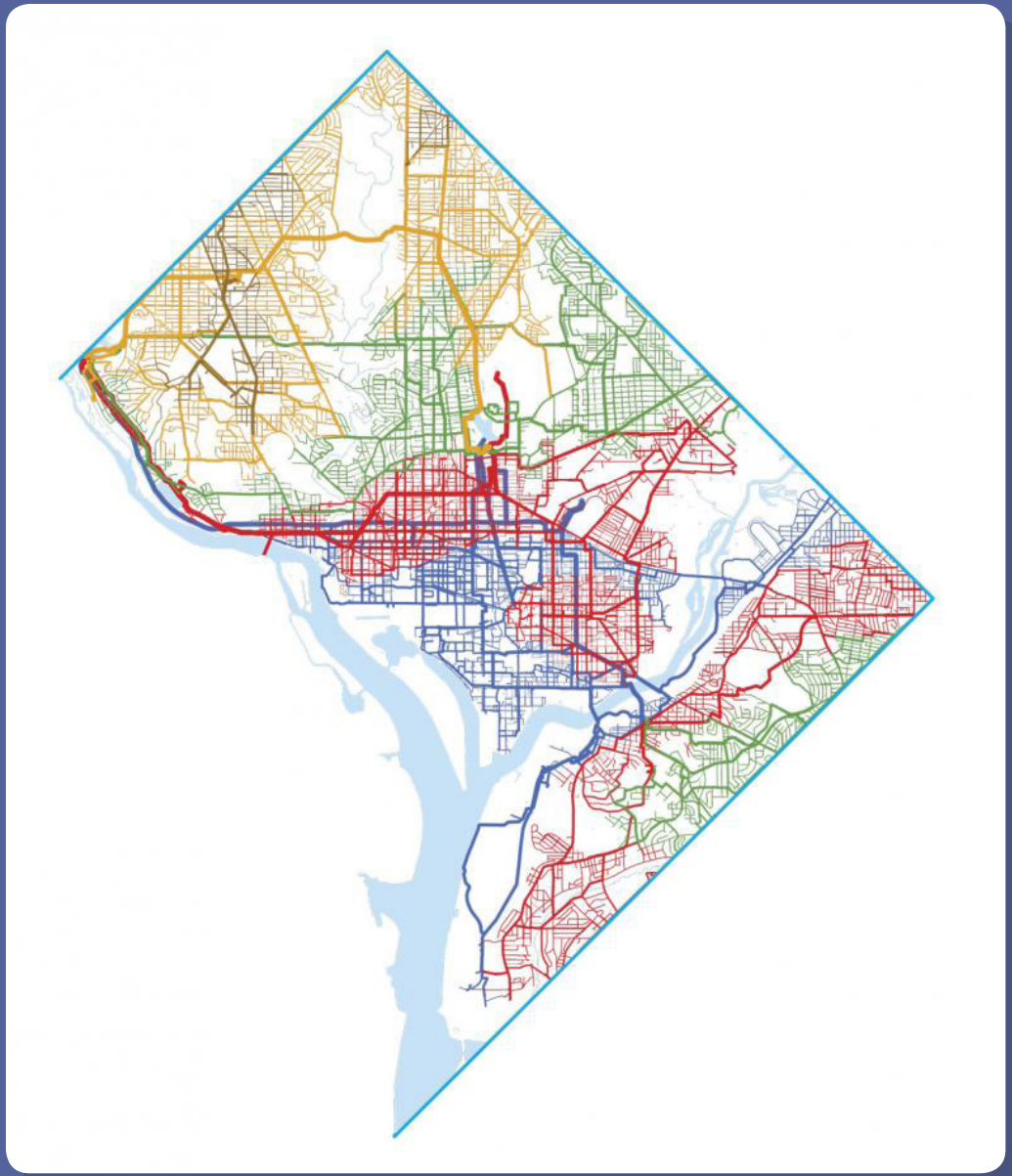
2nd High Elevation Pressure Loss

Low Pressure Incident at Bryant Street Pumping Station



Service Area Map

Background

- DC Water buys water from Washington Aqueduct
- From pump stations, water is distributed to different elevations
- City divided into seven service areas (pressure zones)
- Water can move between zones if necessary

