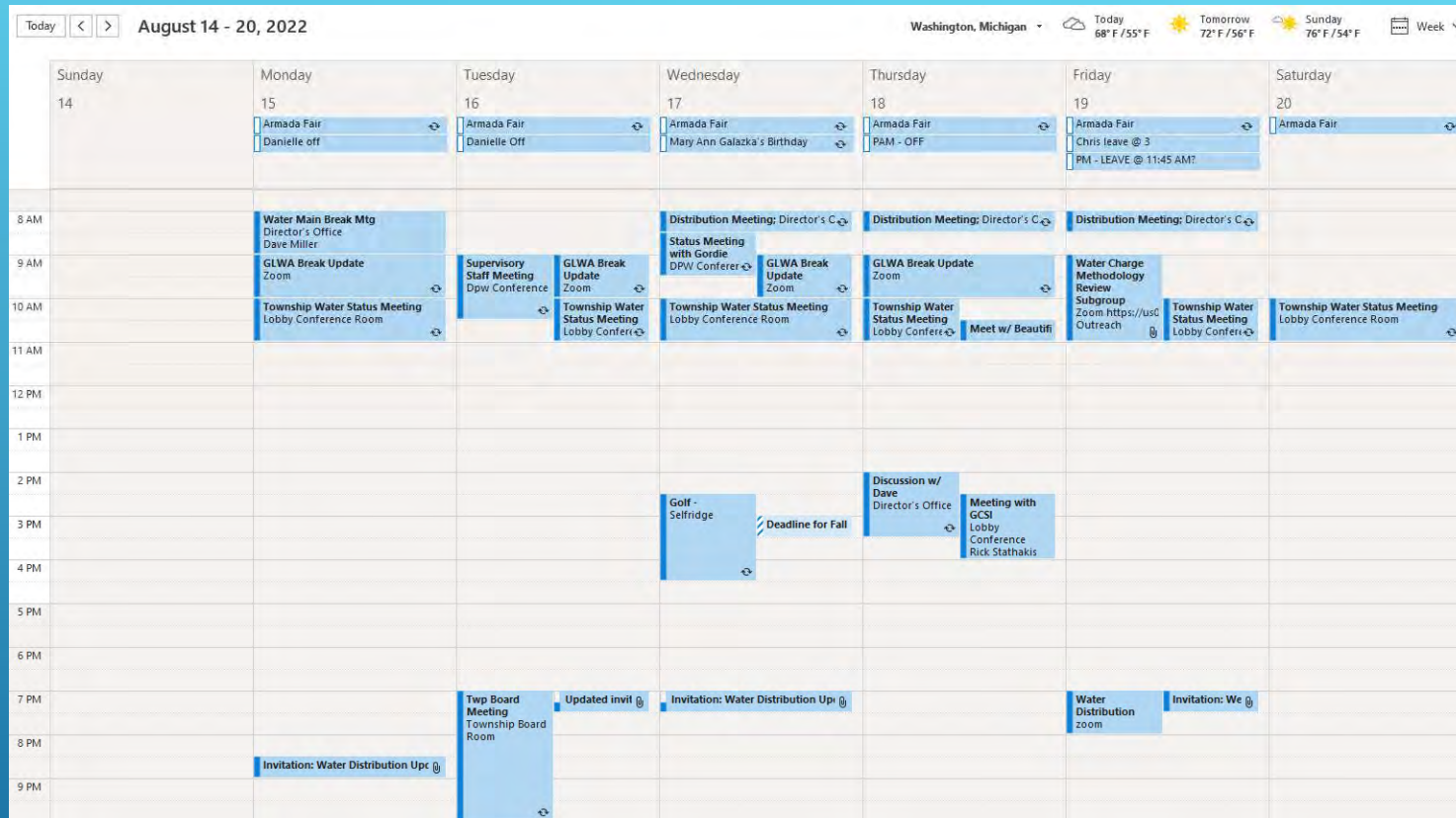
- *Transmission main is the largest in the regional water distribution system.*
- *An estimated 935,000 people in 23 communities, as well as one business in Greenwood and one business in Imlay Township, are potentially impacted.*
- *Out of an abundance of caution, a precautionary Boil Water Advisory is being issued for the 23 impacted communities.*

DETROIT – In the early morning hours of Saturday, August 13, 2022, the Great Lakes Water Authority (GLWA) discovered a leak on a 120-inch water transmission main that distributes finished drinking water from its Lake Huron Water Treatment Facility to communities in the northern part of GLWA's drinking water service area (*see attached*

