



# Welcome to the PFAS Community Stakeholder Meeting

*EPA held a National Leadership Summit in Washington, D.C. May 22-23, 2018, that brought together federal, state, tribal and local partners.*

1. EPA will initiate steps to evaluate the need for a maximum contaminant level (MCL) for PFOA and PFOS. We will convene our federal partners and examine everything we know about PFOA and PFOS in drinking water.
2. EPA is beginning the necessary steps to propose designating PFOA and PFOS as “hazardous substances” through one of the available statutory mechanisms, including potentially CERCLA Section 102.
3. EPA is currently developing groundwater cleanup recommendations for PFOA and PFOS at contaminated sites and will complete this task by fall of this year.
4. EPA is taking action in close collaboration with our federal and state partners to develop toxicity values for GenX and PFBS by this summer.

# Addressing PFAS in Colorado

August 7, 2018



# PFAS in Colorado

- Three locations with PFAS.
- Close collaboration between the EPA, state, local health department, water systems and other organizations to address these situations and reduce exposure.



# 2016 - El Paso County

- Issue identified after EPA's Unregulated Contaminant Monitoring Rule testing.
- Impacts included - Public drinking water systems and private wells.
- State role - provided funding for sampling, technical and communications assistance.
- Other actions - developed site specific groundwater standard, on-going environmental investigation, facilitated funding and mitigation measure.

# 2018 - Boulder County

- Sugarloaf Fire District wells affected in mountains west of Boulder.
- No public drinking water systems affected.
- State role - provide funding for sampling, technical and communications assistance.

# 2018 - Adams County

- South Adams County Water and Sanitation District wells in Commerce City affected.
- State role - provide funding for additional sampling, technical and communications assistance plus source investigation.

# State strategies

- Developed site-specific groundwater quality standard of 70 ppt for combined PFOA/PFOS in El Paso County area.
- PFOA and PFOS listed as hazardous constituents in hazardous waste regulation enables more sampling at other cleanup sites.
- Currently assessing possible statewide strategies and resources to address PFAS more broadly in Colorado.

# Questions

[www.colorado.gov/cdphe/pfcs](http://www.colorado.gov/cdphe/pfcs)

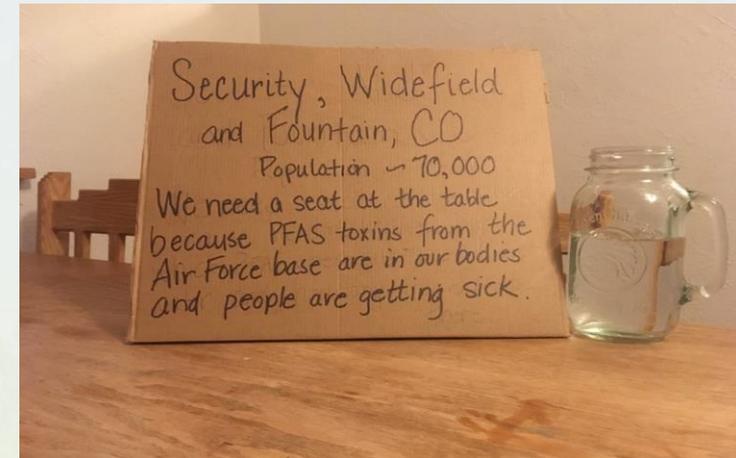


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**Clean Water**  
Coalition

# PFAS Contamination Community Concerns

El Paso County, Colorado

## Contamination Without Representation



# Our Fountain Valley Home

- Over 70,000+ residents
- military and civilians
- 4 water districts and private wells
- multiple types of governmental jurisdictions
- We all want a safe place to live



# It's Not OK, We are still in danger!

- We are told by our water districts our water is safe
- We say: “Define Safe” MCL & Testing Equipment
- We have been drinking PFAS contaminated water since the 1970's
- It remains in our bodies for approx. 8+ years
- DoD acknowledges health effect
- We have a significant increase in cancers



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# March 2018 Defense Department Congressional Report

## **Addressing Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA)**

**Maureen Sullivan**

**Deputy Assistant Secretary of Defense  
(Environment, Safety & Occupational Health)**

**March 2018**

### **water, and grease**

- Examples include: Teflon® cookware, waterproofing fabric and coating on fast food wrappers

**Limited human studies show PFOS/PFOA may be associated with developmental delays in fetuses & children; decreased fertility; increased cholesterol; changes to the immune system; increased uric acid levels; changes in liver enzymes; and prostate, kidney, and testicular cancer**

**In the 1970's DoD began using a firefighting foam (aqueous film forming foam –AFFF), which contained PFOS to extinguish petroleum fires**

- Some AFFF formulations may also contain PFOA

**In May 2000 the primary American manufacturers began phasing out the production of PFOS/PFOA related products**

# Communication Concerns & Challenges

- We, the citizens, have been denied a stakeholder status for critical decisions about our PFAS exposure.
- Inconsistent messages from various government agencies.
- Government agencies have minimized or downplayed health risks from PFAS. So our water districts can say we are safe.
- Too many elected officials have minimized or downplayed health risks from PFAS.
- Lack of full public disclosure of all PFAS test results, not just a few PFAS like PFOA & PFOS.