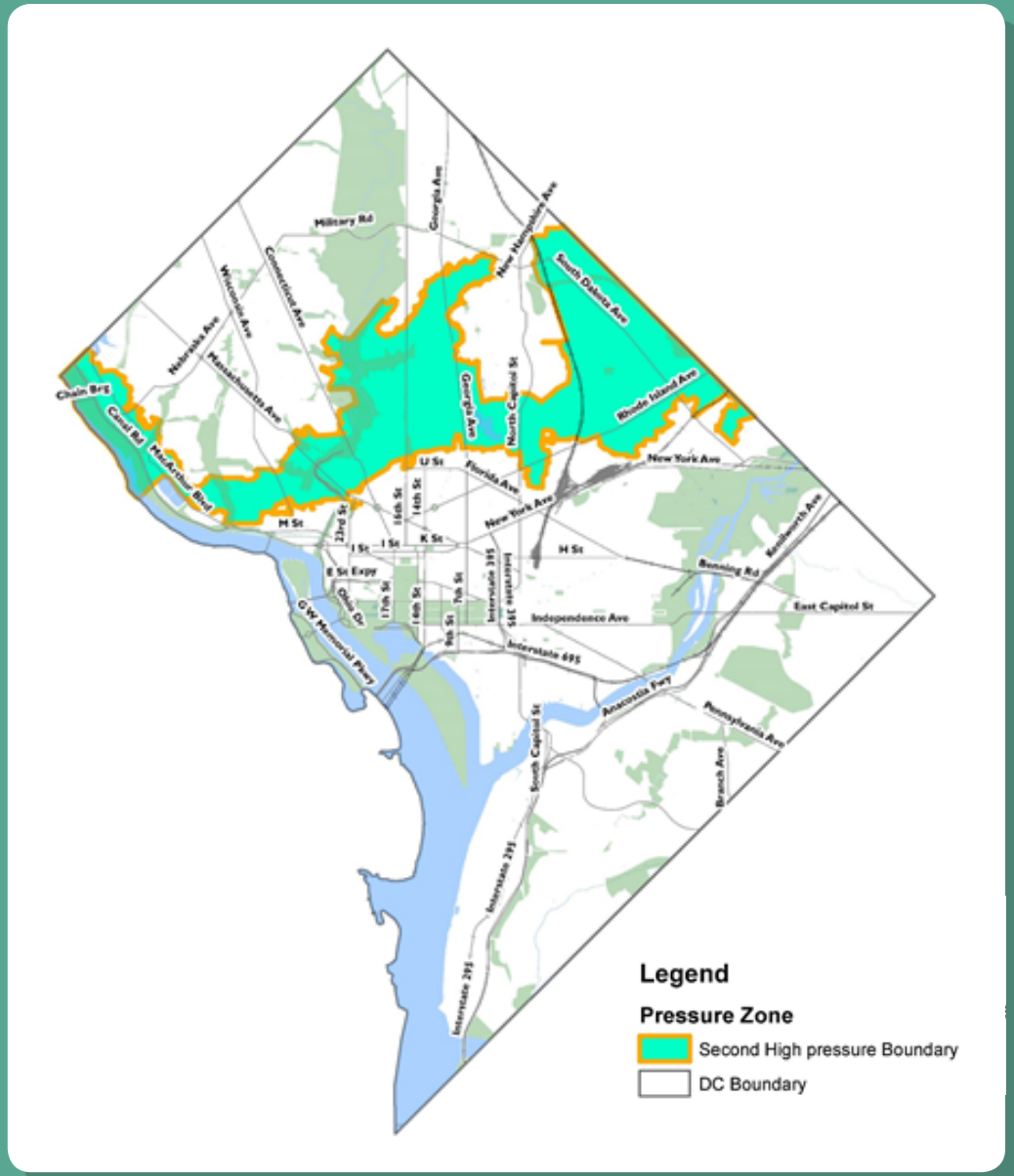
July 12 Pressure Loss

Preliminary investigation suggests it was operator error.

7:31 pm – Operator initiated command to open valve between 2nd High Service Area and Low Service Area.

Equipment issue delayed the execution of the command.

8:30 pm – Repairs completed and valve opened.



Second High Pressure Boundary Zone

Impact

Pressure leaving Bryant Street Pumping Station dropped from **95 psi** to **40 psi**.

