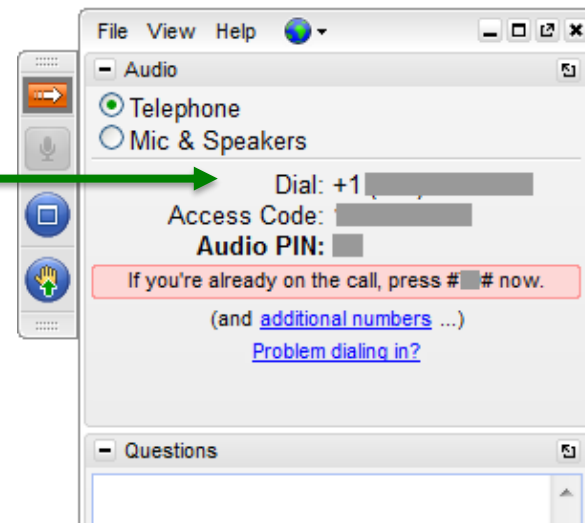


# Welcome

## *Public Notification in Water Contamination Events and Outages – Part 2*

Please dial-in, or use your mic & speakers.

Enter your Audio PIN, after you dial in.

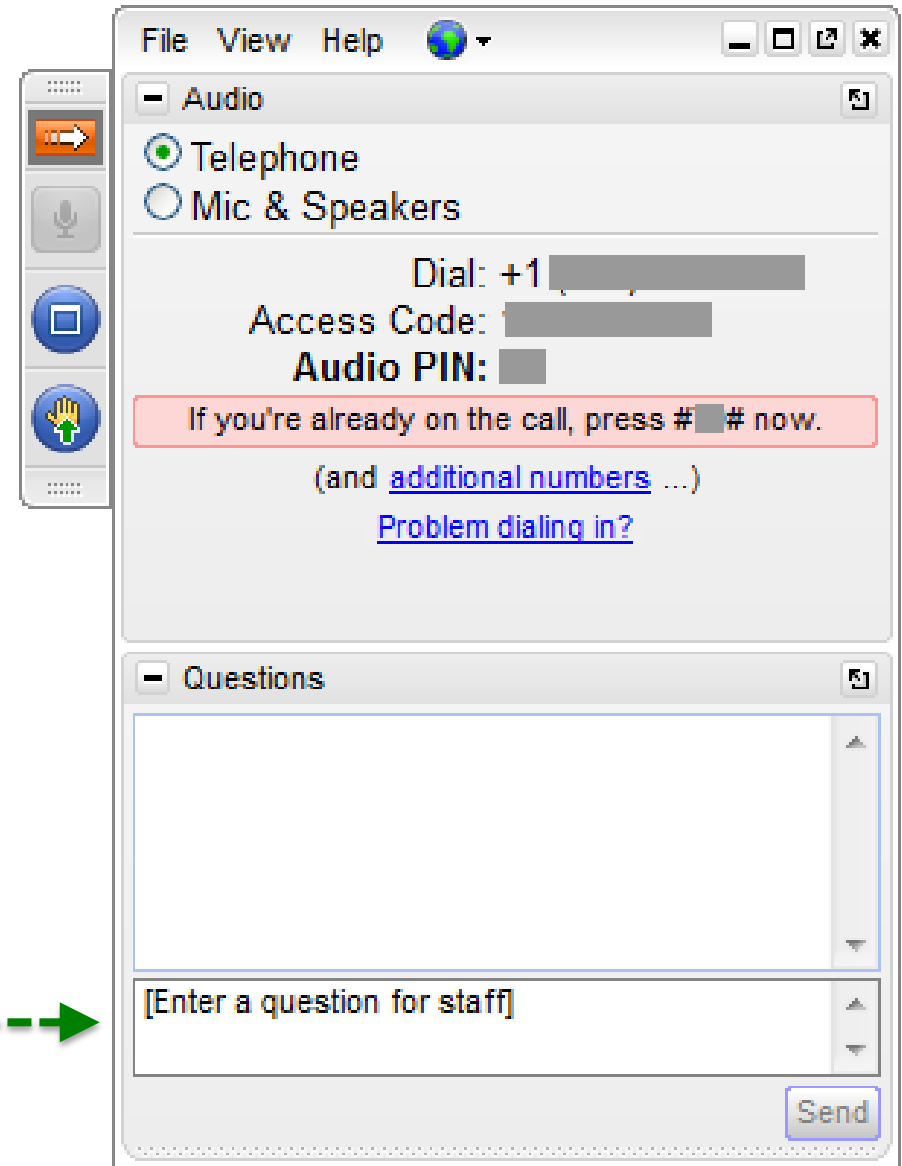


*(All phone lines are muted for now)*

# Reminders

- Slides and recordings will be available to Pro members on the WaterISAC portal by Friday afternoon.
- If you are interested in applying to your state for CEU or PDH credits, email [events@waterisac.org](mailto:events@waterisac.org) for application support materials.

# How to Ask a Question



Type and send 

# Our Presenter

**Lisa Ragain**  
Aqua Vitae



# Public Notification for Outages & Spills Part 2: Applications and Case Studies

Lisa Ragain

July 10, 2014

# Overview

- Purpose
- Drinking Water Emergencies
  - WSSC
  - Elk River, WV
  - DC Water
- Social Media
- Improving Practice

