

Water Main Breaks

Water Mains

- Metro Water Services (MWS) has more than **3,000** miles of water mains over approximately **400** square miles.
- **64%** of our water mains are over **40** years old.
- Of the over **3,000** miles of water mains, approximately **800** miles are unlined cast iron.
- The most common size pipe for a water main is **6 - 8"**. However, MWS water mains range in size from **2 - 60"**.

Factors Contributing to Breaks

- **Age** | The possibility of main breaks increase as pipe age increases.
- **Weather Conditions** | Extreme heat or cold; Pipes expand with increasing temperatures and contract with decreasing temperatures, weakening them.
- **Water Temperature** | Pipe dimensions, pressure capacity, and stiffness are all affected by temperature changes.
- **Soil Conditions and Ground Movement** | Soil moisture and extreme temperatures can cause ground shift.
- **Pipe Material** | Cast iron is more susceptible to external pressures.
- **Pipe Diameter** | The smaller the diameter, the greater the risk for damage.

Response

- Emergency Hotline **(615) 862-4600** staffed 24/7 to take calls and dispatch crews.
- Repair crews trained to quickly respond and repair water main breaks, day and night.
- Valve crews knowledgeable of the water system and operation of our **64,000** valves.
- Heavy equipment to help crews excavate and repair breaks and a warehouse full of pipe section of various sizes and repair parts.



Anyone observing water running in the street during a period without rain or experiencing a water outage is asked to contact our 24/7 emergency line at (615) 862-4600.

The faster the leak / break is reported, the faster the sometimes lengthy repair process can begin.

Water main breaks can occur at any time but the chances of a main break increases during periods of extreme temperatures like winter. Over the past 5 years, Metro Water Services has averaged **450** main breaks a year with most occurring during the winter months.

REPORT

1. Break is reported to Emergency Dispatch

INVESTIGATE

1. MWS investigator is sent to the site
2. Verify and prioritize break
3. Identify exact location of break

SITE PREP

1. TN One Call (may take 2+ hours)
2. Dispatch repair crew, valve crew, and heavy equipment crew
3. Barricades and police are put in place for safety
4. Re-route water

REPAIR

1. Excavate
2. Assess damage and obtain necessary parts
3. Make repair
4. Re-fill, disinfect, and re-pressurize the main
5. Take a water quality sample

RESTORE

1. Temporary patch paving in roadway
2. Full roadway restoration (within 30-40 days)
3. Yard restoration is sent to landscape contractor (may take up to 30 days, dependent on weather)

A simple water main break can be completed in six to eight hours, but large or complicated repairs may take several days or even a week. Conditions such as weather and daylight may affect repair times as well. Often emergency repair crews are working overnight and are dealing with harsh conditions such as freezing temperatures, rain and/or snow.

Metro Water Services considers your health and safety in all that we do. We appreciate your patience, understanding and cooperation during any service interruption and be assured that we are working as diligently and safely as possible to restore full service as soon as possible.