Started to receive reports of low pressure in second high elevation. Call volume overwhelmed Command Center.

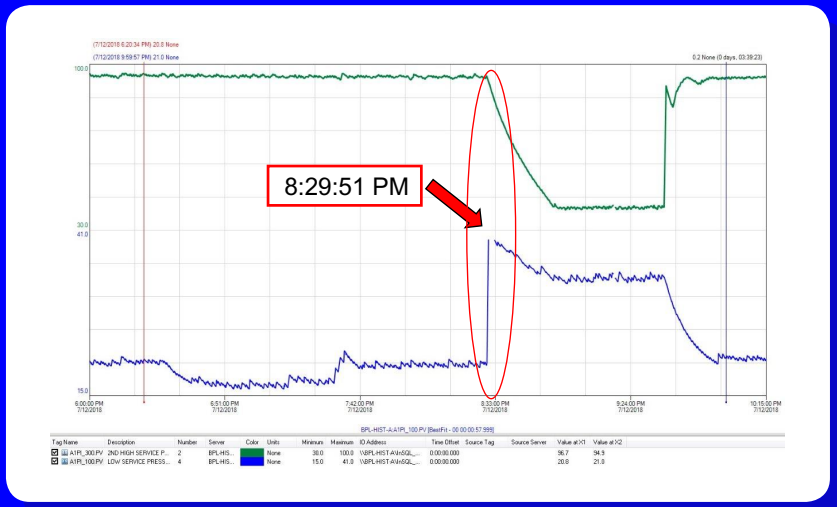
9:04 pm – HSEMA Joint All Hazards Operations Center (JAHOC) calls to ask about reports of low pressure.

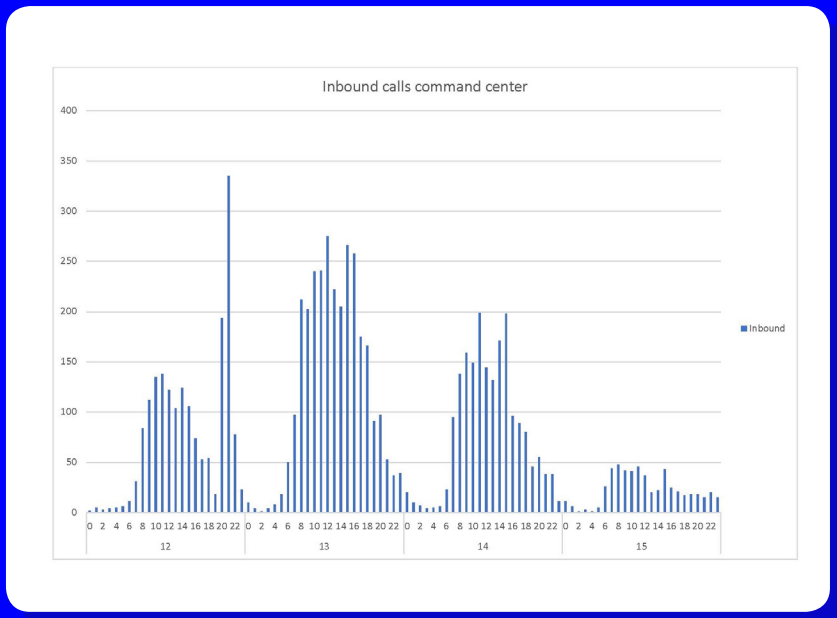
Investigated and identified the cause of the pressure loss.

9:36 pm – The valve was closed.