# Themes

- Build on established utility activities
- High profile events have effects throughout the water sector
- Promote collaboration between jurisdictions and among agencies
- Consistent advice is valuable
- Health data and advice is fraught with uncertainty and unknowns

# Case Studies

- WSSC
- Elk River, WV
- DC Water



# WSSC, Suburban Maryland Outage, July 2013

- Large number of main breaks, prior high profile main breaks and outages
- Installed leak/break detection system
- System identified a crack in a main w/ high probability of immediate failure
- Repairs would necessitate a water supply cut off for ~ 200,000 PG County residents
- Precautionary of outage notice given in advance of repairs



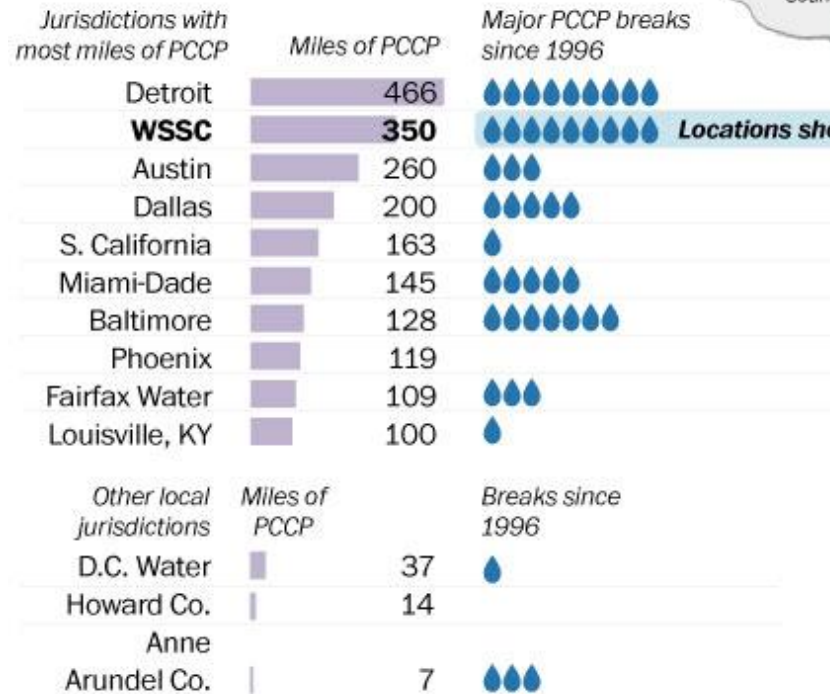
# WSSC, Suburban Maryland Outage, July 2013

- Uncertain time frame
- Uncertain outcome
- When to communicate?
- What to communicate?



