Water Resources Council (WRC)

October 15, 2025

North Central Texas Council of Governments
Environment & Development

www.nctcog.org/WaterResources

Housekeeping Items

- Please remember to sign in, take an agenda & past meeting summary.
- Bathrooms, Emergency Exits, and Safety Procedures
- Thank you all for attending!

Welcome and Introductions

- Meeting attendees will introduce themselves.
- Welcome to our new members:
  - Taylor Alvarez, City of Watauga
  - Stephanie Griffin, Halff
  - Katelyn Hearon, City of Lewisville
  - Nosa Irenumaagho, City of Dallas
  - Michael Kivlan, Mustang SUD
  - David Phan, City of Dallas
  - Robert Sauceda, City of Hurst
- Welcome guests.
- Thank you all for attending!

Action Item

Meeting Summary

- The July 9, 2025 meeting summary will be presented for approval.

Action Item

Approval of the Dallas-Fort Worth Air Quality Improvement Plan- Comprehensive Action Plan (DFW AQIP-CAP) Water and Wastewater Elements.

- NCTCOG staff will seek the WRC's approval of the water and wastewater elements of DFW AQIP-CAP.

North Central Texas Council of Governments

DALLAS-FORT WORTH AIR QUALITY IMPROVEMENT PLAN

Funded through the Environmental Protection Agency's Climate Pollution Reduction Grants

Dallas-Fort Worth Air Quality Improvement Plan

Deliverable 1

Priority Action Plan (PAP)- Submitted March 1, 2024;
www.publicinput.com/dfwAQIP

Requirements:

- Develop Plan to Improve Air Quality Through 2030
- Basic Carbon Dioxide Equivalent (CO_2e) Emissions Inventory (EI)
- Measures (*i.e. projects, programs, or policies*)
- Analysis
- Review of Authority to Implement

Deliverable 2

Comprehensive Action Plan (CAP)-Due December 1, 2025

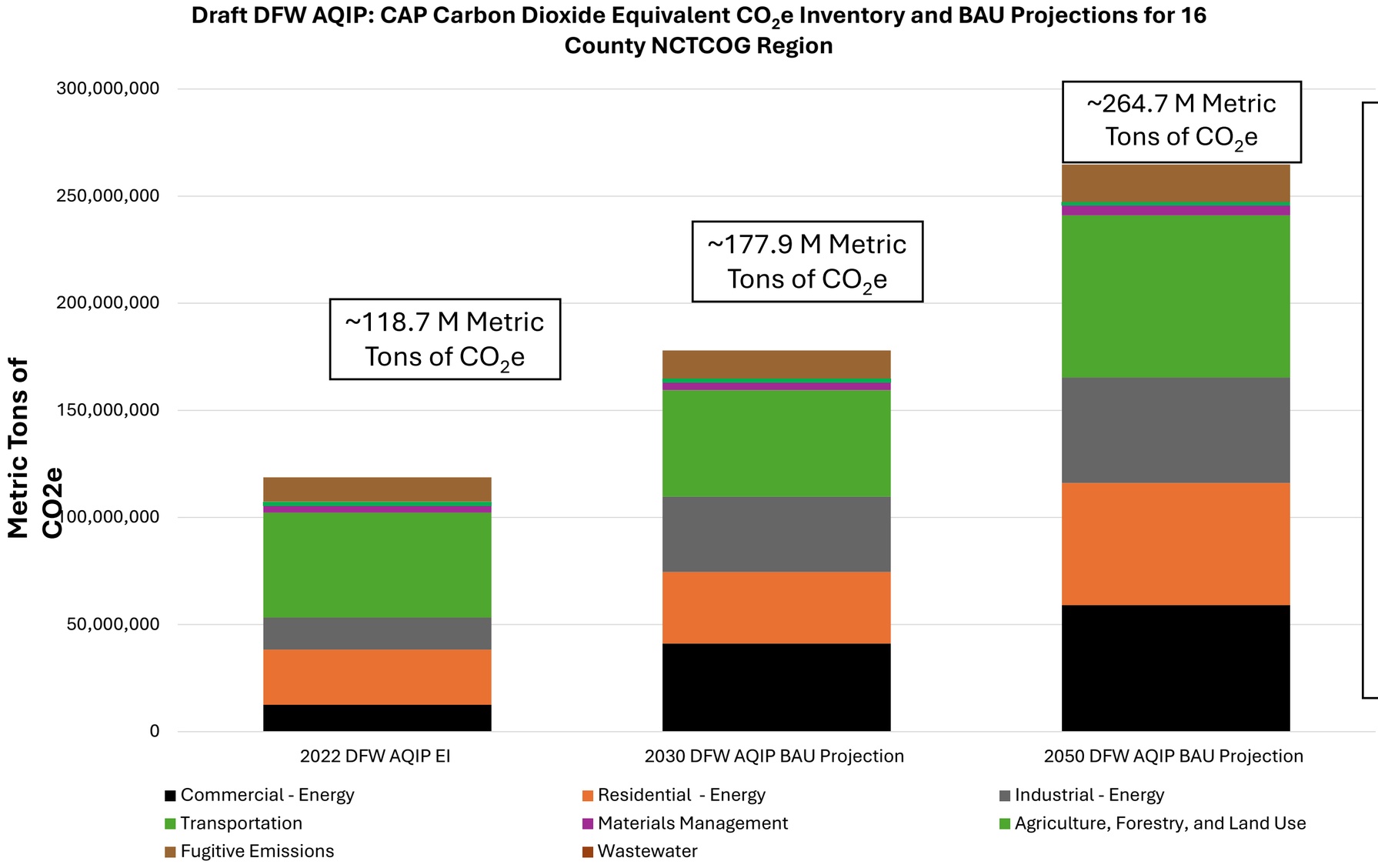
Requirements:

- Develop Plan to Improve Air Quality Through **2050**
- All PAP Requirements
- **Projections and Targets**
- Benefits Analysis
- Funding Analysis
- Workforce Analysis

The DFW AQIP development, including the PAP and CAP, is supported by funding from the Environmental Protection Agency's (EPA) Climate Pollution Reduction Grants (CPRG): Planning Grants

Emissions Inventory and BAU Projections

DRAFT



Source: NCTCOG

Key Takeaways:

Energy Sector (Commercial, Residential, and Industrial) is largest emitter of CO_2e in DFW; **45%** in 2022 and **62%** in 2030

Transportation Sector remains second largest; **41%** in 2022, **28%** in 2030

Growth Due to:

- **4.8M** increase in population by 2050
- **169M** vehicle miles traveled per day increase by 2050
- **13%** Average Annual Growth in ERCOT Annual Energy Forecast from 2024 to 2030 primarily due to addition of large loads*

***Source:** www.ercot.com/gridinfo/load/forecast **- >ERCOT 2025 Long-Term Forecast Report**

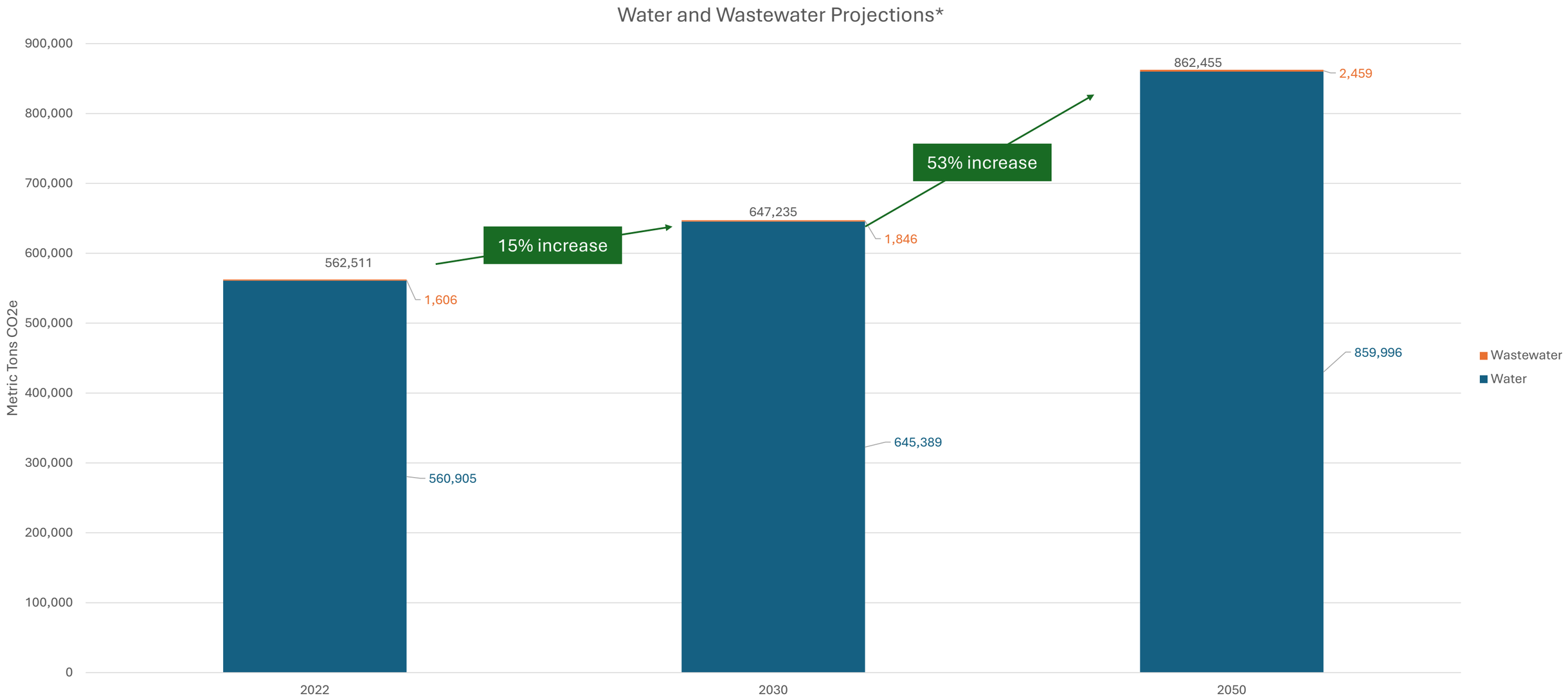
Emissions Inventory and BAU Projections

Sector	2022 DFW AQIP EI (Metric Tons of CO_2e)	2030 DFW AQIP BAU Projection (Metric Tons of CO_2e)	2022- 2030 % Change	2050 DFW AQIP BAU Projection (Metric Tons of CO_2e)	2022- 2050 % Change
Commercial- Energy	12,532,114	41,190,542	229%	59,027,365	371%
Residential- Energy	25,777,875	33,381,679	29%	57,078,515	121%
Industrial – Energy	14,974,254	35,119,462	135%	49,228,999	229%
Transportation	48,933,979	49,736,178	2%	75,717,006	55%
Materials Management	3,193,580	3,618,196	13%	4,663,715	46%
Agriculture, Forestry, Land Use	1,903,646	1,778,595	-7%	1,518,868	-20%
Fugitive Emissions	11,379,084	13,092,940	15%	17,446,668	53%
Wastewater	1,606	1,846	15%	2,459	53%

DRAFT

Source: NCTCOG

Emissions Inventory and BAU Projections



*For comparison purposes only; majority of water emissions are captured within energy sector