Web Sites

Local
Cable

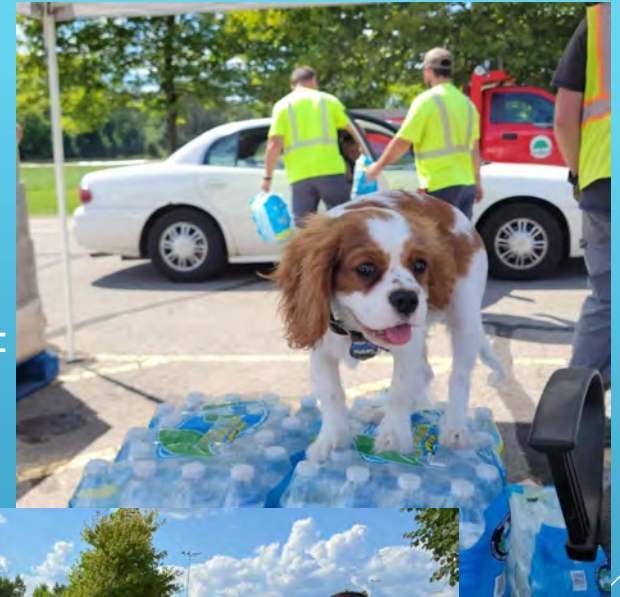
OH NO – NOT THIS



COMMUNICATION IS A MUST

WATER DISTRIBUTION

APPROX. 34,000 CASES OF
WATER



Summary of BWA Data

SYSTEM	BWA Status	Primary contact email address
Almont	Approved to lift BWA	btreat@almontvillage.org
Burtchville	Approved to lift BWA	dirt1@iwarp.net , burtchvilletwpwater@comcast.net
Bruce	Waiting for flushing	mfillbrook@brucetwp.org
Imlay	Approved to lift BWA	epriehts@imlaycity.org
Rochester East	Approved to lift BWA	cbendick@rochestermi.org
Romeo Industrial	Approved to lift BWA	romeoirp@att.net
Shelby	Approved to lift BWA	millerd@shelbytp.org
Washington	Approved to lift BWA	amorminor@washingtontpmi.org

AUGUST 20, 2022
HEADING IN THE RIGHT DIRECTION

Member Outreach



UPDATE 18: 120-INCH WATER TRANSMISSION MAIN BREAK AND BOIL WATER ADVISORY

- *Transmission main is fully closed*
- *Lake Huron Water Treatment Plant begins producing water to fill the 120-inch transmission main; 81 million gallons necessary to fill the 26 miles of main*
- *GLWA is working with EGLE to implement a flushing and disinfection plan for the transmission main*
- *GLWA expects the filling, flushing, and disinfecting process to take some time*
- *Due to the size and length of the transmission main, GLWA estimates a return to normal operations within 15 days (September 21)*

81 MILLION GALLONS IN 26 MILES OF PIPE
WOW!



GLWA Emergency Water Notification

The restoration of the 120 inch main is complete and GLWA has returned the regional system to normal operations.

FRI 9/30/2022 1:50 PM

WE MADE IT!