# WSSC, Maryland Suburban DC

- Messaging
- Value of Water
- Infrastructure Investment

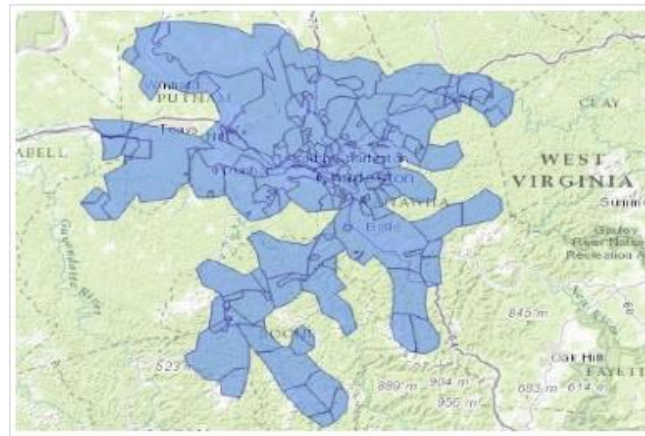
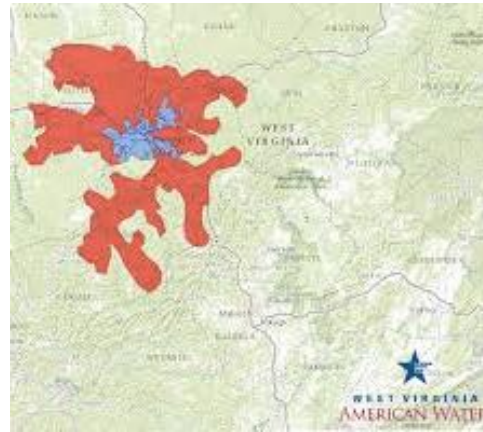


Washington Suburban Sanitary Commission (WSSC) service area

# Elk River, WV Chemical Spill, January 2014

- MCHM leak into the Elk River upstream of WVAVW intake
- Do Not Use advisory for 300,000 people in 9 counties
- Strengthen
- Health effects and aesthetics are two specific communication challenges

# Elk River, WV Spill Maps



# Poison Control Centers

- Under appreciated
- First call for many customers
- Experience in providing and communicating chemical exposure advice





# Public Health Guidance

January 10<sup>th</sup>

- CDC/ATSDR determined that a concentration of 1 ppm is acceptable for normal use.

January 15<sup>th</sup>

- CDC issued a recommendation for pregnant women

January 17<sup>th</sup>

- CDC tested only for crude MCMH

January 19<sup>th</sup>

- CDC Recommended Advisory in place until odor gone

How did the Center for Disease Control Arrive at 1 Part Per Million as a Safe Level for MCHM?