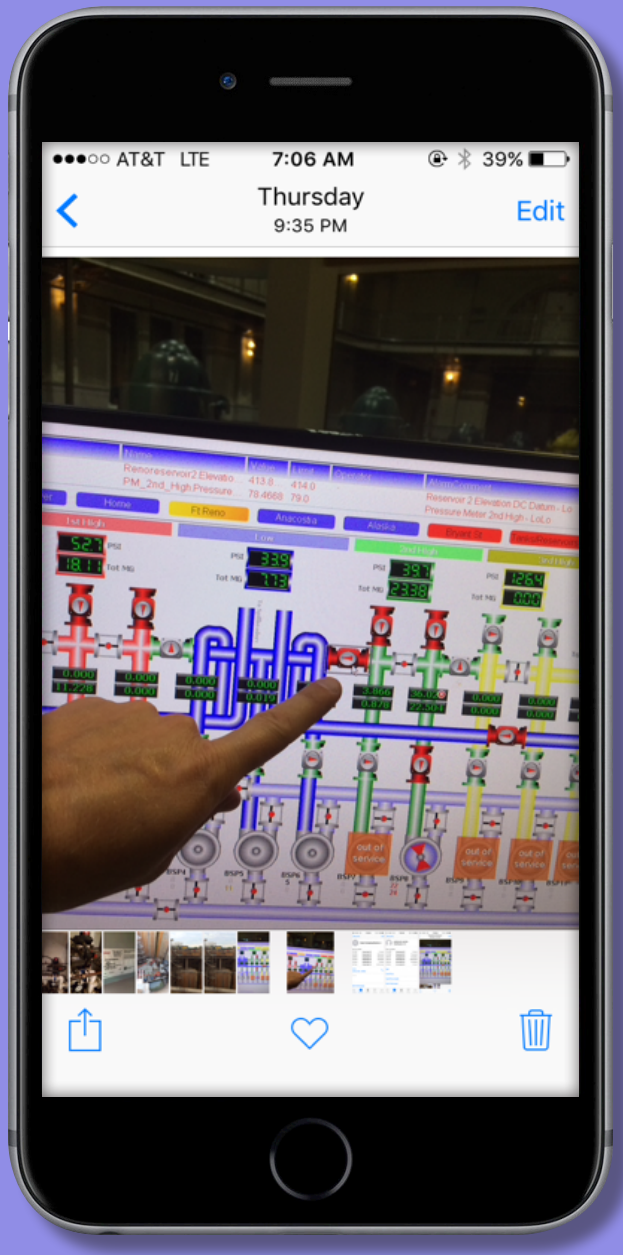
9:39 pm – Pressure was restored.

Operationally, the incident was over.





Call Volume



Assessment

Staff began evaluating the impact of what happened.

9:40 pm – Water Quality Director notified of pressure loss and potential impact.

Relevant water services, pumping and water quality staff report to Bryant Street Pumping Station.

Preliminary assessment conducted, including pressure calculations, reviewing calls and online reports, water main breaks and SCADA data to understand the extent of the issue.

SCADA Graphics – Valves DX70, DX71 & HI82

Activation

10:52 pm – Activated Drinking Water Public Notification Plan (PNP) and Incident Management Team (IMT).

11:26 pm – Contacted EPA for situational awareness and to confirm need for precautionary BWA.

11:30 pm – Tactical team begins work to further define the impacted area.

11:50 pm – Informed EPA that DC Water was issuing a Boil Water Advisory. Area of impact not defined yet.

12:00 am – General Manager briefs the City Administrator.