DRAFT

Source: NCTCOG

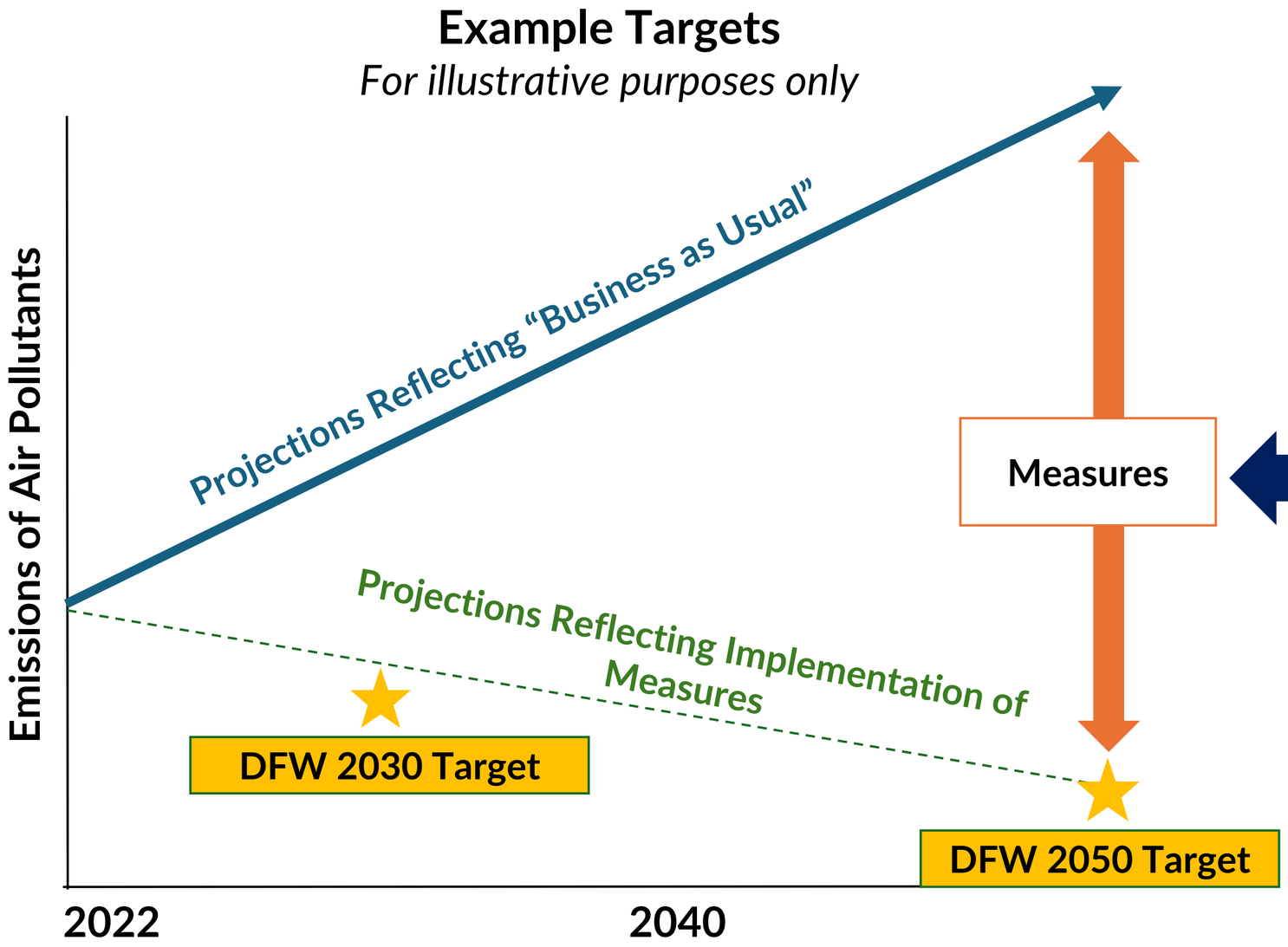
CAP Measure Requirements

	Timeframe	Quantifiable Emissions Reductions?*	Sectors	Funding Analysis	Cost Estimates	Tracking Metrics	Implementing Agencies	Other Requirements
PAP	2025-2030	Yes	Priority Sectors Only	No	No	Yes	Yes	N/A
CAP	2025-2050	Yes	All Sectors	Yes	Yes	Yes	Yes	Be **specific enough** to implement and measure **Support Targets for CAP****

**Efforts which are necessary to undertake to achieve a measure but do not result in direct emission reductions (ex: workforce development) can be "bundled" with a measure.*

Targets should be **actionable, ambitious, achievable

How: Projections, Targets, and Measures



List of preliminary measures available at www.publicinput.com/dfwAQIP
Water & Wastewater Measures: Appendix 12

DFW AQIP: CAP Draft Water & Wastewater Measures

Measures
Provide Economic Rebates for Green Infrastructure and Water-Efficient Landscaping in Commercial Properties
Increase Acreage of Native Plantings in Riparian Corridor Ecosystems
Construct Stormwater Detention Basins
Update Stormwater & Wastewater Conveyance Infrastructure
Improve Water and Wastewater Treatment Process Efficiency**
Repair Aging or Failing On-site Sewage Facility Systems through Rebate Programs to Property Owners

Measures
Provide Sanitary Sewage Upgrades in Developing Areas with Existing On-Site Sewage Facility Systems
Improve Biosolids Management
Implement Methods for Non-Potable Water Reuse
Implement Building-Scale Rainwater Harvesting for Commercial and Municipal Buildings
Improve Local Water Conservation