**100 mg/kg**  
No Observable Effect in animals at this level

The CDC applied 3 Uncertainty/Safety Factors to this level

**10 mg/kg**  
Factor of 10 for Animal to Human Conversion

**1 mg/kg**  
Factor of 10 for Human Variability

**.1 mg/kg**  
Factor of 10 for the Inadequacy of the Database

**.1 mg/kg =**  
.1 part per million

**1 ppm**  
.1 mg/kg x 10 kg Child x 1 Liter Consumption = 1 part per million daily consumption



# Chemical Guesswork in West Virginia

By Deborah Blum

1/25/2014

Drinking Water Not Tested For Tens Of Thousands Of Chemicals : The Salt : NPR



the salt

## Drinking Water Not Tested For Tens Of Thousands Of Chemicals

by ELIZABETH SHOGREN

January 24, 2014 5:00 AM

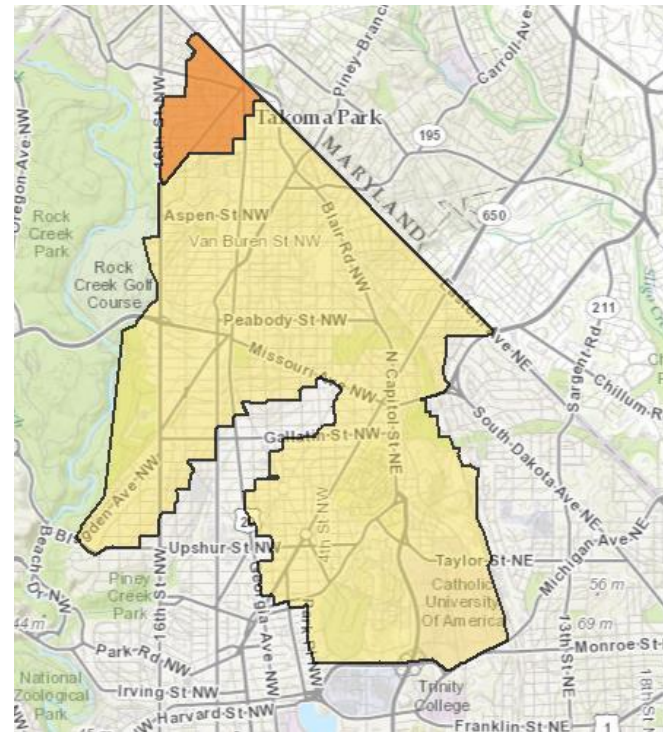




Multi-agency Press , February 6, 2014

# DC Water Loss of Pressure, March 2014

- DC Water Storify
- Clickable maps
- Volunteers
- Tape/Door hangers
- ID
- Flushing
- “Third High”





[Home](#) › [From the Source](#) ›

# Recipe for an interactive map

*By Alexandra Kanik | PublicSource | Feb. 3, 2014*

## Ingredients

Google skills

Server access

Smart friends

Ambitious colleagues

A firm deadline

The will to succeed

## Post type

[Inside our Newsroom](#)

Search Box

### Sites in PA that use at least five tons of ammonia

Are you located in a hazard zone? Type your address in the search bar above.

**About this project:**  
Reporters examined Environmental Protection Agency filings for 122 Pennsylvania facilities that use large amounts of ammonia, a chemical that the EPA classifies as extremely hazardous. Each report shows how many people could be affected in a worst-case ammonia leak.  
[Read the story here.](#)

Note:  
and by  
2010 C

Source  
report

# Downstream Systems

- Cincinnati, Louisville & other Ohio River drinking water systems
  - Will our water be contaminated
  - What are you doing?
  - What should I do?

# Source Water is Sexy?

- NCR question: does this affect our watershed?
- What is in place
- One source, one voice

# Aesthetics

- Role in perception
- Power of odor
- Consistency
- Crucial in post-advisory advice

The water is discolored. What should I do?

- Flush water pipes by running the water until it is clear.
- Do not wash clothes if the water is discolored. Wait until the water runs clear at the tap. Wash a load of dark clothes first.

Why does my water have a strong smell?

- The smell is probably chlorine. Often, water systems will increase chlorine levels to disinfect the pipes.