Boil Water Advisory

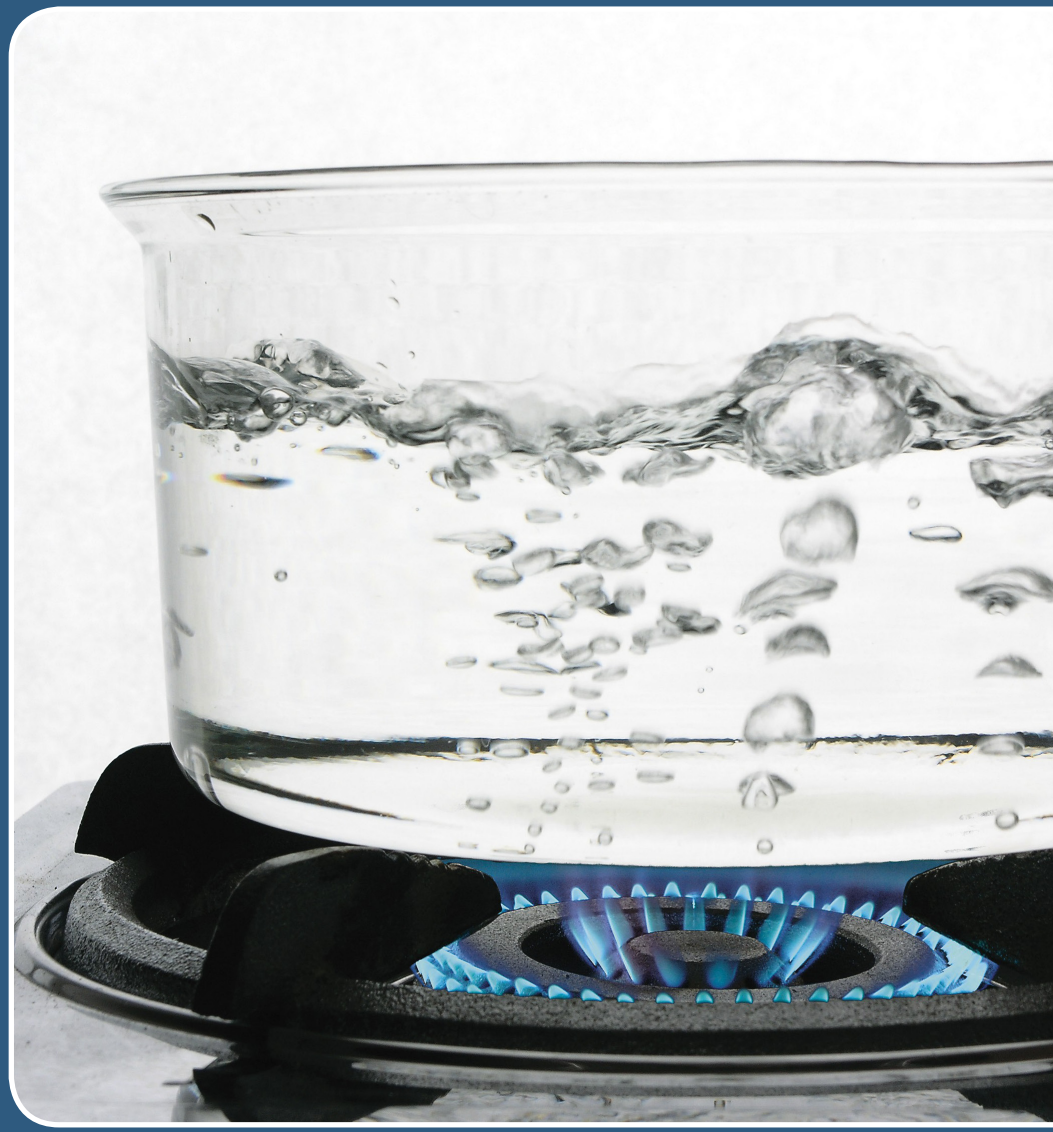
1:56 am – Email to EPA with draft BWA for their review.

2:32 am – Response from EPA with comments on draft BWA.

2:50 am – Email to EPA to inform them which recommendations we were incorporating and to answer questions about distribution.

2:30-3:00 am – Defined the impact area and prepared a map.

3:30 am – The BWA is finalized.



Distribution

3:49 am – BWA is issued to media and public lists.

4:00 am – BWA is published to website.

4:10 am – BWA is posted on Twitter.

4:29 am – HSEMA sends alert via Alerts DC.

6:00 am – Robocalls to impacted customers begins.

9:10 am – FEMS posts BWA on Nextdoor (69,400 subscribers).

11:00 am – Press Conference at Bryant Street. Interactive map posted and publicized.

Communications Tools

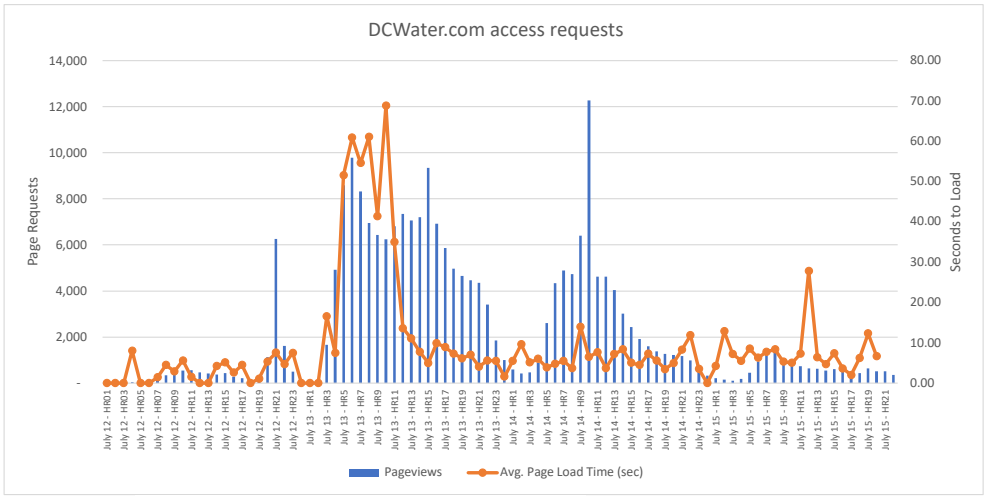
- ✓ Press Release
- ✓ Website
- ✓ Media
- ✓ Social Media
- ✓ Robocalls
- ✓ Alerts DC
- ✓ Nextdoor

