



PFAS: A Drinking Water Supplier Perspective

Christopher S. Crockett, Ph.D., P.E.
Chief Environmental Officer

August 13, 2018

Outline

- Introduction – How we got here
 - Public Reaction
 - Regulatory & Scientific Uncertainty
 - The EPA “Listening Session” Effect
 - Recommendations for Others
 - What is Aqua Doing?
-
- **IMPORTANT: ALL AQUA SOURCES AND WATER IS BELOW THE 70ppt HAL by EPA at all times**



Where We Serve

- **Illinois**
250,000 customers
- **Indiana**
75,000 customers
- **New Jersey**
175,000 customers
- **North Carolina**
282,000 customers
- **Ohio**
500,000 customers
- **Pennsylvania**
1,400,000 customers
- **Texas**
186,000 customers
- **Virginia**
80,000 customers



Aqua Overview



300 million kWh of electricity used to produce
90 billion gallons of water (annually)



3 million people served



12,500+ miles of water main



20 surface water filtration plants



860+ water storage tanks



3,000+ wells



183 wastewater treatment plants

\$3.4 Billion in Total Assets

Introduction: Recipe for Customer Confusion

2014-2016

- Aqua participated in UCMR 3 for PFAS monitoring
- Detection limit was 60ppt.
- EPA Short Term HAL was 400ppt + 200ppt
- No sources detected PFAS in Eastern Montgomery County



Introduction: Recipe for Customer Confusion

May 2016

- EPA issues Long Term HAL at 70ppt combined PFOA + PFOS
- Communities confused wells that were once “safe” are now way over the new “safe” limit
- Public confidence damaged
- New technology allows for detection limits of 2-5ppt.
- Everyone starts sampling due to public concern
- PFOA and PFOS start being detected everywhere in SEPA region
- More wells start going offline
- Becomes dedicated part of news cycle
- Military, state, and federal government action is slow or non existent.



Public Reaction

- The public does not understand why there is an allowable level of a chemical in their water.
- Public wants non detect or zero immediately
- Pitting water suppliers against one another
- Outrage with EPA, PADEP, Military, and federal/state agencies in general
- Has more questions than answers
- Believes they are the next “Flint”



Public Reaction

- Public meetings ensue
- HB 705 of 5ppt of PFOS/PFOA proposed
- Media attention begins
- DEP suggests anything detecting over 70ppt will be required to shut off/down
- Water suppliers begin shutting down wells near 70ppt in fear of DEP action and public outcry
- Communities demand posting of data routinely, overreacting to every small fluctuation in results.
- Communities begin race to the bottom for ND PFAS
- **May/June/July 2018 - EPA Listening Session and CDC Reports come out – Public Outrage Explodes in SEPA.**



Regulatory & Scientific Uncertainty

- EPA Health Advisory 70ppt
- June CDC report is perceived to suggest 7-11ppt
- CDC cannot explain the difference and stands by 70ppt HAL as protective.
- Harvard article states even 1ppt is bad is what public points to from Google search
- Tox data for other PFAS not available
- More CDC studies coming
- Detection limits will go down
- Creates a moving target for water suppliers



The EPA Listening Session Effect

- Worst timing ever – could not have created better conditions for public outrage if they tried.
- Release of perceived “withheld” CDC PFAS Tox report.
- EPA starts listening sessions in affected communities
- Regulatory agencies don’t have any answers or actions
- Regulatory agencies can’t explain the June CDC report recommendations
- Issue now explodes in regions and media/social media attention amplifies public concerns
- Water suppliers left putting out the fire created by EPA
- Communities overreacting and panicking





AQUASM

What is Aqua Doing?

Aqua's PFAS Actions are based on the following areas:

- Monitoring
 - Public communication
 - Treatment Optimization
 - Treatment Installation
1. Aqua has moved below 70ppt HAL to be protective of its customers.
 2. Starting with sources at highest concentrations addressing and lowering PFAS concentrations until EPA and PADEP develop a regulatory limit.



- **IMPORTANT: ALL AQUA SOURCES AND WATER IS BELOW THE 70ppt HAL by EPA at all times**

What's Aqua Doing?

Since 2016 Aqua has been involved and acting

Developed in house testing \$400,000 LC/MS

Certified in PA/NJ

Ran over 1,100 samples in 2017

Post data and information on www.Waterfacts.com

Hosted meetings and calls for public and public officials

Attended EPA PFAS Summit and events

Optimizing PAC at Neshaminy WTP

Installed GAC on two wells & designing for two more



Recommendations for Others

Before you test know what you are going to do if you detect PFAS

How will you share the information?

What will you do if its over 70ppt?

What will you do if its detected?

How will you respond to customer requests to make it Non Detect?

Who are your partners in speaking to the community?

How will you pay for all the testing and treatment?



Acknowledgements

- Aqua Team
- Chuck Hertz, Ph.D.
- Visit www.waterfacts.com
- Contact me at cscrockett@aquaamerica.com





Thank You For Listening!