# Learn from the Media

# THE WALL STREET JOURNAL.

## It's Watershed vs. Pipeline in Latest Fracking Battle

High Profile Key Word



Graphics

High-Profile Spills Prompt Water Utilities to Fight Oil-and-Gas Pipelines

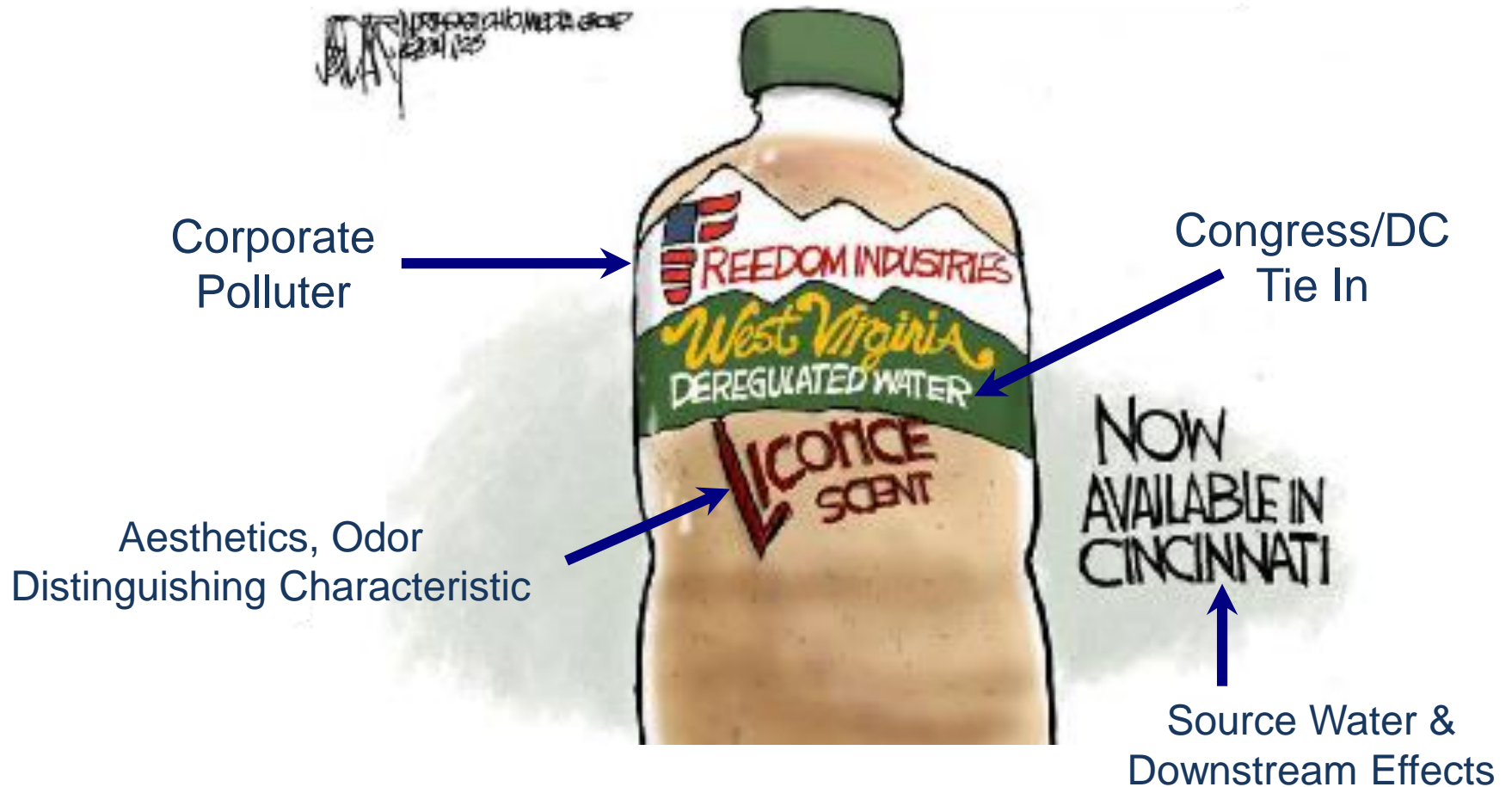
Non-Specific WV Reference

It's about critical infrastructure coexisting...It's an awareness-building campaign...getting a sector that is very far removed from the provision of safe drinking water to understand what that entails."

Consistent Topic Message:



# 1 Graphic - Many Messages





# Social Media: Specific Audiences



American University shared a link.  
14 hours ago

AU responds to DC Water's Boil Water Advisory and provides answers to frequently asked questions about this kind of water service interruption.  
<http://bit.ly/MRDmqF>



Reports and Announcements, Office of the President, American University, Washington, DC  
[www.american.edu](http://www.american.edu)

March 6 2014 Announcement Water Advisory



American University School of Communication  
College & University



School of International Service – American Univ  
College & University



Kogod School of Business (American University)  
College & University



American University Alumni Association  
College & University · Organization



American University  
19 hours ago

# Social Media: Updates

19 pallets of water just like this at distribution sites in Charleston for today #wvchemspill #WVWaterCrisis pic.twitter.com/ceJ0Lu0mbo

Reply Retweet Favorite More



**WV Public News** @wvpublicnews

#WVLegToday 1.14.14: @WVDOT Sec. talks funding, @wvlegislature's Information Office & @JeffKesslerWV on a #futurefund wvpub.lc/sAHo5

Expand



**melissa block** @NPRmelissablock

Charleston, WV Mayor Danny Jones calls chem leak damage "incalculable," Freedom Industries "renegades," says suing is "an option." @npratc

Retweeted by WV Public News

Expand



**WV American Water** @wvamwater

Status Update

West Virginia American Water, the Army National Guard and our interagency partners are working... fb.me/2F6uXLlyN

Retweeted by WV Public News

Expand



**WV Public News** @wvpublicnews

Charleston Mayor Danny Jones was interviewed by @NPRmelissablock. He called those behind #wvchemleak "renegades": wvpub.lc/sAyGo



## Tweets



**Bob Bamard** @bamardfox5dc

9h

#myfoxdc Tom and Brad and a rusty old valve. They're the #WSSC techs who saved the day - and the water. 5pm  
[pic.twitter.com/FZpFpuehZd](http://pic.twitter.com/FZpFpuehZd)

Retweeted by WSSC Water News

[View photo](#)



**WSSC Water News** @WSSCWaterNews

4h

(sry 1 more) If test results confirm the required water quality level, we hope to put the pipe back into service this weekend.