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# A Closer Look at Our PFAS Levels

- According to the Defense Department, El Paso County's highest off-base drinking water level was 7,910 parts per trillion, making it the highest PFAS drinking water level in the United States.
- Widefield, Security, Fountain, & Stratmoor Hills have all had drinking water wells testing above the EPA's limit 70 ppt.
- DoD says 44 of the 88, off-base drinking water sources tested here in El Paso County had PFAS levels exceeding the EPA's limit of 70 ppt.
- A Peterson Air Force Base groundwater well tested at 88,000 ppt.



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# Our PFAS Contamination is Unique

- Peterson Air Force Base admitted to dumping toxic water laced with PFAS into the environment
- Decades of PFAS contamination starting in 1970
- Peterson AFB remains an active duty base
- With a constantly moving military population how many more than our 70,000 current residents are affected?
- What about people who have moved from the area?
- What about our current military, and veterans?



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# Inconsistent State and Federal Responses

- CDPHE says exposed residents don't need free PFAS blood-level
  - Colorado Department of Public Health and Environment
- States offering FREE testing: New York, New Hampshire, Vermont, and Pennsylvania.
- Colorado does not offer its exposed residents free PFAS biomonitoring (medical monitoring for long-term effects), like NY.
- No enforceable Colorado statewide or federal PFAS drinking water limits
- New Jersey (14 ppt) & Vermont (20 ppt) have set state levels



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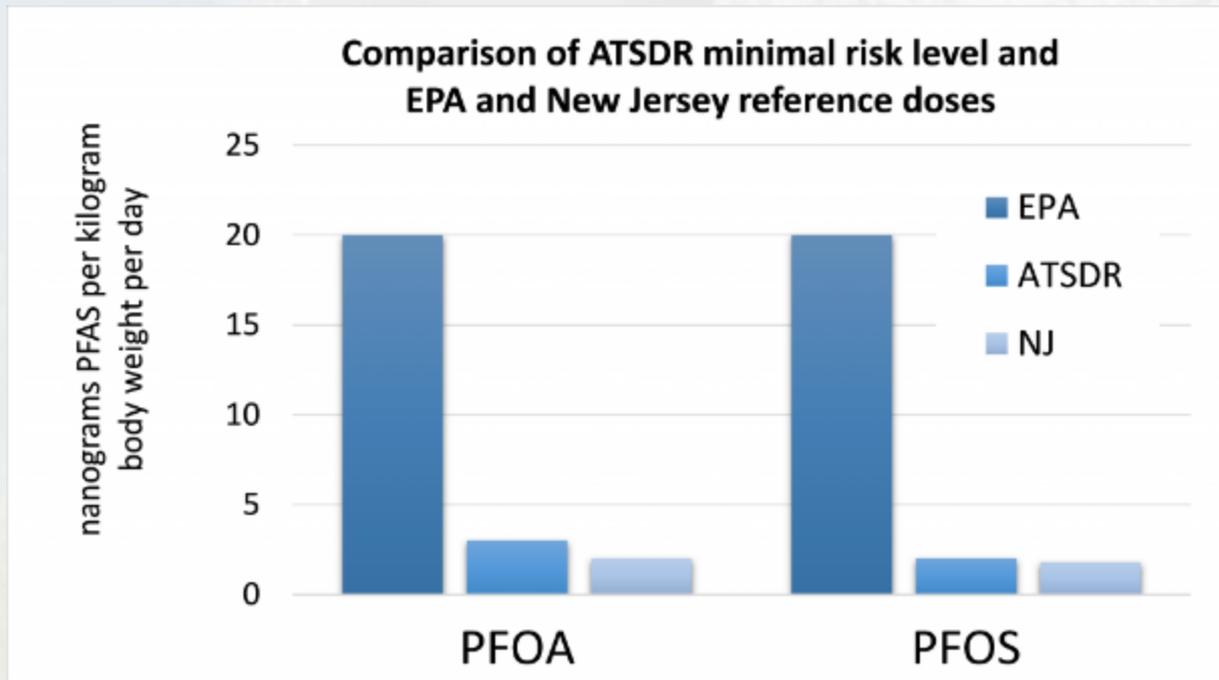
## Continued: Inconsistent State and Federal Responses

- No statewide or federal responses for private/public wells less than 70 parts per trillion (ppt).
- In 1991, Army Corp of Engineers told Ft Carson, to stop using AFFF & must be replaced with nonhazardous substitute
- In 1997, Ft Carson declared PFAS hazardous & dangerous to the environment, & shouldn't flow untreated into ecosystems nor sewage



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# EPA vs ATSDR vs New Jersey What about our community?



# Lack of Transparency = Lack of Trust which level is “safe”?

SECURITY

- ATSDR PFAS Toxicology report was withheld for months from the public.
- Levels of “safe”
  - before EPA advisory: since the 1970’s
    - 88, 000 (most contaminated area)
    - 7,900 ppt
    - 800 ppt and other various levels in our community
- EPA advisory 70 ppt in 2016
- ATSDR Toxicology 10 ppt
- Science based research = a trace of PFAS is a cancer causing chemical



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# Financial Challenges from our PFAS Exposure

- Communities and Taxpayers should not be responsible for the costs of fixing contamination, clean water, blood-level testing, or medical monitoring: MAKE POLLUTERS PAY!
- Many PFAS exposed residents are now burdened with costs of private well testing, bottled water, blood-level testing, expensive home filters, & PFAS-related medical care.
- A large portion of us are still buying bottled water / lack of trust
- Chronic illness costs are devastating to family finances.
- Decreased property values.