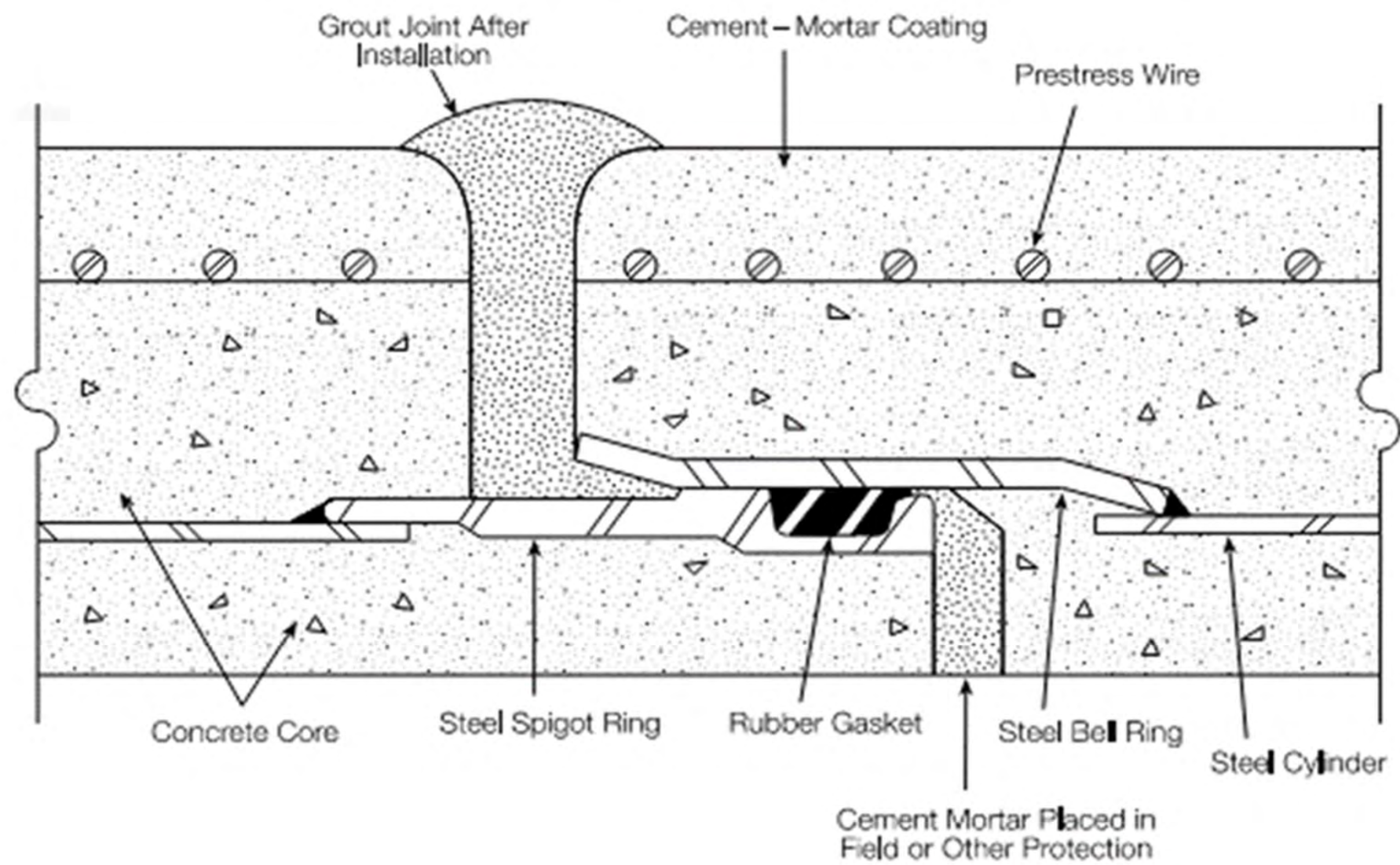


120-inch Water Main Break (WMB) MI-ACE 23

**Todd King – System Resiliency Officer &
Director of Field Services**



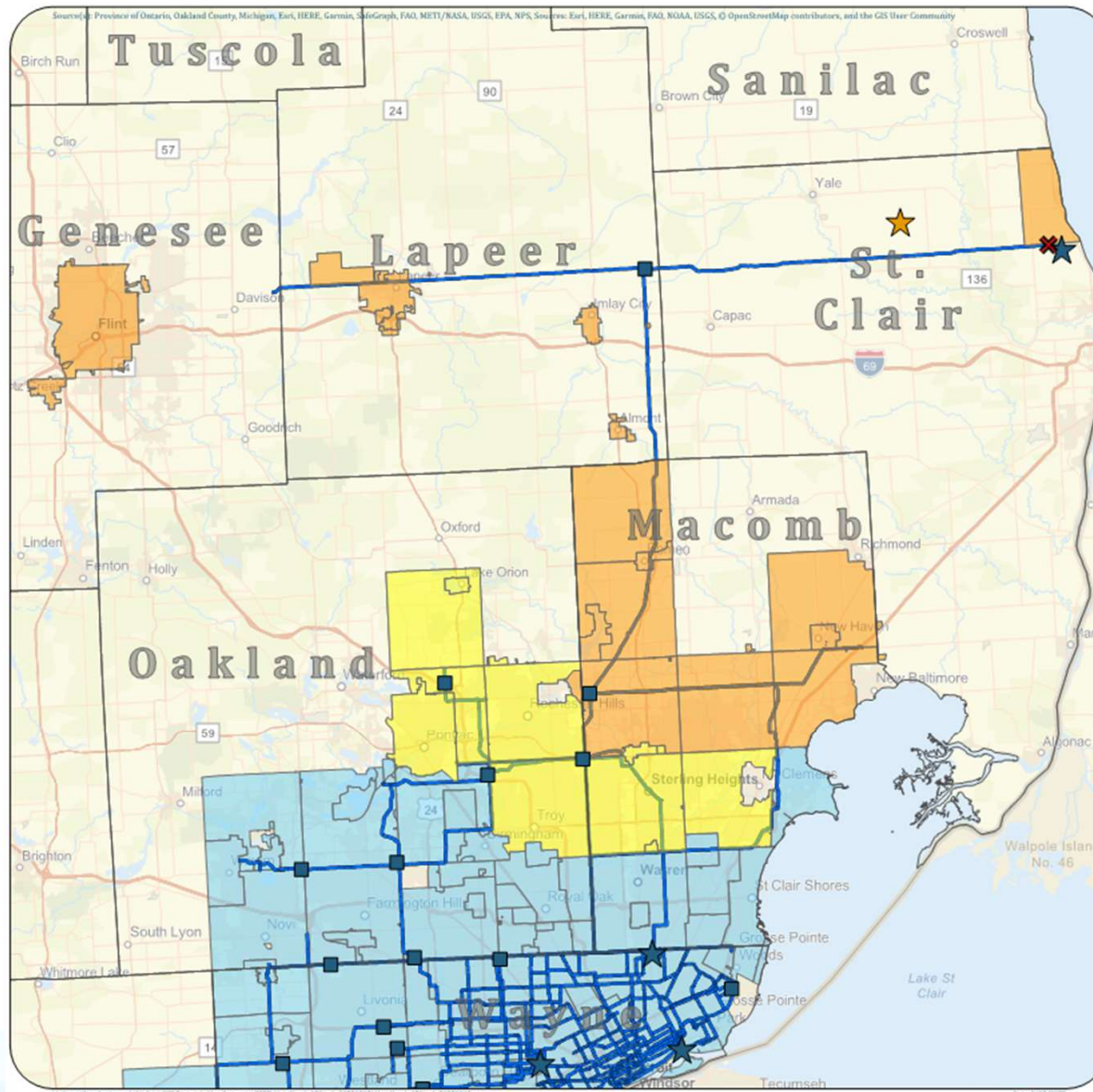












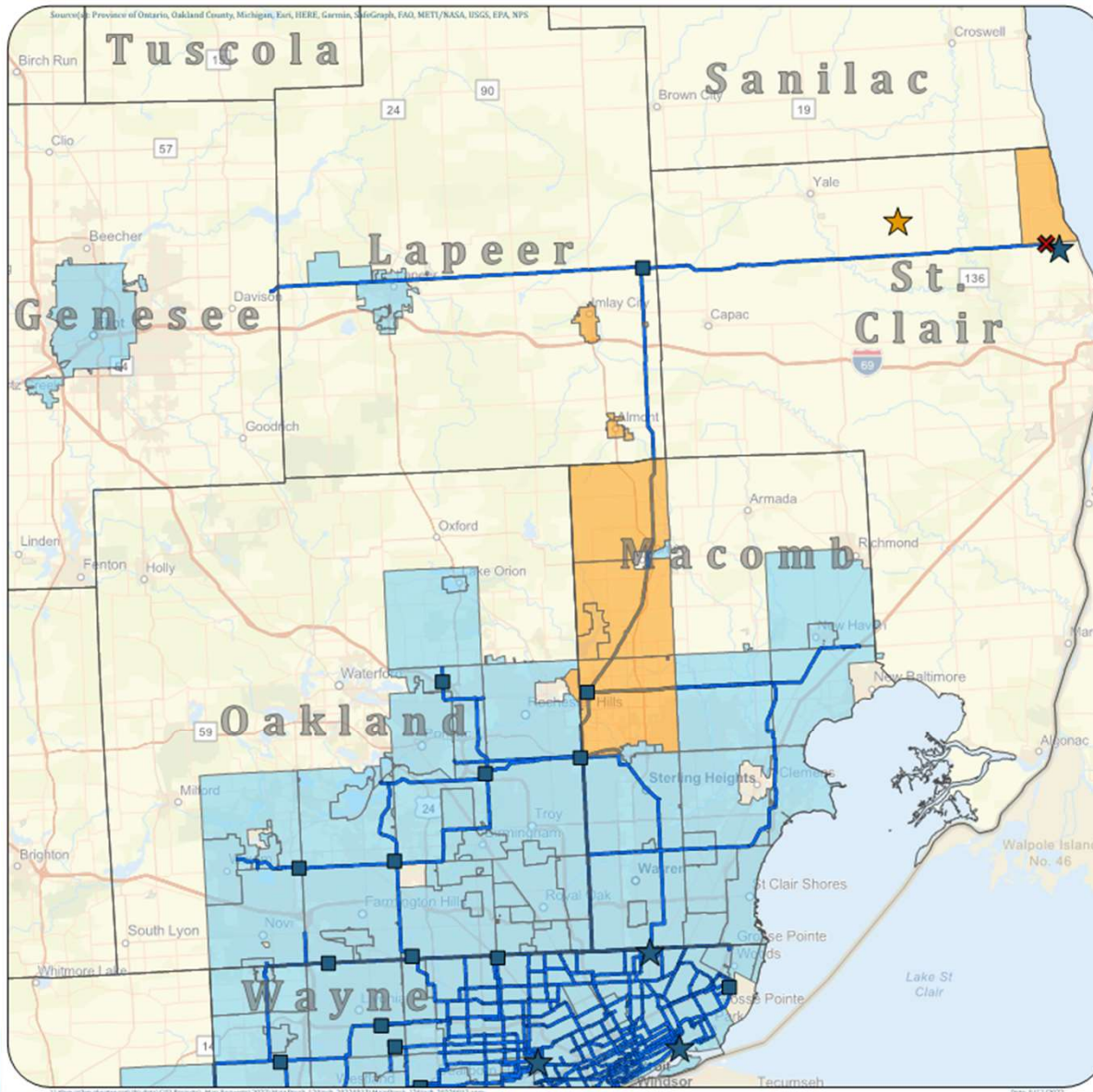
120" Main Break Affected Member Partner Communities

- ✕ Main Break Location
- ★ DTE Greenwood Facility
- Area with Low or No Water Pressure
- Area with Lower than Normal Water Pressure
- Unaffected GLWA Water Service Area
- GLWA Transmission Main
- ★ Water Treatment Plant
- Booster Pump Station



A high-speed photograph of a water splash, showing intricate details of the water's surface and numerous bubbles. The image is split horizontally, with the top half showing the splash against a light blue background and the bottom half showing the water's surface against a darker blue background.

