

Dixon Water Treatment Plant – Pink Water Incident Summary

Date: Sunday, February 8, 2026

On Sunday, February 8, the Onslow Water and Sewer Authority (ONWASA) Dixon Water Treatment Plant experienced an equipment failure that resulted in pink-tinted water for some customers in the Sneads Ferry, North Topsail Beach, Verona, and Holly Ridge areas.

Initial customer calls reporting pink discoloration in water were received at approximately 1:40 p.m. The first distribution crew was dispatched by 1:45 p.m., and Dixon Water Treatment Plant personnel were promptly notified and responded to the plant.

Distribution crews utilized multiple hydrants throughout the affected service area to flush the system. Crews reported that when pink water was encountered, it cleared quickly with flushing. At the plant, staff accompanied by the supervisor immediately began investigating potential sources of the discoloration. Plant personnel shut down the sodium permanganate feed to prevent any additional product from entering the system. Staff then opened the sample tap on the service water line in the permanganate feed room to determine whether permanganate was still present. While slight remnants were observed initially, the discoloration cleared quickly, confirming the breakthrough had already ceased.

It was determined that the most likely cause of the incident was an obstruction in the solenoid valve on the permanganate feed line. This obstruction created excess pressure within the feed line, which exceeded the pressure of the service water line and allowed permanganate to flow backward into the service line. The permanganate then traveled to the point where service water supplies the chlorine feed, resulting in permanganate entering the distribution system along with the chlorine feed.

The obstruction was removed, both solenoid valves were cleaned, and the system was returned to service. Distribution crews continued flushing affected areas into the evening and returned the following morning to perform additional flushing.

To prevent future occurrences, plant staff will install a double check valve on the service water line upstream of its connection to the permanganate feed. This installation is expected to be completed today, but no later than tomorrow. Additionally, the solenoid valves will be added to a quarterly inspection and maintenance schedule to ensure they are routinely opened, inspected, and cleaned to prevent buildup and obstruction.

Upon notification of the pink water reports, ONWASA issued public notices through its website to inform customers of the situation and provide guidance on flushing household plumbing. A call was also placed to the North Carolina Public Water Supply (NC PWS) after-hours notification line. The NC PWS continues to receive updates and have approved all remediation efforts.

WHY SODIUM PERMANGANATE CAUSES PINK WATER?

Sodium permanganate is a purple-pink oxidant used in water treatment to control iron, manganese, taste, odor, and some organic compounds.

When very small amounts of permanganate make it past the treatment process and into the distribution system, it can tint the water pink or light purple.

That color shows up before it reaches levels that would be considered unsafe meaning:

- A tiny residual is visible
- But it is still well below harmful concentrations

In other words: it is dramatic looking, but low-level.

What actually happens in the system?

- Permanganate is fed at the plant and is supposed to react and be “used up” before water leaves the treatment process.
- If there’s an equipment issue (like a clogged solenoid, pressure imbalance, or backflow), a small amount can break through into treated water.
- Because permanganate is highly colored, even trace amounts will:
 - Turn water pink
 - Stain sinks, tubs, or laundry temporarily if not flushed

Why does flushing clear it?

Permanganate does not linger in the system:

- It reacts quickly
- It dilutes rapidly
- Once fresh water moves through the line, the color disappears

That’s why hydrant flushing and customer side flushing typically clears the issue quickly. Some customers also experienced lower than normal water pressure. This was temporary and caused by the active hydrant flushing completed to mediate the pink water.

Is pink permanganate water safe?

At the levels that cause a light pink tint:

- It is not considered a health risk
- It may cause aesthetic issues (color, possible staining)

Pink Water FAQ

Why is my water pink?

A pink or light purple tint can occur when a very small amount of a water treatment chemical called sodium permanganate enters the water system. Sodium Permanganate is commonly used to improve water quality by helping remove iron, manganese, and certain taste and odor compounds. Even tiny amounts are highly visible, which is why the color can look concerning.

Is pink water safe to drink?

Yes. While the color is noticeable, the levels that cause pink discoloration are very low and not considered a health risk.

That said, we understand it can be unsettling, and our crews worked quickly to resolve the issue when it occurred.

What should I do if my water is pink?

We recommend flushing your plumbing:

1. Run cold water from a bathtub or outdoor spigot for 10–15 minutes.
2. Once the water runs clear, flush indoor faucets for a few minutes.

If discoloration continues after flushing, please contact us.

How long will the pink water last?

In most cases, pink water clears quickly with flushing. The chemical does not linger in the system and dissipates as fresh water moves through the lines.

Can pink water stain fixtures or laundry?

Yes, in some cases permanganate can temporarily stain:

- Sinks and tubs
- Toilets
- Laundry (especially light-colored fabrics)

If your water is discolored, we recommend:

- Avoiding laundry until the water runs clear
 - Wiping fixtures promptly if discoloration is noticed
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What caused the pink water?

The discoloration was caused by an equipment issue at the Dixon Water Treatment Plant that allowed a small amount of permanganate to enter the distribution system. Once identified, the issue was corrected, and additional safeguards have been put in place to prevent it from happening again.

What is ONWASA doing to prevent this in the future?

We have taken the following steps:

- Corrected the equipment issue at the treatment plant
 - Flushed water lines in affected areas
 - Installed additional safeguards to prevent the issue in the future
 - Added enhanced inspection and maintenance procedures
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Who was affected?

Some customers in Sneads Ferry, North Topsail Beach, Verona, and Holly Ridge may have experienced pink water.