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# Our Recommendations:

- Regulate PFAS as a class and not every individual chain separate,
  - there are over 3,000 chains
- Stop producing all PFAS chemicals
- Make a national enforceable MCL of 1 ppt.
- Include waste water for data analysis
- Set a January 1<sup>st</sup>, 2020 deadline date for all the above.
- Prioritize public health, NOT the chemical industry
  - EPA mission statement



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# Mandate a Seat at the Stake Holder Table

We are multiple voices of our communities

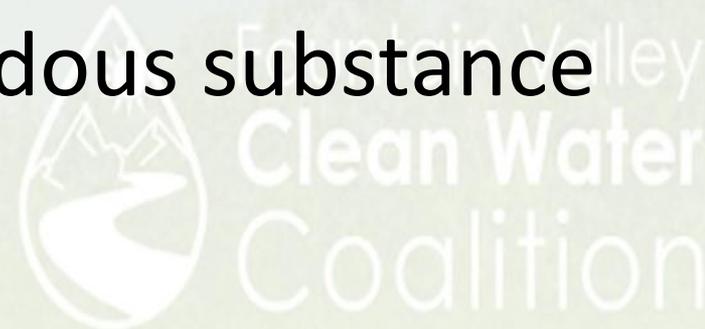
# Make a national enforceable MCL of 1 ppt

Include all PFAS as a class, not individually

# Biomedical Monitoring for all people

Those who live here now, and in the past

# Classify all PFAS as a hazardous substance



SECURITY

Thank you EPA for  
coming to our  
community,  
now is the time to  
support us.



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# PFAS Community Engagement Meeting

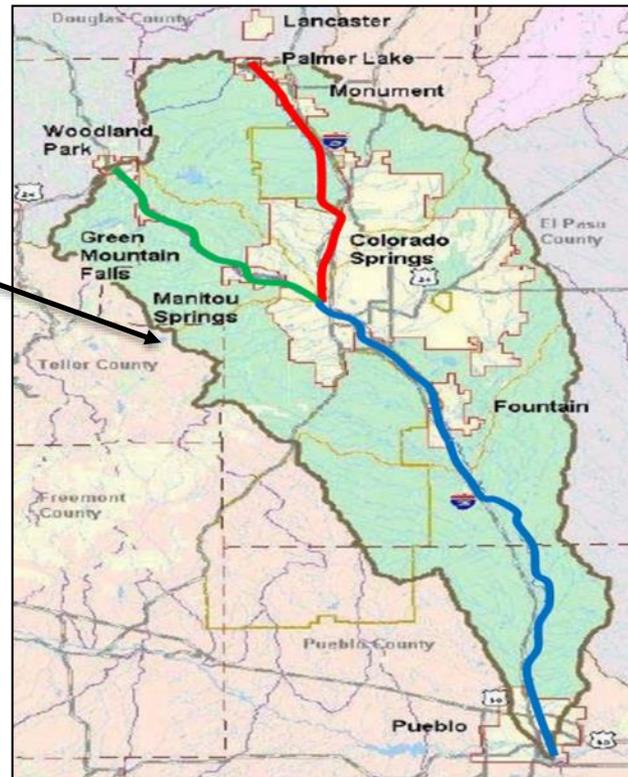
Sierra Club Fountain Creek Water  
Sentinels



Our mission is to protect, restore,  
and improve the Fountain Creek  
Watershed

# Fountain Creek Watershed

All the area shaded in green is the Fountain Creek Watershed



# Fountain Creek Water Sentinels: Community Stakeholders

Our members and volunteers live and work in the affected communities.



# Community Challenges

- ▶ 3 out of 4 contaminated areas are unincorporated communities.
- ▶ There is no city council, no mayor to advocate locally.
- ▶ Limited political representation.
- ▶ The community has not been treated as critical stakeholders.
- ▶ There has been limited support for needed blood testing and biomedical monitoring.
- ▶ There are 4 different water districts with different treatment for PFOS/PFOA Contamination.

# What is "Safe" Water?

Reporting Entity	Drinking Water Action	Compound	Level (PPT)
VERMONT	Groundwater Quality Standards	Sum of PFOA PFOS PFHxS PFHpA PFNA	20
MINNESOTA	Health Based Guidance for Water	Sum of PFOA and PFOS	62
NEW JERSEY	Regulation	PFNA PFOA	13 14
EPA	Health Advisory	PFOS PFOA	70
HHS	Recommendation from ATSDR Study	PFOS PFOA	10

# Granular Activated Carbon (GAC) Filtration

Is our water safe?

