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King County  
Water District 54  
Boil Water  
Advisory - After  
Action Report

June 16

2023

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Report Completed by: City of Des Moines  
August 9, 2023

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## EXPLANATION OF TERMS

AAR	After Action Report
WDOH	Washington Department of Health
PHSKC	Public Health – Seattle & King County
ICS	Incident Command System
NIMS	National Incident Management System
KCOEM	King County Office of Emergency Management
EOC	Emergency Operation Center
PIO	Public Information Officer
WML	Water Management Lab
WD54	King County Water District 54
CDM	City of Des Moines
BWA	Boil Water Advisory

## INTRODUCTION

A King County Water District 54 (WD54) water sample taken on June 14, 2023, tested positive for E. coli. WD54 received the test result on June 16, 2023. WD54 staff took repeat samples on June 16, 2023. The repeat samples tested positive for Coliform (no E. coli present), requiring Water District 54 to chlorinate their water system and issue a Boil Water Advisory BWA notice on June 17, 2023. WD54 contacted the Washington State Department of Health for assistance on a BWA to customers and a press release to the media. WD54 sent the BWA to King County Office of Emergency Management for an Alert King County (CodeRed) warning to the public.

Additionally, WD54 used door-to-door notifications, website updates, and social media posts to alert customers about the BWA. Public Health – Seattle & King County worked directly with food service establishments on June 18, 2023, to ensure restaurants were aware of proper procedures due to the BWA.

The City of Des Moines Public Works Director was notified of the BWA, via email, on June 18, 2023. The Public Works Director immediately informed the City of Des Moines Chief Administrative Officer of the BWA. The City assisted by posting and re-sharing information on social media, noticing the City's website, Facebook pages and updating the Waterland Blog with information when it became available. Water re-sampling took place at 24-hour intervals by WD54. When Washington State Department of Health approved lab results, Water District 54 rescinded the BWA. The BWA was rescinded on the afternoon of June 24, 2023.

Sequence of events:

**Friday, June 16, 2023**

- 10:30am **WD54** received a call from Water Management Laboratories (WML) informing them that 3 sample stations were coliform positive, E. coli absent and 1 sample station was coliform positive E. Coli present.
- 2:30pm **WD54** staff collected follow-up water samples and delivered them to WML.

**Saturday, June 17, 2023**

- 10:23am **WD54** called WML. Lab verbally stated that follow-up samples were negative for Coliform. This information was later learned to be inaccurate.
- 11:00am **WD54** called City of Des Moines Public Works Director to inform of first status (non-emergency) due to WML results.
- 11:18am **WD54** conferred with DOH on non-emergency notification to go out via mail as required within 30 days.
- 12:00pm **WD54** staff began chlorinating the water system.
- 1:00pm **WD54** call with WA State Department of Health (DOH).
- 2:47pm **CDM** Public Works Director sent an e-mail informing the City of Des Moines Chief Administrative Officer, and the City Manager, of **WD54's** intent to chlorinate the water due to a water main break a few weeks prior.
- 3:24pm **WD54** e-mailed lab report received by **WD54** from WML. Samples were positive for coliform. Written report contrary to verbal notification 5 hours earlier.
- 5:02pm **WD54** conferring with DOH as to the revised requirements for Boil Water Advisory (BWA).
- 6:13pm **WD54** requested help with Press Release from DOH.
- 7:26pm **WD54** sent BWA to DOH for approval.
- 7:38pm **WD54** DOH approval of 1<sup>st</sup> BWA.
- 8:44pm **WD54** press release received by **WD54** from DOH.
- 9:42pm **WD54** sent 2<sup>nd</sup> version of BWA to DOH for approval.
- 10:15pm **WD54** final approval of BWA sent to customers.
- 10:16pm **WD54** started producing 2,500 copies of the BWA for distribution Sunday, June 18, 2023.
- WD54** PIO phone activated.

**Sunday, June 18, 2023**

- 6:02am **WD54** press releases sent to media contacts as detailed in **WD54** Emergency Response Plan.
- 8:25am **WD54** e-mail sent to the City of Des Moines, Public Works Director updating from initial non-emergency notification to BWA to all customers.
- 8:55am **WD54** King County Office of Emergency Management Duty Officer notified of BWA for Alert King County notification.
- 9:00am **WD54** organized 2 staff, 2 commissioners and 4 volunteers to deliver BWA district wide.
- 9:34am **CDM** City of Des Moines Chief Administrative Officer received an email from the Public Works Director with BWA and map of the area impacted. City Manager notified.
- 9:34–9:47am **CDM** Chief Administrative Officer posted the BWA and map on the City's Website, the City's Facebook page, Des Moines Community, Des Moines Community 2.0, Des Moines N.O.W., Des Moines CAN, Friends of Des Moines/Redondo, Woodmont CAC Facebook pages and the Waterland Blog.