August 14, 2022



120" Main Break

Affected Member Partner Communities

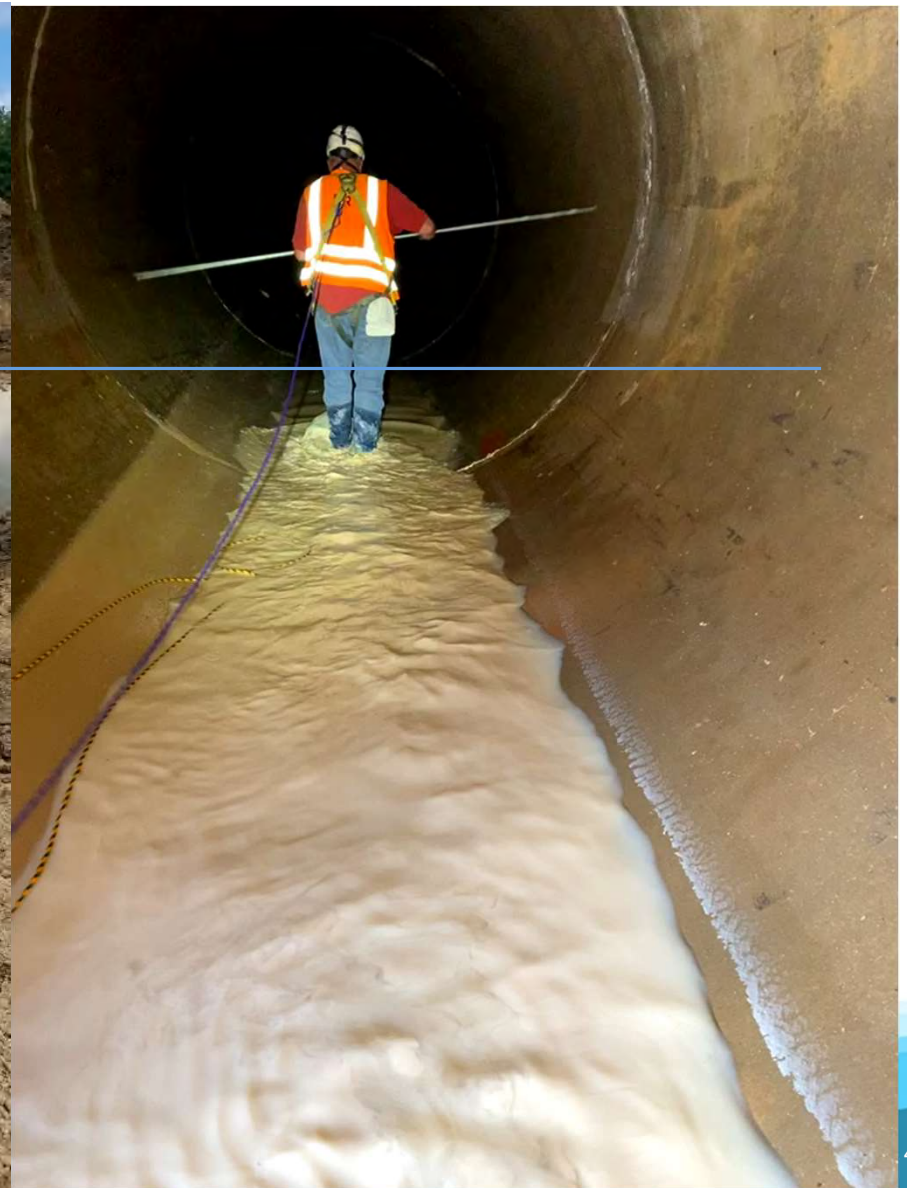
- ✕ Main Break Location
- ★ DTE Greenwood Facility
- Area with Low or No Water Pressure
- Unaffected GLWA Water Service Area
- GLWA Transmission Main
- ★ Water Treatment Plant
- Booster Pump Station





A high-speed photograph of a water splash, showing intricate details of the water's surface and the formation of bubbles. The water is a deep blue color, and the background is a lighter, hazy blue.

August 15, 2022





A high-speed photograph of a water splash, showing intricate details of the water's surface and the formation of bubbles. The water is a deep blue color, and the background is a lighter, hazy blue.

August 17, 2022







A high-speed photograph of a water splash, showing intricate details of the water's surface and numerous bubbles. The image is split horizontally, with the top half showing the splash against a light blue background and the bottom half showing the water's surface against a darker blue background.

August 21, 2022







A high-speed photograph of a water splash, showing intricate details of the water's surface and numerous bubbles. The image is split horizontally, with the top half showing the splash against a light blue background and the bottom half showing the water's interior with bubbles against a darker blue background.