- ▶ Pass-through concerns
- ▶ Disposal concerns



# Aquatic Life and Animals in the Fountain Creek Watershed



# Backyard gardens/Urban Farms



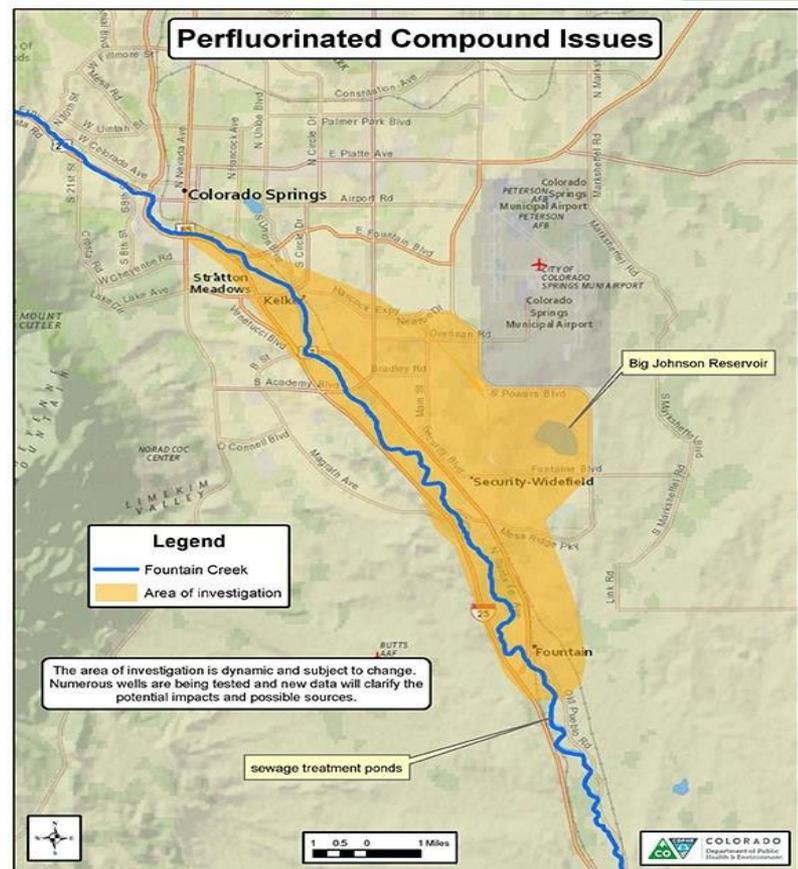
## Voices From the Community

- ▶ Transparency about the toxicity of PFAS chemicals.
- ▶ Consideration of lifestyle i.e. urban farming, wildlife and aquatic species impacts.
- ▶ Notification of military families.
- ▶ Consistent treatment and remediation of contaminated water.
- ▶ Set maximum PFAS contaminant levels for drinking and ground water.
- ▶ Regulate PFAS as a family of chemicals.

## The Widefield Aquifer Is Still Contaminated

Water districts are filtering or have alternate water supplies but the water in the aquifer is still contaminated.

The problem isn't going away.



Source: Colorado Department of Public Health and Environment

# Who Is Going To Pay?

- ▶ Remediation is expensive.
- ▶ Water Districts who must comply with any new EPA regulations will have difficulty paying for on-going water treatment.
- ▶ Customers should not have to pay for a problem created by industry.
- ▶ Make polluters pay!

# We Need Action Now!

EPA says	Community needs
Evaluate	Regulate
Propose	Enforce
Recommend	Remediate

# Safe Drinking Water Act: SDWA

## SDWA

*The SDWA authorizes the EPA to set national health-based standards for drinking water for man-made contaminants.*



## Clean Water Act

- ▶ Section 311 Hazardous Substance List
- ▶ Section 307 Toxic Pollutant List



# Our Community. Our Watershed.

## The EPA's Mission:

“Our mission is to protect human health and the environment.”