+ Reverse 911
+ Wireless Alerts

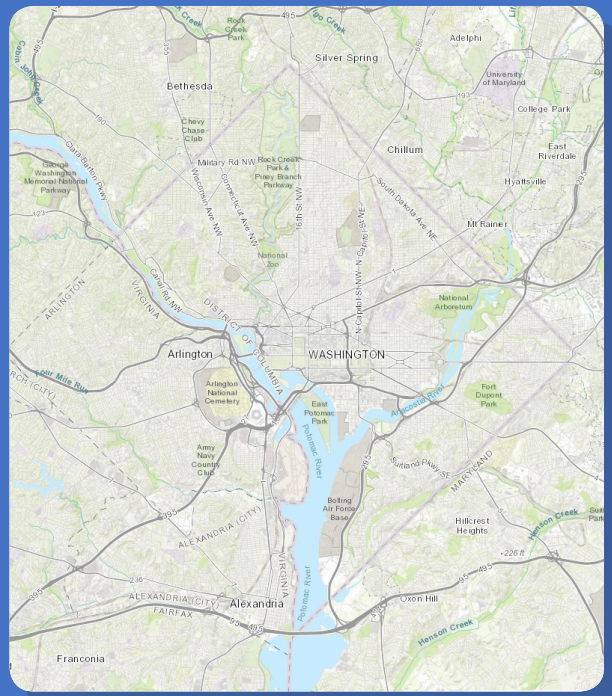
Website Traffic July 13-14

- **92,770 visitors** to dcwater.com
- **194,410 page views** to dcwater.com
- **731,395 views** of interactive GIS map (hosted on separate site)

Exhibit I – DCWATER.COM traffic



Web Traffic



GIS Map

Incident Review

- ✓ After Action Conference held on July 30
- ✓ After Action Report completed August 10
- ✓ Internal investigation, led by General Counsel, completed August 12
- ✓ Determining appropriate disciplinary action

Preliminary Recommendations

Valve Restrictions

Operational controls at pumping station to prevent accidental release of pressure by requiring supervisor approval before a divider valve is opened.

Safe Clearance Standard Operating Procedures

Clarify protocols and expectations for safe clearances and ensure all operators and maintenance staff are trained on these changes.

Supervisory Control and Data Acquisition (SCADA)

Conduct a comprehensive review of SCADA alarm protocols. We expect to make changes in the near future that will improve alarm notifications.

Preliminary Recommendations
continued

Technology Improvements

Information Technology Department has added a second server to reduce the chance of website being overwhelmed.

Better Mapping Capability

IT is creating pre-loaded map templates that can be used for future alerts that show existing pressure zones.

Better Government Coordination

Annually review Drinking Water Public Notification Plan and template language internally and with EPA Region 3.

Preliminary Recommendations
continued

Communication

Reviewing possible technology enhancements to reach more customers more quickly. Convening discussions with HSEMA about both Reverse 911 system or the Wireless Emergency Alerts (WEA) system for drinking water advisories.

New Customer Outreach

Identify liaison officer to hospitals, schools, universities and other large customers in case of future emergencies.