August 22, 2022

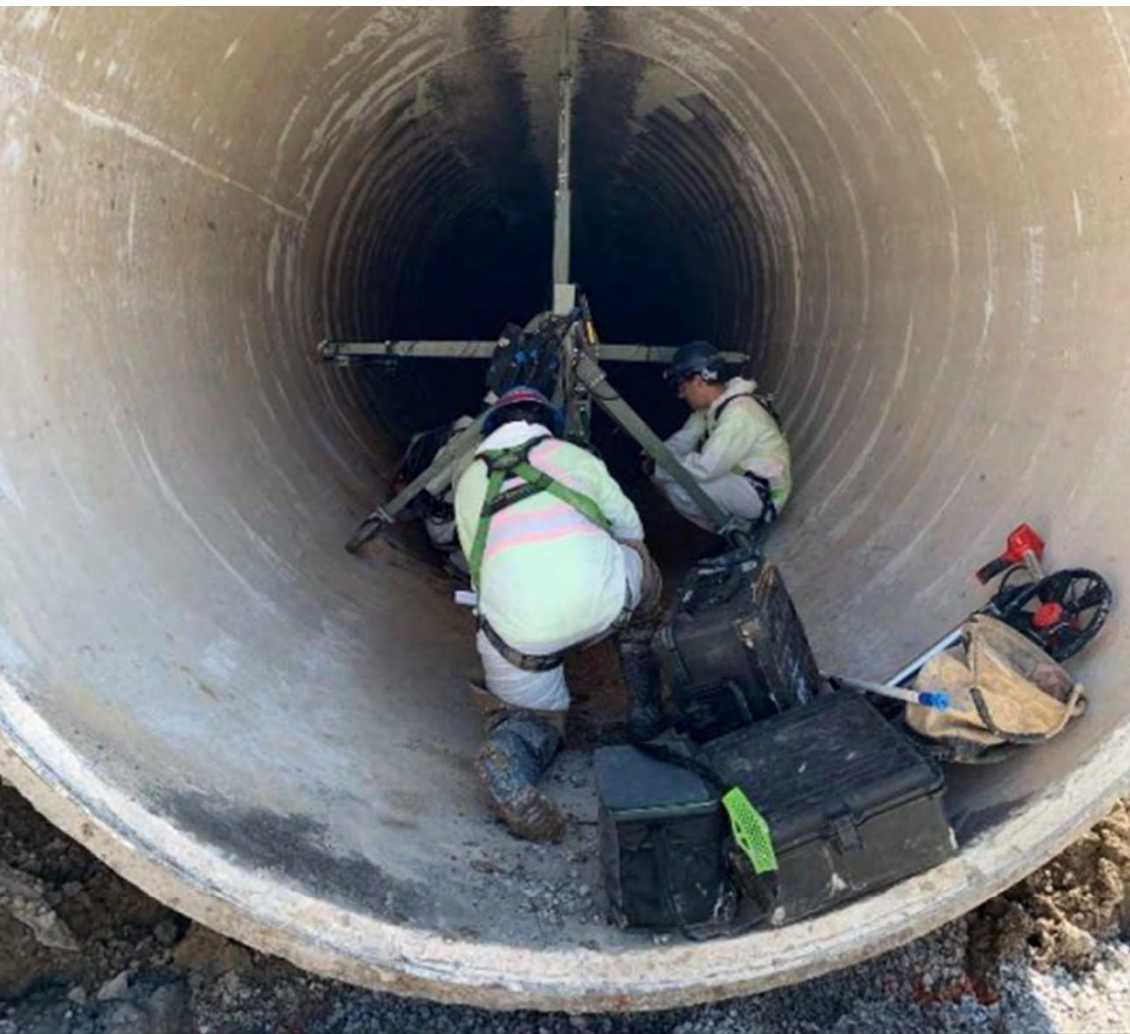


Figure 6. PICA crew completing the assembly of the NFT tool during the inspection of the East leg.



Figure 7. PICA operator monitoring the EM data as it's collected during the August 2022 NFT inspection of GLWA's 120-inch PCCP Transmission Main.