[Expand](#)



**WSSC Water News** @WSSCWaterNews

4h

The pipe is fully sealed and is now being flushed to fully cleanse this section and test the integrity of the pipe.

[Expand](#)



**WSSC Water News** @WSSCWaterNews

4h

Acoustic Fiber Optic cable, a key technological tool used to monitor the integrity of our pipes, is now installed in the new pipe. (2/3)

Who to follow · [Refresh](#) · [View all](#)



**Accepta** @AcceptaCom

Followed by Loudoun Water and o...

[Follow](#)



**Geoawesomeness** @geoawesom...

[Follow](#)



**Tom Sherwood**

@tomsherwo...

[Follow](#)

[Popular accounts](#) · [Find friends](#)

# Social Media: Advocacy & Media



**Rod Snyder**  
@RodSnyderWV



Maybe don't drink bottle of water at press conf when you're at fault for 300,000 people not having any.

#wvchemleak

pic.twitter.com/sSuYf0YjLI

@ Connect # Discover Me



RETWEETS 1,507 FAVORITES 554



#truth #wvchemleak #wvwatercrisis  
pic.twitter.com/Z5wGDBxwFt

Reply Retweet Favorite More



© 2014 markwofdesign.com

# Social Media: Pats on the Back





# Automated Messages

## Abbreviated Message Template— Boil Water Advisory

The [name of water system] is asking customers to boil tap water or use bottled water. For more information, go to [www.watersystemwebsite.org] or call [555-555-1111].

- 140 Characters will fit current shortest
- URL Shortener (goo.gl)

# Essential Information

- Who you are
- What action customers should take
- What event occurred and description
- Where it occurred
- When it occurred
- The expected duration
- Why it happened
- Who is affected
- Basic information on the water system
- Current actions
- Where to get more information

# Social Media & Water Supply Emergencies



- Direct to detailed information & other sources
- Track concerns & media
- Audiences
- Leverage existing partners
- Traditional channels
- Distraction
- Personnel
- Policies
- During events, not the time to start