- 9:47am **CDM** Chief Administrative Officer e-mailed the Public Works Director after notices were posted.
- 10:02am **CDM** Chief Administrative Officer notified all City employees of the BWA via email.

**Sunday, June 18, 2023 continued**

- 11:35am **WD54** staff confirmed the City shared the BWA on Social Media. WD54 requested via e-mail that the Public Works Director ensure that the Chief Administrative Officer direct the public to contact WD54 directly with questions and concerns.
- 12:08pm **WD54** staff received verification from the Public Works Director that the above request was forwarded to the Chief Administrative Officer and that he would update the City Manager.
- 12:33pm **CDM** Chief Administration Officer notified City Council of BWA via email. Marina staff closed and locked public restrooms.
- 1:14pm **CDM** staff sent an email to janitorial service relative to Beach Park Services. Discussed closing and locking the Beach Park Restrooms with Project Manager. City disabled public drinking fountains.
- 4:50pm **WD54** staff, commissioners and volunteers door-to-door delivery of BWA completed.

**Monday, June 19, 2023**

- 6:00am **WD54** staff arrived at 6:00 a.m. to open WD54 office for public access.
- 10:30am **WD54** turned on the emergency intertie between WD54 and Highline Water District delivering water to the district.

**Tuesday, June 20, 2023**

- 8:00am **WD54** sample 1A of follow-up samples with chlorine dropped off at WML.
- 9:00am **WD54** worked with Waterland Blog on Alert King County promotion to encourage residents to sign up for Alerts and Warnings.
- 1:11pm **CDM** Chief Administrative Officer received an email from Senior Event Planner, inquiring about protocols for upcoming rentals at the Beach Park Event Center.
- 2:30pm **WD54** called the City inquiring about restroom at the Marina.

**Wednesday, June 21, 2023**

- 9:17am **CDM** Chief Administrative Officer sent an email update to Mayor Matt Mahoney, Deputy Mayor Traci Buxton and Councilmember Vic Pennington noting that the City shared BWA as requested through the Public Works Director.
- 12:15pm **WD54** sample 1A of chlorinated samples results for June 20 from WML came back negative for coliform.
- 2:00pm **WD54** sample 1B of follow-up samples with chlorine dropped off at WML for testing.
- 4:30pm **WD54** conducted Zoom call with DOH. DOH required WD54 to test for a higher chlorine residual using a different testing method before authorizing WD54 to rescind the BWA.

**Thursday, June 22, 2023**

- 11:27am **WD54** sample 1B of follow up samples tests negative for coliform.
- 11:00am **WD54** DOH delivered and trained WD54 staff on new testing method required by DOH due to the chlorination and manganese interference of WD54's system.
- 12:30pm **CDM** Chief Administrative Officer left a message offering assistance to WD54. WD54 staff were unavailable due to a meeting with DOH.

2:00pm **WD54** sample 2A of samples using the new testing method were taken to WML. This being the first sample of two required samples to lift the BWA.

**Friday, June 23, 2023**

1:04pm **WD54** results of the Sample 2A negative for coliform.

2:00pm **WD54** sample 2B dropped off at WML.

**Saturday, June 24, 2023**

12:23pm **WD54** results of the Sample 2B negative for coliform.

12:31pm **WD54** results forwarded to DOH.

12:46pm **WD54** DOH approves press release to go out.

12:58 pm **CDM** re-posted Boil Water Advisory in Effect on City's Website, the City's Facebook page, Des Moines Community, Des Moines Community 2.0, Des Moines N.O.W., Des Moines CAN, Friends of Des Moines/Redondo, Woodmont CAC Facebook pages and the Waterland Blog.

1:03pm **WD54** DOH rescinds Boil Water Advisory. WD54 sent notification to full media list as outlined in Emergency Response Plan. Forwarded rescinded BWA to administrators of all local Facebook groups and updated web site. Used Alert King County to notify public of BWA rescinding.

1:21pm **CDM** posted rescinded Boil Water Notice Lifted on the City's Website, the City's Facebook page, Des Moines Community, Des Moines Community 2.0, Des Moines N.O.W., Des Moines CAN, Friends of Des Moines/Redondo, Woodmont CAC Facebook pages, personal Facebook page and the Waterland Blog.

1:26pm **CDM** sent rescinded boil water notice to Council via email.

**Monday, June 26, 2023**

7:30am **CDM** sent rescinded boil water notice to all employees via email.

**AFTER ACTION REPORT OVERVIEW**

The City of Des Moines Emergency Operations Center completed this report as a compilation of information derived at an after incident review. The review took place on July 27, 2023 and included the following partners; King County Water District 54, Washington State Department of Health and the City of Des Moines. These agencies participated in the response and communication to the public during Water District 54's boil water advisory. The information was gathered by the City of Des Moines Director of Emergency Management with the assistance of the City Clerk's Office.