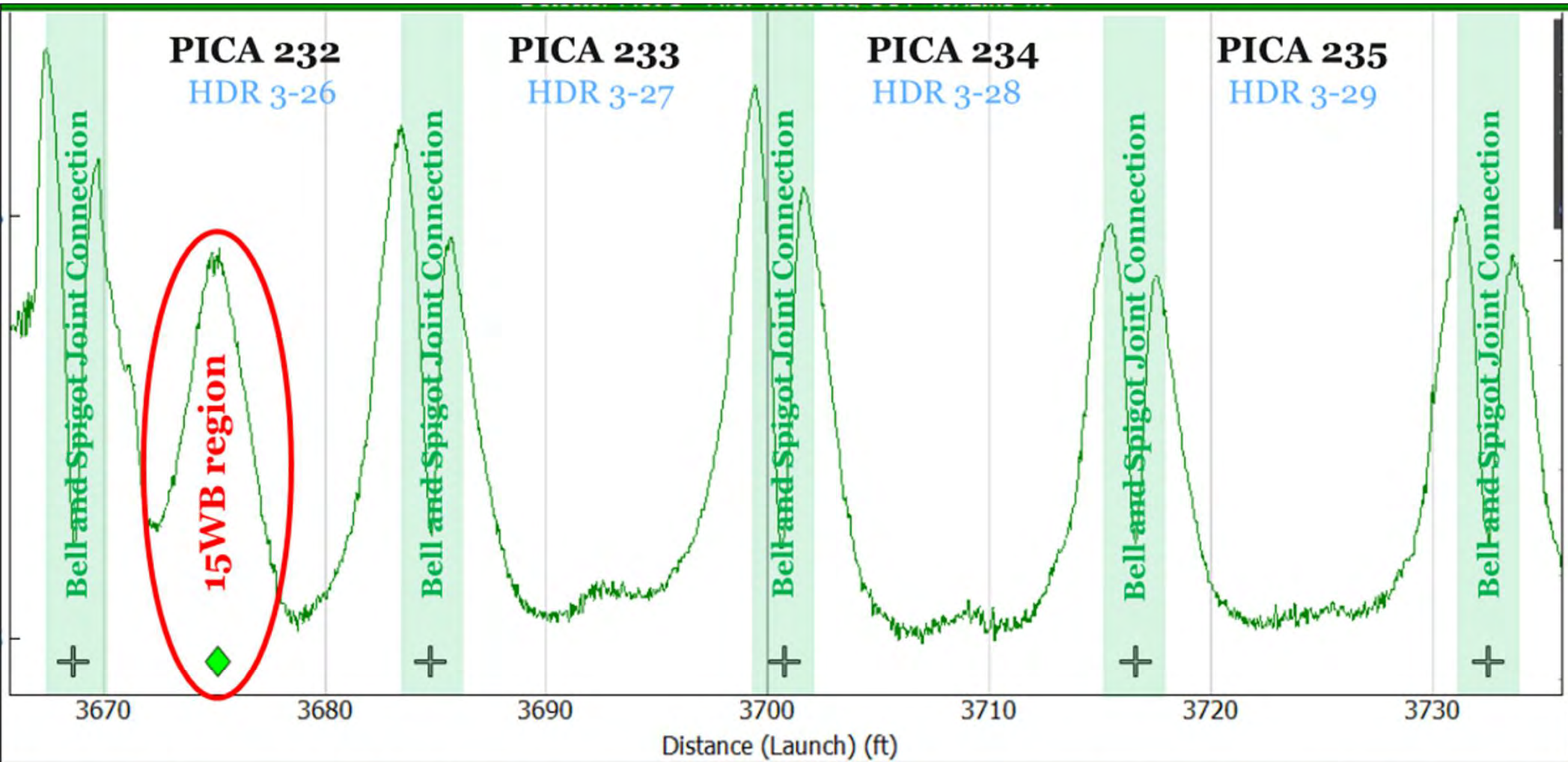


Figure 8: Electromagnetic (EM) data (phase) capture highlighting the 15WB region detected in Pipe 232 (HDR Pipe 3-26). EM data for neighboring Pipes 233, 234 and 235, which did not contain any wire breaks, were included as baseline references.

A high-speed photograph of a water splash, showing intricate details of the water's surface and numerous bubbles. The water is a deep blue color, and the background is a lighter, hazy blue.

August 24, 2022





August 25, 2022



A high-speed photograph of a water splash, showing intricate details of the water's surface and the formation of bubbles. The water is a deep blue color, and the background is a lighter, hazy blue.

August 31, 2022











120-inch Water Main Break (WMB) MI-ACE 23

**Michelle Zdrodowski – Chief Public Affairs
Officer**



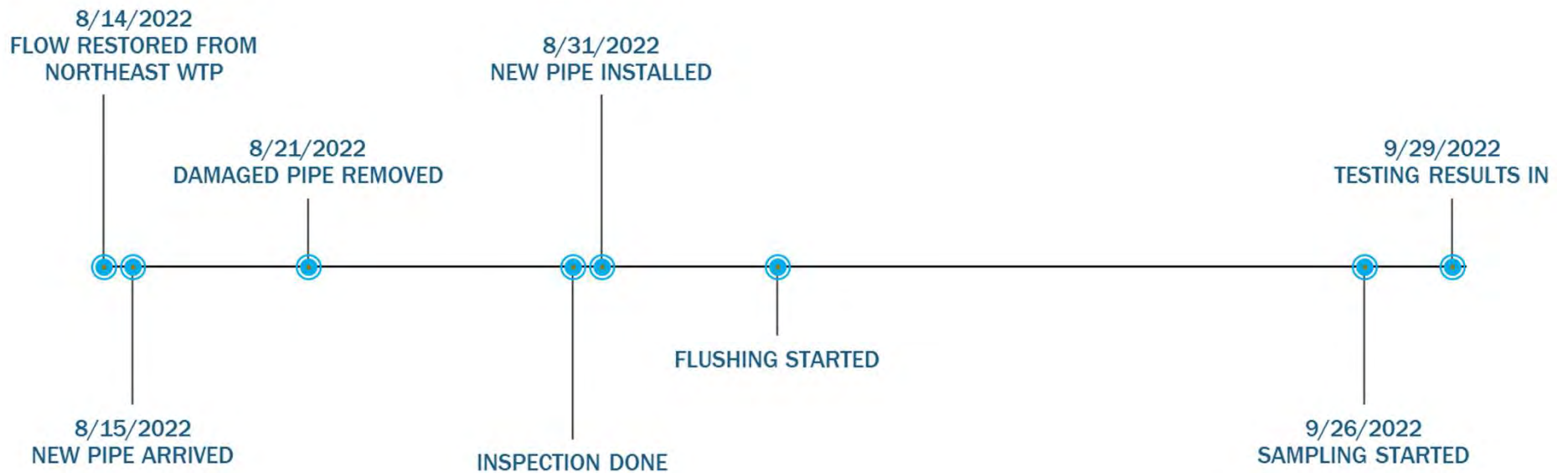
Communicating in a Crisis: Achieving Neutral Coverage During GLWA's 120-inch Water Main Break

120-inch Water Main Break (WMB) Largest size transmission main in GLWA system

- 4:30 am on Saturday, August 13, 2022
- 23 communities impacted
- 935,000 estimated people
- Initial BWA issued before noon (all 23 communities impacted)
- Gradually lifted for all communities within one week
- Repairs initially scheduled to take 3 weeks; ultimately took a full 48 days