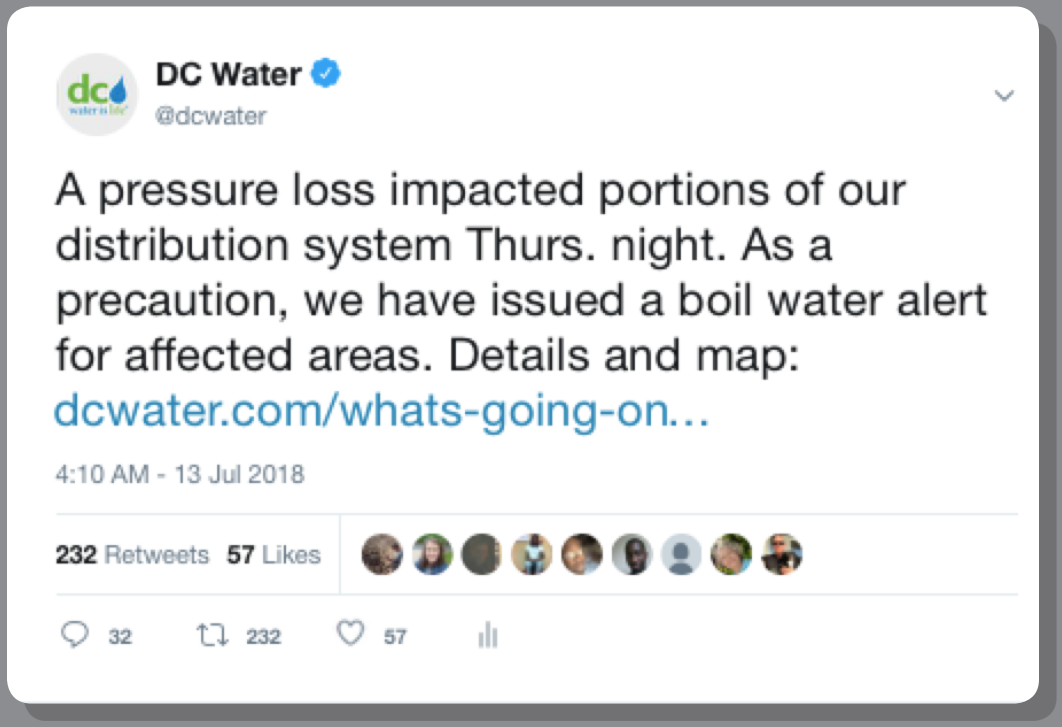
Call Center

Reviewing options for adding additional customer service phone lines and staff to be able to handle future emergencies.

Social Media Overview

First official Boil Water Advisory DC Social Media Announcement:

- Earned **91,503** impressions
- Generated **6,918** total engagements
- Earned **3,795** link clicks
- Earned **232** retweets
- Earned **57** likes
- Received **32** replies