# SECURITY WATER DISTRICT

EPA PFAS Community Event

August 7, 2018

Roy E. Heald  
General Manager

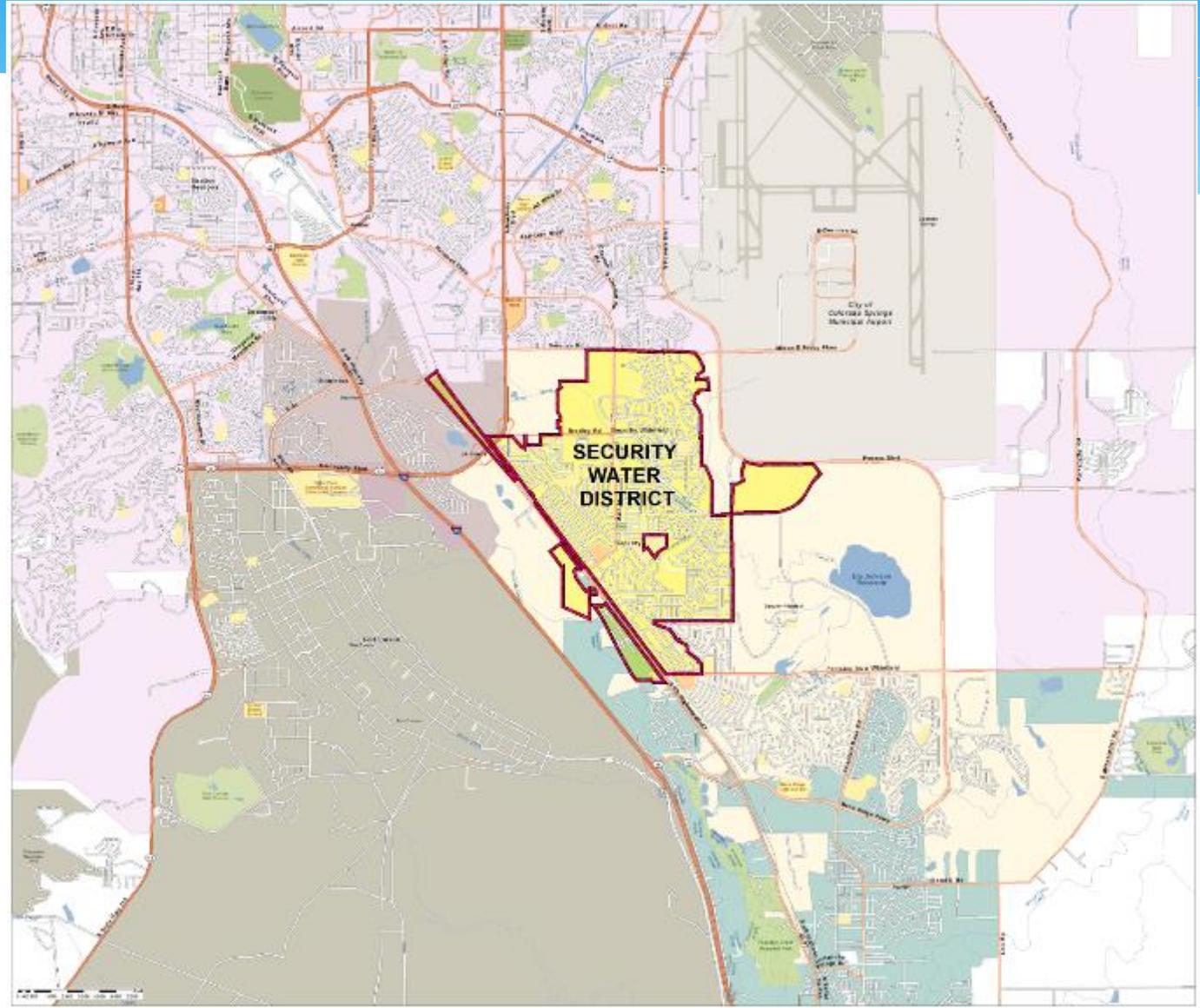
Office: 719-392-3475

Email: [r.heald@securitywsd.com](mailto:r.heald@securitywsd.com)

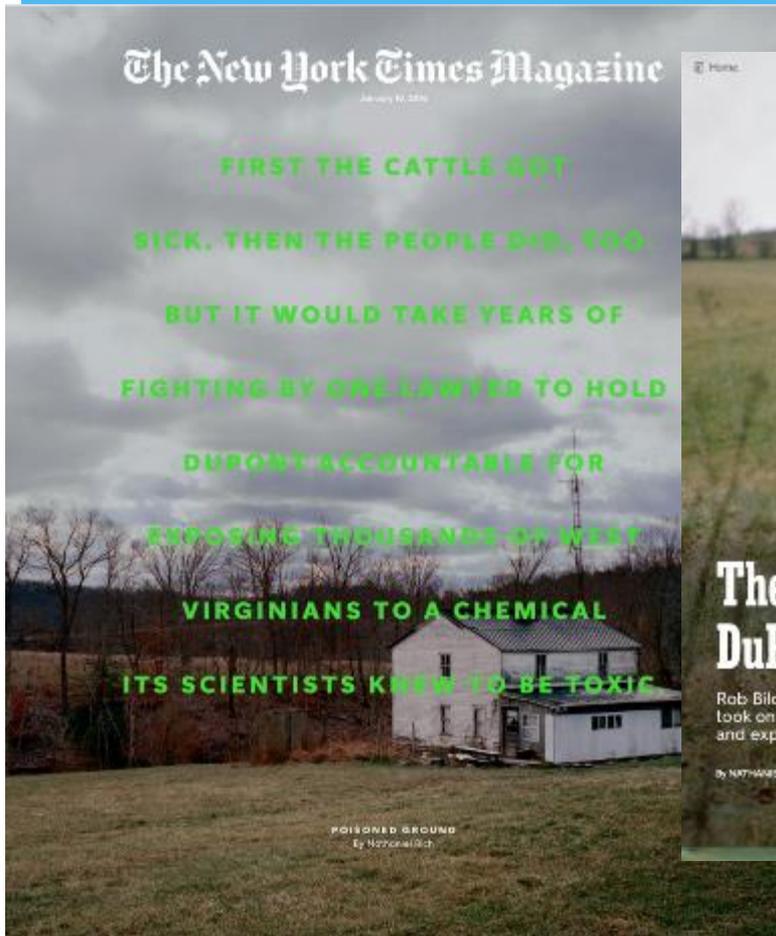


# About the District

- \* Formed in 1954
- \* Title 32 Special District
- \* Serve 19,000 customers
- \* We have 10 employees that manage all facets of the water systems



# PFC Story Breaks Nationally



# Public Outreach/Communications

- \* Media Consultant hired for strategy and implementation support
  - \* Messages
  - \* FAQs
  - \* Media messaging
  - \* Social media presence
  - \* Coordination with regulatory Public Information Officers (PIOs)
  - \* Open Houses



## Security Water District Frequently Asked Question about Water Quality

### PFOA/PFOS

#### What kind of contamination was found in the water?

Perfluoroalkyls are a family of human-made chemicals that do not occur naturally in the environment. The two Perfluoroalkyls, which were made in the largest quantities in the U.S., are PFOA (perfluorooctanoic acid) and PFOS (perfluorooctane sulfonic acid). These compounds are found in a variety of products, such as firefighting foams, coating additives, surface protection products such as carpets and clothing, and in the commercial products Teflon™ and Scotchgard®. For most people, food is the primary

# Short-Term Solutions

- \* Curtailed groundwater use by maximizing use of surface water resources (Fountain Valley Authority and Southern Delivery System).
- \* Voluntary outdoor watering restrictions.

