AFTER ACTION REPORT (AAR) FORM

Overview

Event/Incident: Hydrant blown off 36" water main
Date(s): Monday August 11, 2025
Location:106th Street near Haverstick Road
Lead Department/Agency: Carmel Utilities
Report Prepared By: Carmel Utility Staff – Lane Young, Mike Hendricks, Ken Rhodes, Scott Cambell, Mike Luper, Steve Cook, Jaimie Foreman
Date Prepared: Monday, August 18, 2025

Purpose of Operation:

Emergency operation to address a major disruption to water distribution system.

1. **Key Observations**

What Went Well:

- Plant Operations:
  - Supervisory Control and Data Acquisition (SCADA) System notified plant staff of pressure issues immediately
  - Automatic shutoff of pumps based on low pressure
  - Sensors in system alerting pressures out in distribution system
- Distribution Operations:
  - Team Response – Distribution notified of issue, responded immediately, good fortune that we had our most experienced staff in the area at the time
  - Valve locations were known and operational, had proper equipment to shut off large valves
  - Detection, evaluation and isolation time outstanding – 8:09 a.m. first known, isolated by approximately 8:30 a.m.
  - Contractor support – contractor changed work plan to assist
- Knowledge of backup plan with Citizens and ability to act on that quickly once the situation was evaluated and determined we needed help
- Regulatory guidelines known and followed in timely manner
- Utility website technology allowing simple URLs to be clearly named and posted
- Regular and frequent outreach via multiple channels including media

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Areas of Improvement:

- Communications:
  - Customer communication system lacked ability to get mass messaging out to affected customers
  - Needed to establish primary point person for communications
  - Needed better crisis communications plan – what vehicles to use, what partners to contact
  - Need for non-emergency communications around irrigation days, emergency preparedness
- Integrated operations:
  - Use of the Emergency Operations Center (EOC) to coordinate comms/Rave Alert/activities
  - Use of Geographic Information Systems (GIS) for better map development
- Distribution system:
  - Heavy reliance on one large main
  - System cannot narrow affected areas without more sensors

2. Recommendations & Action Items

- Upgrade in communication system:
  - Launch customer portal already in development (to be operational very soon)
  - Upgrade phone system to allow for messaging to callers when all customer service reps are handling calls
- Revisit communication protocol and standard operating procedures:
  - Identify dedicated communication staff member for crisis comms
  - List of critical contacts
  - List of all communication vehicles available
  - List of internal contacts
  - External partner coordination
- Institute proactive community education:
  - Irrigation dates/times (perhaps also policy change)
  - Emergency preparedness (water, supplies at home/work)
  - New section of website
- Revisit use of EOC:

    - Notification list updates regularly scheduled
    - Review use for incidents
    - Drill more with utilities
    - Institute new leader training
- Reduce reliance on main:
    - Ground Storage Tank and Booster Station to hold more water on westside already under construction
    - Evaluate adding automated hydraulic valve on 36” closer to U.S. 31
    - Evaluate larger connection to westside from other plants
- Reduce likelihood of hydrant failure:
    - Hydrants built to spec, however, evaluate and add extra secure restraining bolts to remaining hydrants on the 36” main east of U.S. 31
- Reduce potential of long-term outage
    - Add more pressure sensors in distribution system to help better identify and locate low pressures and define potential boil advisory areas

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APPENDIX

Summary of Activities (black = operations, red = communications, bold = key activities)

Aug. 11, 2025

8:08 am – SCADA – Normal Operating pressure at 111th/College 86.52 psi / Plant 1 pumping 12,000 gpm flow

8:09 am – SCADA- Multiple low/low pressure alarms received

8:10 am - Pumps at Plant 1 shutdown 0 gpm flow

8:13 am – Distribution staff arrived at leak location

8:15 am – Located valves and started to isolate leak

8:17 am – Notified the West Tower had no water

8:26 am – Called Indiana Reclamation and Excavating (IRE) for assistance with the main leak

8:30 am – Carmel Fire Department (CFD) knows of issue and gets back up tanker plan in place for any fire emergencies on the westside

8:31 am – More water redirected through Booster #1 to West Side

8:35 am – Started contacting Marketing & Community Relations (MAC) Department

8:39 am – Discussed back up plan to get water from Citizens Westfield, made initial call to Citizens