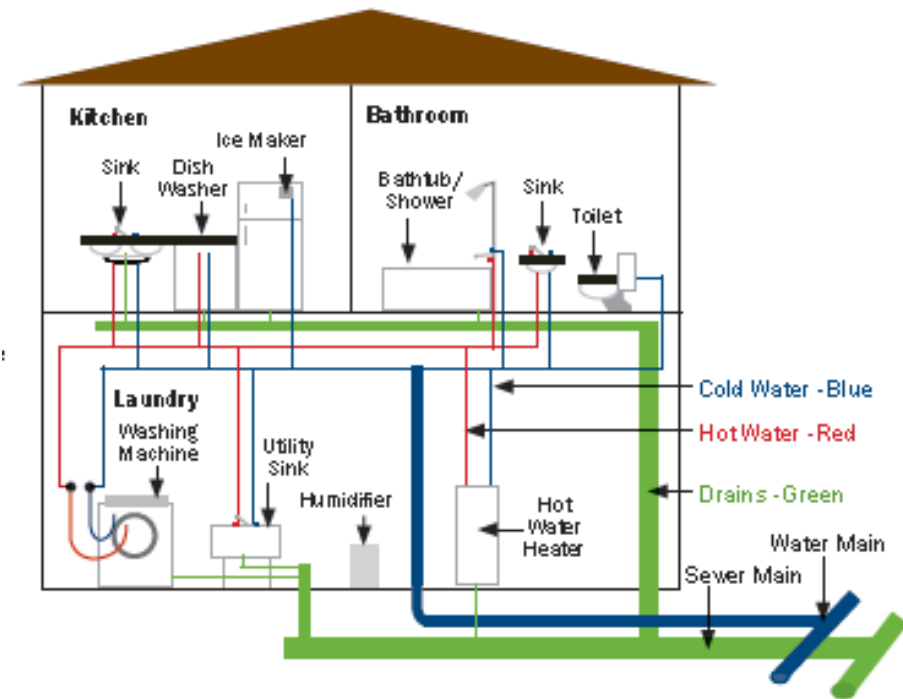


# Flushing

- How to
- Premise Plumbing
- Distribution System
- Follow-up

# Flushing Plan

- WV American, WV DHHS and the National Guard developed a phased plan to lift restrictions by zones.
- Zones were prioritized to get four major hospitals back to full operations.
- Crews conducted flushing throughout the distribution system.
- Residential customers given a credit of 1000 gallons.



# Flushing

## Deepening respect

- Louisiana *Naegleria fowleri* outbreak
- West Virginia Chemical Spill
- CDC Waterborne Disease Surveillance Report

## Evolving Considerations & Applications

- Lead and copper
- Backflow contamination
- Premise plumbing types
- Requests for protocols

*Premise plumbing is not a consideration in the  
Safe Drinking Water Act...*

# Toolbox Flushing FAQs

Do I need to clean out my faucets?

Yes. You should flush your faucets after the drinking water advisory.

- Turn on the main water valve.
- Turn on the cold water tap at all faucets and run the water until you feel a change in temperature (i.e. the water gets noticeably colder). This may take several minutes.
- Begin with the faucet that is highest up in your home or building and then open the other faucets one at a time moving from the highest floor to the lowest.

# Toolbox Flushing FAQs

## Do I need to clean appliances?

Yes. Read the owner's manual for directions to clean appliances such as water softeners and filter units.

## My refrigerator has a water dispenser/ice maker. Do I need to clean them?

Yes. Water dispensers and ice makers are connected to your water line. You need to flush and clean them. Follow the directions in the owner's manual or:

- Change the filter cartridges.
- Throw out ice.
- Flush the water dispenser for 3 to 5 minutes.
- Run the ice maker for 1 hour.
- Throw out all the ice.
- Wash and sanitize bin areas.

# NCR Water Systems Actions

## Audiences:

- Emergency Management Agencies
- Boards
- Public & Elected Officials
- Facility Managers
- Public Health agencies

## Updates:

- Source Water Plans
- Water Supply Emergency Plan

## Coordination & Communication

- Essential information check list
- Coordination Talking Points
- Sharing media inquiries
- CAO Primer, specific audiences
- Flushing protocols & communication
- Use the same information source on contaminants

Frame	Message	Examples
Preparedness	<p>We have invested resources in planning for and responding to events</p> <p>We are trained water professionals</p> <p>We are responding and responsive</p>	<p>We plan to ensure that we have plenty of high quality and safe drinking water.</p> <p>We are investigating the event and our labs are sampling to determine the contaminant.</p> <p>We have trained</p> <p>We are collaborating with state and local agencies to manage the situation</p>
Public Health	<p>Drinking water is the foundation of health communities</p> <p>Water professionals will respond to protect public health</p> <p>Wise Water Use</p> <p>The Value of Water</p> <p>    Natural &amp; Financial Resources</p> <p>Infrastructure Investment</p> <p>Watershed/water Resources</p>	<p>The safety and reliability of our drinking water is our primary concern.</p> <p>As water systems, we have an excellent track record of making sure that water stays safe to drink.</p> <p>I'm advising people to <b>use water wisely</b>.</p> <p>All of us are in this together for safe drinking water in the community, clean water in the environment.</p> <p>Our individual behaviors affect the health of our rivers and our drinking water supply.</p>



# How do we continue to improve water sector practice?

- Public Notification
- Public Information
- Public Communication
  - High-profile events upstream, neighboring,
  - Prepared for questions about your water system
  - Practice



# Improving Practice

- Customer & Community Perspective
- Tools
- Prepare for Inevitable
  - Contacts
  - Timing
  - Losing Control
- Learn from
  - The media
  - Water systems
- Opportunities
  - Small scale “Dry runs”
  - High profile events

*Domestic water supplies should protect the health and promote the well-being of individuals and communities.*

Advisory Committee, USPHS Drinking Water Standards, 1962.