The recommendations in this After Action Report (AAR) should be viewed with considerable attention to the needs for providing safe, clean, reliable drinking water to the residents and businesses of Des Moines, which are serviced by Water District 54. Each organization should review the recommendations and determine the most appropriate action and time needed for implementation.

**Incident:** King County Water District 54 – June 2023 Boil Water Advisory

**Participating Organizations during the Incident:**

- King County Water District 54
- Water Management Laboratories
- Washington State Department of Health
- Seattle-King County Department of Health

The City of Des Moines

**Duration:** Friday, June 16, 2023 - Saturday, June 24, 2023

**Focus:**

- ✓ Response
- ✓ Recovery

**Incident:** ✓ Boil Water Advisory Notification

**Location:** Image 1



**STRENGTHS**

1. WD54 has an Emergency Response Plan that details steps to be taken when a Boil Water Advisory notification is required.
2. WD54 (WD54) issued a Boil Water Advisory with the assistance of Washington State Department of Health.
3. WD54 has a strong water testing procedure in place to fulfill local, state, and federal requirements. These tests ensure that staff and commissioners are consistently aware of the water system quality.
4. WD54 began chlorinating the water June 17, 2023.
5. WD54 worked with King County Office of Emergency Management to send a Boil Water Advisory notification through Alert King County (Code Red) to customers on June 18, 2023. WD54 organized door to door notifications of the Boil Water Advisory on June 18, 2023. Notifications were completed in 8 hours.
6. WD54 issued a press release with district map outlining the impacted area. See image 1.
7. Social media information was clear, detailed and updated frequently by both the Water District and the City of Des Moines.
8. WD54 updated their web page for customers daily.

9. WD54 made cases of bottled water available at the district office.
10. WD54 worked with the Waterland Blog on an Alert King County community outreach campaign encouraging residents to sign up for emergency alerts and warnings.

## AREAS OF IMPROVEMENT

1. The sharing of information between partner agencies during the incident:
  - a. King County Water District 54
  - b. Washington State Department of Health
  - c. Public Health - Seattle & King County
  - d. Water Management Laboratories
  - e. The City of Des Moines
2. Verbal notification from WML was not accurate and conflicted with the written report received. This caused a 5-hour delay in the customer notification process.
3. WD54 did not reach out to the City of Des Moines to request emergency aid as outlined in King County Water District 54's Emergency Response Plan.
4. The City of Des Moines will engage with the Director of Emergency Management and or designee to respond to situations that have the possibility of escalating into events requiring EOC support.
5. City of Des Moines Emergency Management, Emergency Operation Center and other Emergency Response resources were unknown by Water District 54.
6. Restaurant notifications were handled by Public Health – Seattle & King County. King County Water District 54 was communicating with Washington State Department of Health. Public Health-Seattle & King County did not provide Water District 54 with a copy of the restaurant boil water information.

## RECOMMENDATIONS

1. The City of Des Moines will hold regularly scheduled meetings with community partners to discuss Emergency Management issues, train partners in resources available during times of emergency.
2. When WD54 is updating notifications on their web site, they will ensure that the messaging is date and time stamped.
3. WD54 will work with DOH to streamline the notification approval process; with special attention to weekends and holidays.
4. Partners will conduct situational awareness meetings during incidents with all the key stakeholders to create horizontal and diagonal information flows.
5. WD54 will create templates of possible alerts and warnings to the public and have them pre-approved by DOH.
6. City of Des Moines Emergency Management will work with partners to develop ICS/EOC/NIMS training recommendations.
7. City of Des Moines Emergency Management will work with partners to develop ICS/EOC/NIMS training recommendations for elected officials.

SHEFFER

— AMBER ALERT ? 6/7 10:15

— BETTER MAP

— MA CI PIPES WHAT YOU CAN EXPECT

— RISK POOL

(P24)



## CONCLUSION AND NEXT STEPS

The City of Des Moines will reach out to local partner agencies to ensure they are aware of how the City of Des Moines can assist in times of Emergency. The Emergency Operations Center is a resource for partners as early as possible in any emergency.

1. The City of Des Moines Director of Emergency Management will set up regular Emergency Management meetings with partners.
2. The City of Des Moines Director of Emergency Management will provide ICS/EOC/NIMS training recommendations for partners.
3. The City of Des Moines Director of Emergency Management will provide ICS/EOC/NIMS training recommendations for partner board members, commissioners and volunteers.
4. The City of Des Moines will include partners in all community outreach events to help engage the whole community.
5. The City of Des Moines will create a process for 24/7 contact with the City of Des Moines Emergency Management Department.