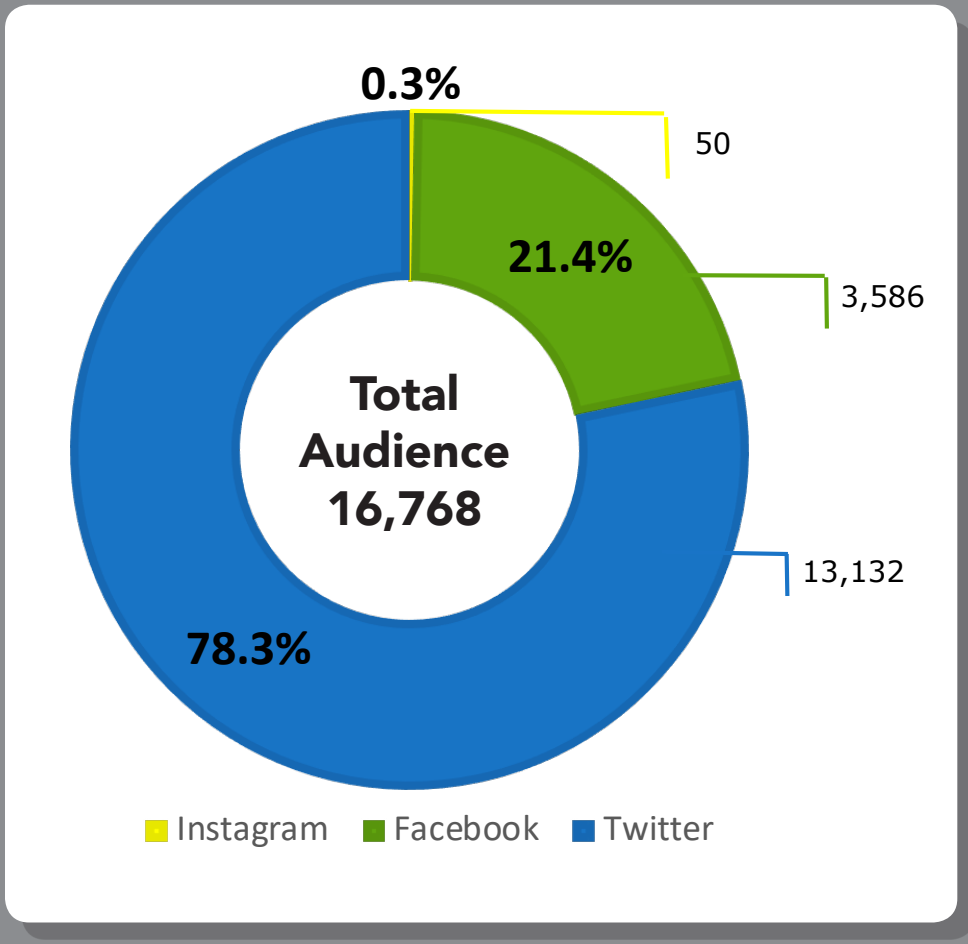


Source: Twitter Insights

Social Media Overview

During the Boil Water Advisory DC Waters social media platforms:

- Generated **155,784** total engagements
- Earned **2,455,075** impressions
- Earned **65,752** link clicks
- Referred **16,768** users to dcwater.com
- Gained **3,125** new followers in total

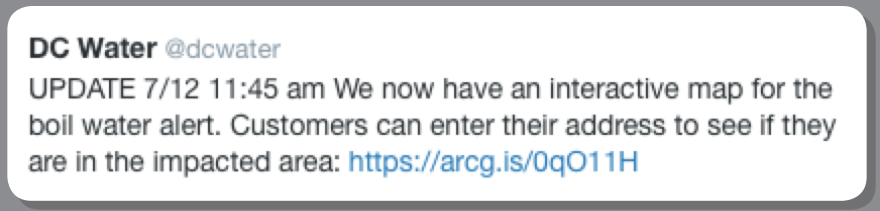


Source: Sprout Social and Google Analytics

Social Media Overview

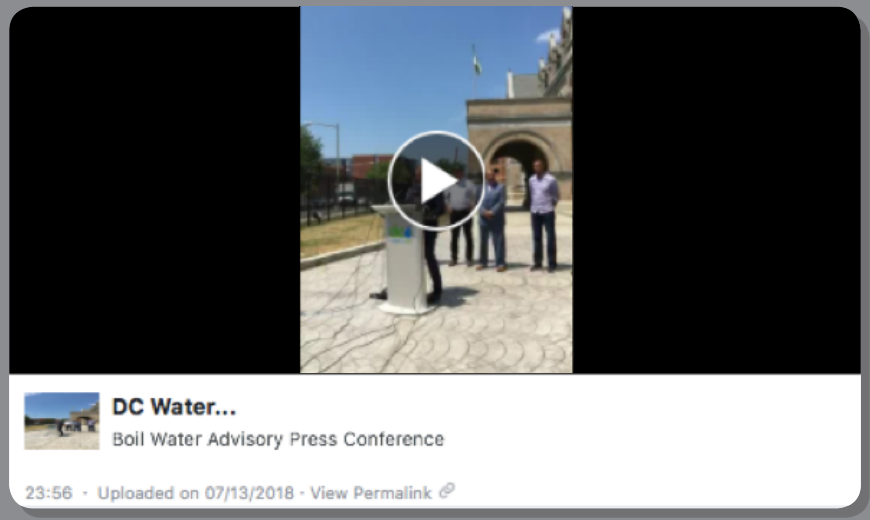
During the Boil Water Advisory, DC Waters Social Media Top Engaging Posts Were:

Twitter



- Impressions: **116,914**
- Total Engagements: **22,711**
- Link Clicks: **16,727**
- Retweets: **221**
- Likes: **106**

Facebook



- Post: **Live Stream of 1st Press Conference**
- Reach: **19,026**
- Video Views: **8,483**
- Shares: **179**
- Likes: **124**

Source: Twitter Insights / Facebook Analytics