## SECURITY WATER OUTDOOR WATERING RESTRICTIONS

April 1, 2018 to October 1, 2018



See reverse side for conservation tips.

### READ THIS AND SAVE FOR FUTURE REFERENCE

We are asking for our customers to follow voluntary watering restrictions from April 1, 2018 to October 1, 2018. While these rules are voluntary, it will be critical that all customers cooperate to ensure we have adequate water to meet our high demand water months.

From April 1, 2018 through October 1, 2018, we are asking all customers to:

- Water no more than three times per week.
- **Please follow this simple watering schedule.** Homes/businesses with addresses ending in **even** numbers may water on Monday, Wednesday and Saturdays. Homes/businesses with addresses ending in **odd** numbers may water on Tuesday, Thursday and Sunday. All customers should avoid watering on Fridays.

MON	TUES	WED	THUR	FRI	SAT	SUN
EVEN	ODD	EVEN	ODD	NO WATERING	EVEN	ODD

Use only the water you need. Conserve water both indoors and outdoors. More than 50 percent of water use goes to water yards.

# Interim Solutions

- \* Added pipeline interconnections to provide better circulation of surface water in Zone 1
- \* Added infrastructure to increase the ability to purchase surface water from Colorado Springs
- \* All at a cost of millions of dollars to District residents and customers

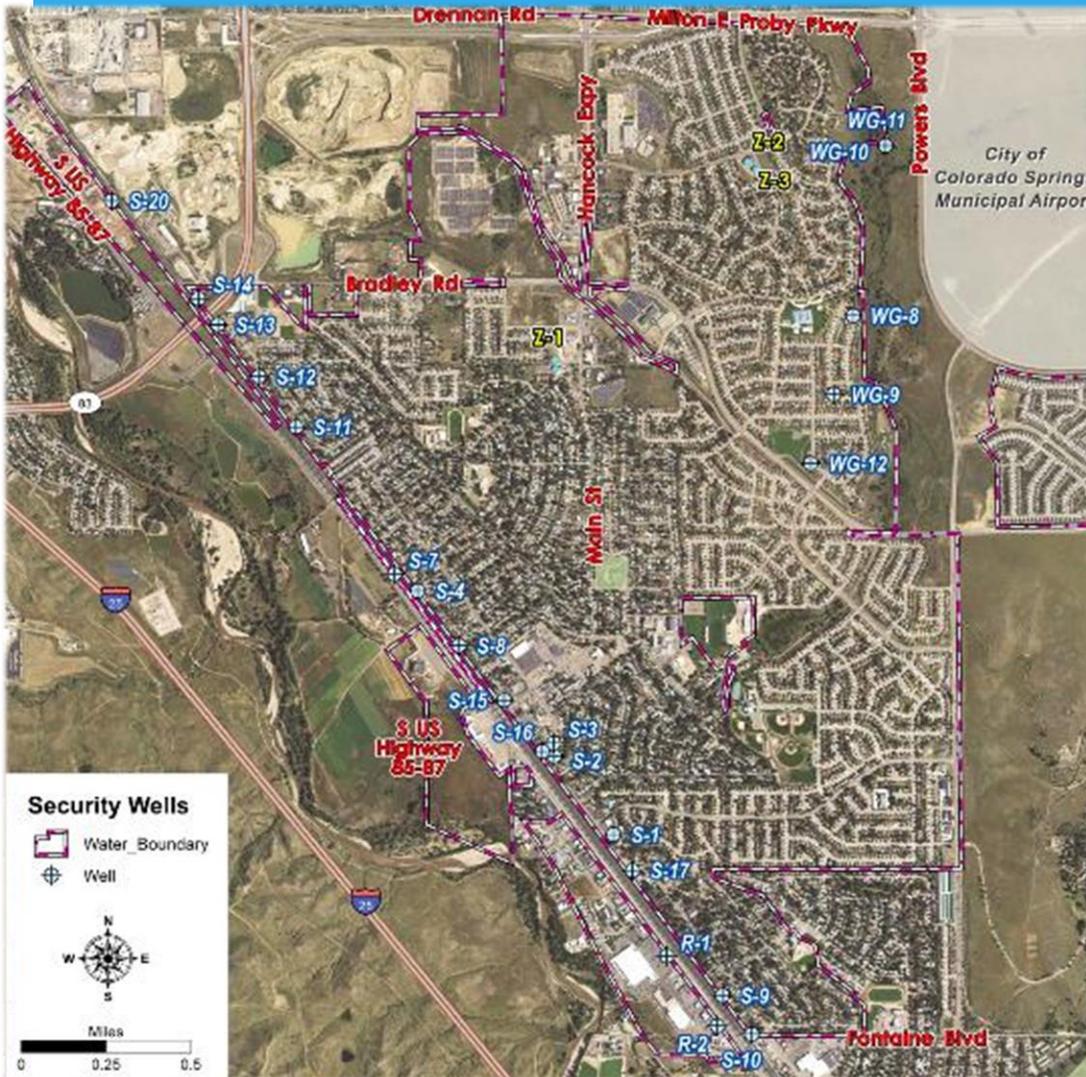


# Long-term Solutions

- \* Maintain ability to purchase additional surface water from Colorado Springs
- \* Treatment of groundwater resources
- \* Seek reimbursement of costs from the Air Force