8:41 am – Notice of the break was posted on the Utility website that a water main break has occurred, and we are working on the problem https://carmelutilities.com/2025/08/11/water-outage-affecting-western-carmel/

8:42 am – SCADA – Pressure @ 111th/College starting to rise

8:50 am – Spoke with CFD communications

8:51 am – Utility started notification to Indiana Department of Environmental Management (IDEM)

8:52 am - SCADA - Pressure @ 111th/College 45 psi

8:57 am – Rave alert #1 issued about water problem affecting western part of city

9:00 am – IRE on-site with a vac to assist in pumping down the area and expose the leak

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9:01 am – IDEM notified

9:10 am – Calls to Critical Customers: Hospitals; Schools; Dialysis Providers; Long Term Care Facilities; Day Cares/Pre-Schools

9:30 am – First post to Carmel Utilities social media (Facebook, X/Twitter and Next Door).

9:30 am – City of Carmel socials amplify message

9:30 am – Begin responding to media calls

9:42 am – Boil Water Advisory (BWA) crafted with the understanding that IDEM would require it

9:47 am – Utilities Director met with Director of Facilities for Schools to discuss plans to restore water to schools on westside. After discussing repair timeline, made decision to get water from Citizens.

9:54 am – Second Post on socials

10:03 am – Opened the valve connections to Citizens Water and Citizens Westfield to provide water to the west side of Carmel

10:08 am – SCADA – low/low pressure alarm cleared. Pressure is > 50psi, water restored to system

10:16 am - EOC activated

10:17 am – Boil Advisory and map in draft form for review

10:38 am – Boil Advisory and map issued on socials

10:45 am – Carmel Clay Schools posts on their social media outlets

10:45 am – Post on Carmel Utilities: https://carmelutilities.com/2025/08/11/boil-water-advisory-all-drinking-water-customers-of-carmel-utilities-west-of-college-avenue/

10:48 am – Post to update specific street boundaries for map

10:48 am – IRE was heading back to the leak site with parts for the repair

11:02 am – Carmel Clay Schools issues second update

11:11 am – No new update, reshared boil advisory

11:18 am – SCADA – Rise in West Tower level

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11:39 am – IDEM notification of BWA posting on Utility website

11:46 am – SCADA – low pressure alarm cleared. Pressure is > 60 psi

11: 56 am – IDEM notification of sampling locations for total coliform sample collection

11:51 am – News release sent to all City of Carmel contacts

11:55 am – News release shared on all socials

3:00 pm – Hydrant reconnected to 36" main and valves opened, disconnect from Citizens water

3:06 pm – Rave alert #2 issued about Boil Water Advisory

4:00 pm – No new update, reshared boil advisory

4:18 pm – EOC deactivated

5:14 pm – Carmel Utilities posts on website:
https://carmelutilities.com/2025/08/11/water-outage-update-boil-advisory-in-place/

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2:50 am- All Towers and Storage were > 90% full

8:30 am – Total Coliform (TC) Sampling begins at 10 locations, needed to ensure Citizens water was out of our system and we are testing Carmel water

8:43 am – IDEM update provided

8:59am – Carmel Utilities updates website:
https://carmelutilities.com/2025/08/12/water-advisory-update/

12:00 pm – Utilities Director speaks to CSBN regarding the issue

12:10 pm- TC samples dropped off at third party lab

2:01pm – Carmel Utilities updates website:
https://carmelutilities.com/2025/08/12/water-advisory-testing-update/

3:50 pm – Posted on socials about water testing update

5:31 pm – Mayor posts on personal social media

6:00 pm – Utilities Director speaks to CNAN regarding the issue

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10:15 am – posted update on socials regarding advisory testing timeline

12:14 pm – Notification from lab that all total coliforms samples passed

1:21pm – Carmel Utilities updates website with repeal of water boil advisory:
https://carmelutilities.com/2025/08/13/repeal-of-boil-advisory/

1:34 pm – Boil Water Advisory repeal posted on all channels of communication

2:00 pm – City sent Special Announcement repealing water boil advisory to all lists and posted to social channels
https://content.govdelivery.com/accounts/INCARMEL/bulletins/3edbce2

4:01 pm – IDEM – emailed the Boil Water Advisory questionnaire to suffice requirements

4:24 pm – IDEM field inspector response "…We don't need anything additional at this time."