# Thanks to:

MWCOG

Steve Bieber

Stuart Freudberg

Nicole Condon, Sarah Neiderer &  
Jonathan Reeves,

DC Water

Water System  
Advisory Group

Chuck Murray & Jeanne Bailey,

Fairfax Water

Tom Jacobus, Washington Aqueduct

Jim Neustadt, WSSC

# NCR Water Systems & Organizations

Arlington County

Fairfax Water

Frederick County

ICPRB

Loudon Water

Prince William Co Water Auth

City of Rockville

Virginia American Water

Washington Aqueduct

City of Manassas

Share Toolbox  
Comments:

Alan Roberson: [aroberson@awwa.org](mailto:aroberson@awwa.org)

Lisa Ragain: [ragain@aquav.net](mailto:ragain@aquav.net)

John Watson: [HealthyWater@CDC.gov](mailto:HealthyWater@CDC.gov)

Resources  
Referenced

CDC/AWWA

Drinking Water Advisory Communication Toolbox

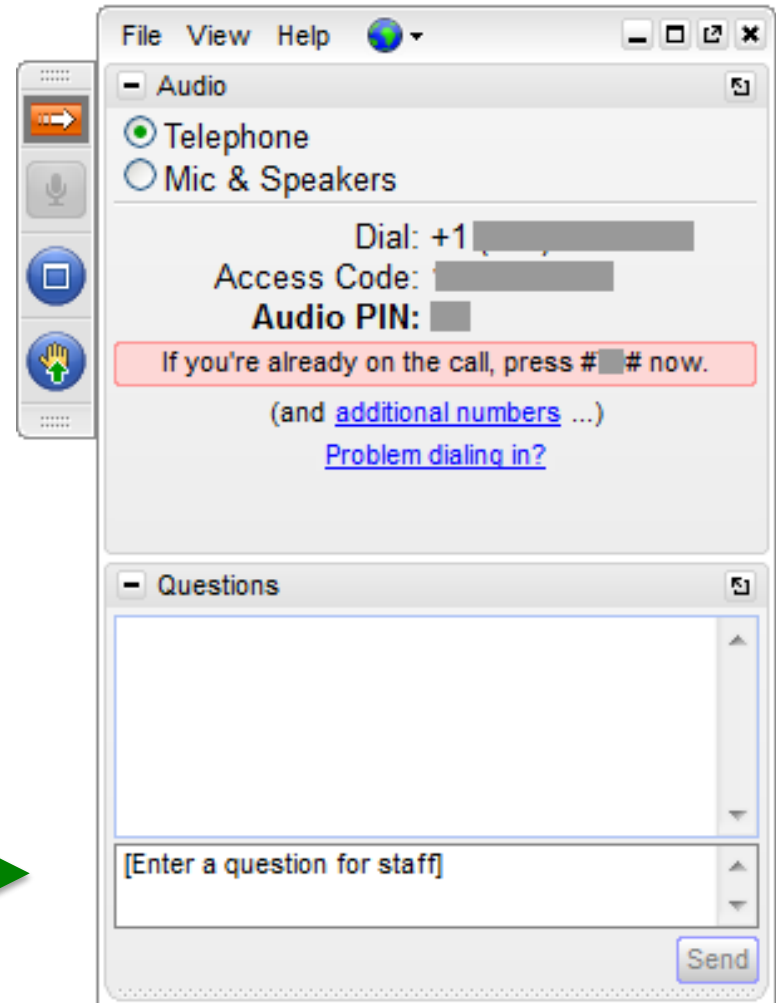
[cdc.gov/healthywater/emergency/dwa-comm-toolbox/index.html?s\\_cid=cs\\_001](http://cdc.gov/healthywater/emergency/dwa-comm-toolbox/index.html?s_cid=cs_001)

EPA/AWWA

Planning for Water Supply Emergencies

[http://cfpub.epa.gov/si/si\\_public\\_record\\_report.cfm?address=nhsrsrc/&dirEntryId=235197](http://cfpub.epa.gov/si/si_public_record_report.cfm?address=nhsrsrc/&dirEntryId=235197)

# Questions?



Type and send ----->

# Thank You

## WaterISAC Contact Information:

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