

WHAT SYSTEM PRESSURE ADVISORIES MEAN — AND WHY WATER MAINS CAN BREAK

We know many of you see System Pressure Advisories shared during water main breaks or severe weather, and we want to take a moment to explain what they really mean and why they are issued.

A System Pressure Advisory is issued when water pressure temporarily drops below normal levels. Maintaining pressure is important because it helps keep drinking water protected as it moves through underground pipes. When pressure is reduced, there is a potential risk that outside contaminants could enter the system through small cracks or leaks — even if no contamination has been confirmed.

These advisories are precautionary, not an indication that the water is unsafe. They are issued to protect public health until water pressure is fully restored and required water quality testing is completed.

Why water main breaks happen, especially during extreme weather:

Water mains are buried underground and are affected by changes in soil and temperature.

Common weather-related causes include:

- Freeze-thaw cycles that cause the ground to expand and shift
- Prolonged freezing temperatures that make pipes more brittle
- Rapid temperature drops that cause pipes to contract quickly
- Heavy rain or flooding that shifts soil and adds pressure around pipes

Many of these conditions are outside human control and can impact even well-maintained water systems

City crews respond as quickly and safely as conditions allow to make repairs, restore pressure, and complete testing before lifting any advisory. We appreciate your patience and understanding and hope this helps clarify why these advisories are issued and what they truly mean.

SYSTEM PRESSURE ADVISORIES IN NORTH CAROLINA – WHAT TO KNOW

In North Carolina, public water systems are required to notify customers anytime system conditions change in a way that **could** affect water safety.

What is an advisory?

A **System Pressure Advisory** is issued when water pressure temporarily drops below normal levels. Maintaining **pressure** is **important** because it helps keep drinking water protected as it moves through underground pipes.



Pressure drops can happen due to:

- Water main breaks
- Emergency repairs
- Power outages affecting pumps
- Extreme weather or high water demand



Why advisories are required

- When **pressure is low**, outside **contaminants** could enter the system through **small cracks or leaks**.
- This does **not** mean **contamination** has occurred—it means water quality cannot be immediately confirmed.
- Advisories are **precautionary**, not an indication that water is **unsafe**.
- Customers should **boil tap water** until pressure is restored and required testing confirms water safety.



System Pressure Advisories

are a **standard** safety practice in North Carolina to protect public health.



WEATHER-RELATED CAUSES OF WATER MAIN BREAKS

In North Carolina, public water systems are required to notify customers anytime system conditions change in a way that **could** affect water safety.



Freeze-Thaw Cycles



Rapid temperature swings cause the ground to freeze, expand, and then **shift** as it thaws. This movement can crack or **pull apart** aging pipes and joints.

Prolonged Freezing Temperatures



Deep, sustained **cold** causes frost to reach the **depth** where pipes are buried, making them brittle and more likely to crack or break.

Heavy Rain & Flooding



Saturated soil around water mains causes **pressure** and **shifting** that can damage or break pipes.

Rapid Temperature Drops



Sudden, sharp drops in temperature make pipes **contract** quickly, increasing the risk of failure—**especially in older lines** that are more brittle.

WHY?

Changes in soil **temperature**, moisture, or movement can crack or stress pipes, making breaks more likely.