# Treatment Solution



Air Force plans to award contract by September 30, 2018, to construct a groundwater treatment system by December 31, 2020.





**Widefield**  
Water and Sanitation District

The logo features a stylized mountain range in shades of blue and green above the text. The word "Widefield" is in a large, bold, black sans-serif font, and "Water and Sanitation District" is in a smaller, black sans-serif font below it. The text is partially enclosed by a blue and green swoosh.

# Timeline to Treatment

EPA Lowers  
HAL

Board  
Approves  
Treatment  
Plant

Pilot Study  
Initiated

Vessels Under  
Contract

50% Plant  
Design

Full Scale  
Construction  
Contract

Media  
Ordered

Plant Start Up

•5/19/2016

•6/21/2016

•10/24/2016

•1/6/2017

•1/15/2017

•2/9/2017

•4/17/2017

•5/4/2017

•2/18/2016

•6/21/2016

•10/24/2016

•1/6/2017

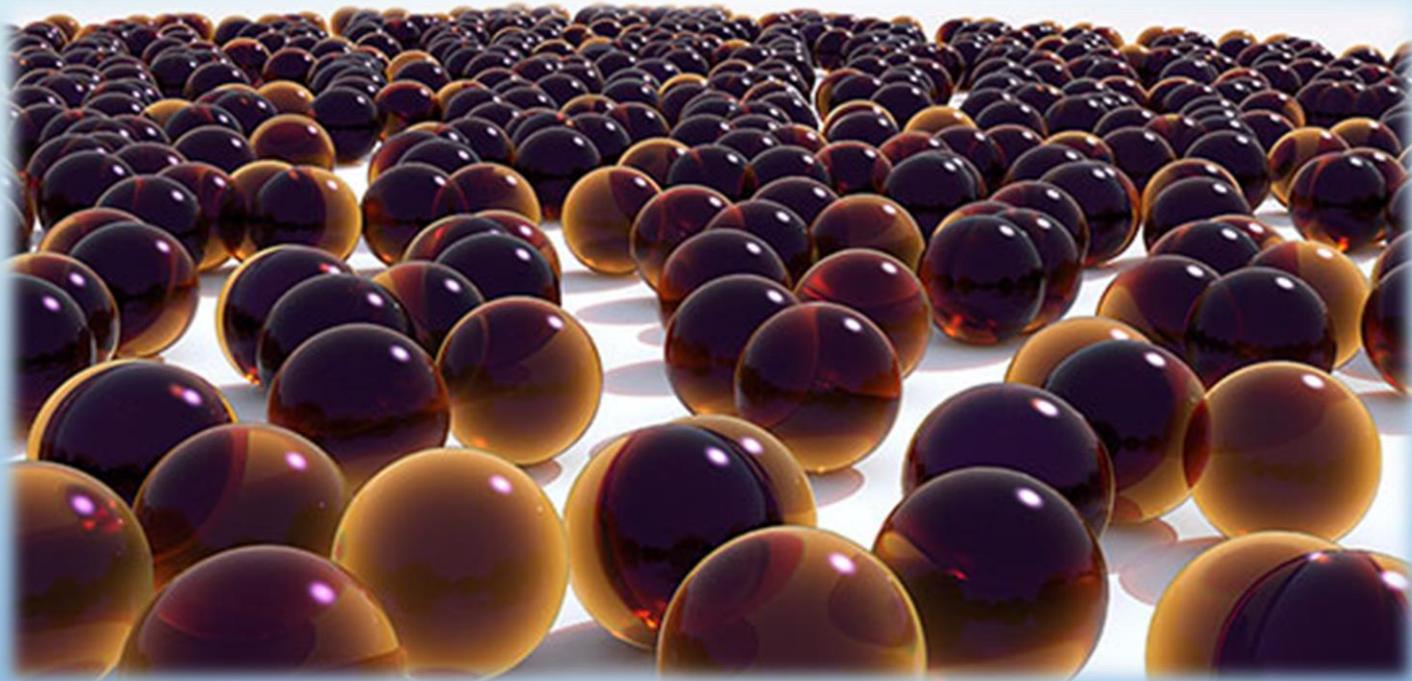
•1/15/2017

•2/9/2017

•4/17/2017

•5/4/2017

# ION EXCHANGE RESIN TECHNOLOGY



# 1<sup>ST</sup> FULL SCALE IX TREATMENT PLANT FOR PFC'S IN AMERICA!



# ON GOING EFFORTS WITH USAF

- ENVIRONMENTAL SERVICES AGREEMENT; AIR FORCE PAYS FOR ALL OPERATIONAL COSTS ASSOCIATED WITH THE SOUTHMOOR WATER TREATMENT PLANT
- AIR FORCE'S 2016 RAPID RESPONSE FUNDS TO PIPE TWO ADDITIONAL GROUNDWATER WELLS TO THE SOUTHMOOR WATER TREATMENT PLANT
- PUBLIC WORKS STATEMENT TO OBTAIN A FEDERAL CONTRACT FOR THE DESIGN AND CONSTRUCTION OF ANOTHER ION EXCHANGE TREATMENT PLANT

