City of Dyersville
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To: Mayor Jacque and City Council Members
Cc: Mick Michel, City Administrator
From: John F. Wandsnider, PE – Public Works Director/City Engineer
Date: May 14, 2024
Subject: Report of Citywide Water Pressure Loss Incident

As you know, Dyersville's water supply system sustained a pressure-loss on Mother's Day, May 12, 2024. Following are the background and details of the incident:

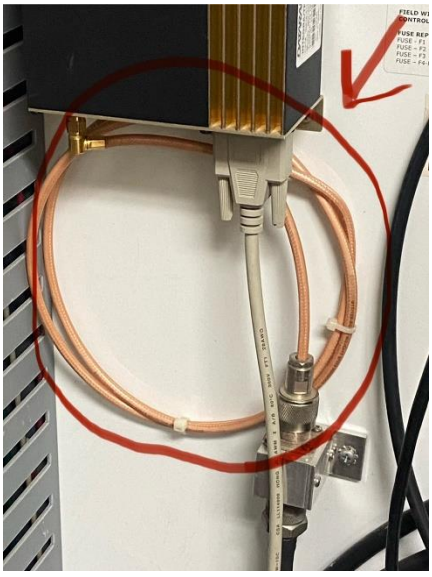
City staff began to receive notifications of a potential water main break causing water pressure loss at around 10:17 AM on Sunday, May 12. Upon arriving on-site at approximately 10:20 AM, City staff began working to restore the system. By 11:30 AM, City staff had the system back up using an alternative operating mode.

Due to the water pressure loss, a citywide 'boil-order' was issued. This is an Iowa DNR mandate. City staff communicated the boil-order to the public at around 11:35 AM using the Alert Iowa system. The City initially believed that the notification had reached all utility users on the system. However, it was later discovered that some citizens had not received the message due to a wrong setting. The City has since corrected this issue with the vendor.

In accordance with Iowa DNR protocols, water samples were sent to labs on Monday and Tuesday mornings for testing. Negative results (no bacteria) were received on Tuesday and Wednesday mornings, and the boil order was lifted before 8:00 a.m. Wednesday, May 15.

The loss in pressure in the City's water system was not due to a water main break, as first thought. The incident was due to two, simultaneous communication failures within the City's water supply system: 1) At approximately 5:00 PM on Saturday, May 11, the City's Water Tower required Well 4 to pump additional water. However, this need was not appropriately communicated due to a communication system failure; 2) A second communications system designed to immediately notify City water operations staff of a low-pressure alarm, also failed to operate. Therefore, the alarm notification never went out to staff.

On Monday, Public Works staff were able to determine the cause of the first communications failure. A communications cable connection in the telemetry system had gone bad. The photos to the right show the cable. The cable connection was repaired, and the water system was able to be restored to standard operating mode.



The second communications failure, that of the telephone dialer to City staff for a low-pressure alarm, was due to a

faulty dialer unit. This unit had been having intermittent issues, so the City had ordered a replacement unit on March 11, 2024. The City was told by the vendor that supply issues with some of the components caused the delay. They told the City they expect the unit to arrive next week, and plan to perform the installation by the end of the following week.

The water system currently uses the older technology of telemetry (radio communications). We have been working toward replacing it with newer, state-of-the-art communications technology. With the recently completed installation of fiber-optic cable between all City stations, and once the installation and start-up of the SCADA (Supervisory Control and Data Acquisition) system has been completed, we anticipate a much more reliable system of communications.

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