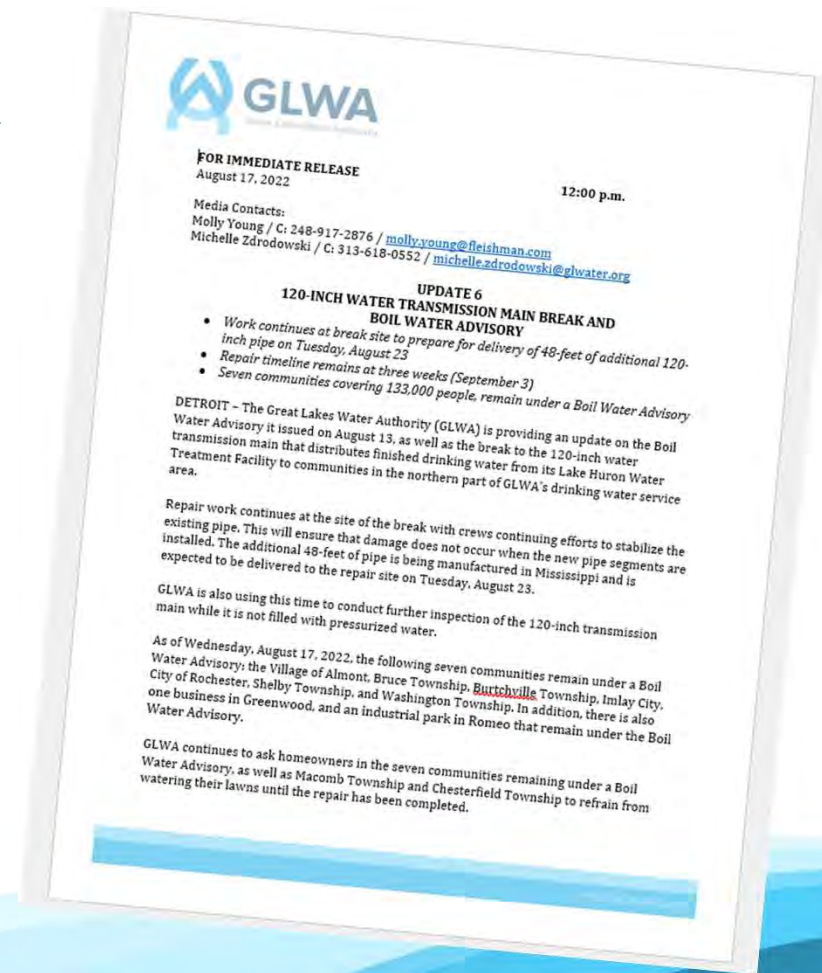


48 Days to Fix the 120-inch



Communicate Early and Often

- GLWA became the lead communicator to ensure consistency of messaging; *One voice helps to ensure one message*
 - *Communications participated in all EOC calls, and was worked into other special meetings to understand first-hand what was occurring*
 - *Made multiple site visits to gain knowledge for talking with media*
- Regular cadence of communication established
 - Everyday at the outset of the crisis (sometimes multiple in a day)
 - Committed to issuing regular updates by noon of each day
- Made sure each update had a number and a time issued
 - Bulleted key takeaways at the top of each update
 - Gave internal leadership key takeaways each day
- Issued total of 22 updates
 - Photos and video included with each update
 - Maps of impacted areas included





Updates focused on large and small repair milestones (positive and negative)

- Dewatering of the break area
- Process to remove damaged section of pipe/Installation of new pipe
- Delivery of new segments of pipe (and return of bad pipe)
- Inspection of damaged pipe
- How to emerge from a Boil Water Advisory

Mark Hackel
August 15, 2022 ·

This morning we received an on-site briefing of GLWA's water main repair efforts. Contractors and engineers from around the state and country are working around the clock to deploy a swift and sustainable solution.

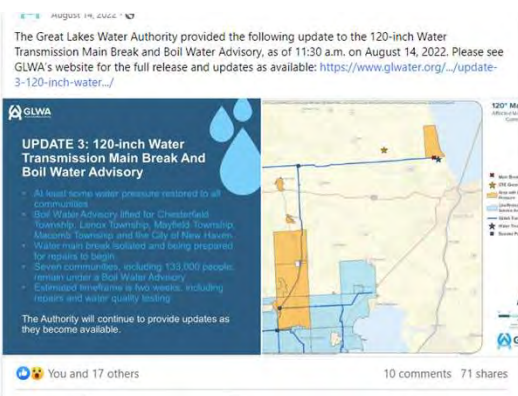


You, Bryan Peckinpaugh and 427 others · 179 comments · 297 shares



CONFERENCE

On Saturday, August 20, GLWA CEO Sue Coffey held a virtual press briefing on 120-Inch Main Break News Conference with Boil Water Advisory Lifted. Please click play on video below to watch. Press the full screen button to increase size of video for viewing.



Transparency: Key to Neutral Coverage

- Created new webpage on the GLWA website
- Emergency banner at top of website
- Photo rounder on website homepage always had one section dedicated to main break
- Held virtual press briefings with CEO/COO (site too dangerous)
- Social media channels conveyed key information on break and how to handle BWAs
 - Produced *One Water News Drops* for social and website





**Acknowledged and thanked GLWA team members
and showed their efforts to help those impacted**

Key Takeaways

- ◆ Use what you've learned from previous crisis to improve your strategy
- ◆ Communicate early and often
- ◆ Create a schedule and stick to it
- ◆ Make leadership accessible
- ◆ Small milestones (and obstacles) are worth sharing
- ◆ Photos and videos are critical to telling the story
- ◆ Don't be afraid to talk about delays/challenges
- ◆ Acknowledge team member effort to humanize the story



Questions?

4B6B



120-inch Water Main Break (WMB) MI-ACE 23

Questions

4B6B