# IN CONCLUSION...

- WWSD HAS TEMPORARILY FIXED THE PROBLEM, BUT HAS A LONG WAY UNTIL ENTIRE GROUNDWATER SOURCE IS AVAILABLE
- WWSD BELIEVES THE EPA SHOULD AVOID REGULATION THROUGH GUIDANCE (HEALTH ADVISORY'S)
- BY NOT CREATING A REGULATION FOR PFOA/PFOS, AND BY NOT SETTING AN ACTUAL MAXIMUM CONTAMINANT LEVEL, PUBLIC WATER SYSTEMS NEED TO RELY ON RATE PAYERS AND THE ARMY CORPS OF ENGINEERS TO EFFECTIVELY MITIGATE THESE CONTAMINANTS
- HEALTH ADVISORY'S HAVE THE SAME EFFECT AS MCL'S WITH NONE OF THE SUPPORT
- WWSD'S PRIMARY GOAL IS TO RETURN TO PRE-PFC PUMPING CAPACITY



Thank You!



The background of the slide is a light blue gradient with several realistic water droplets of various sizes scattered across it. The droplets have highlights and shadows, giving them a three-dimensional appearance.

# STRATMOOR HILLS WATER DISTRICT

COMMUNITY OUTREACH EVENT

KIRK MEDINA, DISTRICT MANAGER

[KIRK@STRATMOORHILLSWATER.ORG](mailto:KIRK@STRATMOORHILLSWATER.ORG)

AUGUST 7, 2018

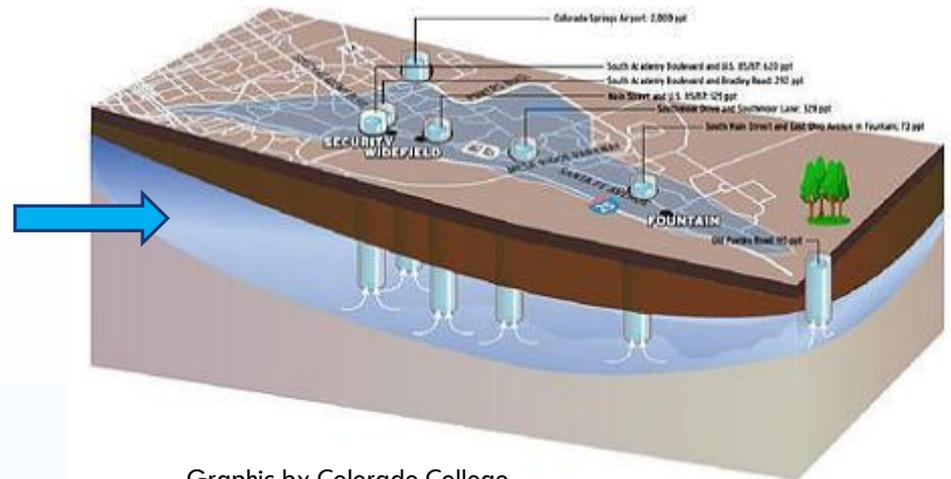
# STRATMOOR HILLS WATER DISTRICT

## WIDEFIELD AQUIFER

Stratmoor Hills **seasonally** draws from the North end of the Widefield aquifer

PFC's are typically below the lowered Health Advisory Level of 70 ppt

Treatment provided to ensure no exposure to customers



# STRATMOOR HILLS WATER DISTRICT

## ION EXCHANGE TREATMENT ADDED IN 2017

District worked with the Air Force to install Ion Exchange Vessels

Finished water PFC levels below detection limit of 2 parts per trillion

Facility still needed to house treatment equipment





# STRATMOOR HILLS WATER DISTRICT

## IN SUMMARY:

- DISTRICT WILL CONTINUE TO PROVIDE TREATMENT TO REMOVE PFCS FROM GROUNDWATER
- REMEDIATION COULD BE YEARS OUT
- CENTRALIZED TREATMENT FACILITY PLANNED
- STRATMOOR HILLS SHOULD BE INCLUDED IN ANY ASSISTANCE PROVIDED

Thank You!



# City of Fountain PFC Timeline

- October 2015 – Stopped using groundwater
- January 2016 – PFC Detection Announced
- May 2016 – HAL established
- June 2016 – Began pilot testing
- August 2016 – Began work with AFCEC on addressing immediate concern
- 2017 – Two sets of filters delivered



## Timeline - Continued

- October 2017 – Trip to Pentagon
- March 2018 – MOU and ESA Signed
- June 2018 – First set of filters in operation
- August 2018 – Second Set of Filters in Operation
- May 2020 – Comprehensive Groundwater Treatment Plant in operation