Water and Wastewater Sector Target: Reduce 35% of the projected BAU CO2e emissions by 2050 (~300k MT CO2E)

***Emission reductions from 2030 and 2050 implementation will be subtracted from the Energy Sector*

DFW AQIP: CAP Draft Water & Wastewater Measures

Measures	Associated Projects (if applicable)	Implementing Agencies
Provide Economic Rebates for Green Infrastructure and Water-Efficient Landscaping in Commercial Properties	• *Update Local Policy, Codes, Drainage Criteria, and Ordinances* • *Update Building Standards for New Developments to Reduce Outdoor Irrigation Requirements* • Install Smart Controls and Sensors to LID and Green Infrastructure to Analyze and Quantify Stormwater Collection Efforts	• Local Governments & Water Service Providers
Increase Acreage of Native Plantings in Riparian Corridor Ecosystems	• N/A	• Local Governments & Applicable Water Districts
Construct Stormwater Detention Basins	• N/A	• MS4 Permit Holders & Applicable Water Districts
Update Stormwater & Wastewater Conveyance Infrastructure	• Install Smart Manhole Covers • Phase Out Traditional Pipe Repair in Favor of Trenchless Pipe Rehabilitation	• MS4 Permit Holders, Wastewater Service Providers
Potential "bundled" projects that are essential to achieving measures but don't provide emission reductions includes: Outreach and education, studies/research, infrastructure development, and workforce development		

Projects in Italics will be bundled with other projects, as they do not provide a CO2e reduction benefit on their own.

DFW AQIP: CAP Draft Water & Wastewater Measures

Measures	Associated Projects (if applicable)	Implement Agencies

Improve Water & Wastewater Treatment Process Efficiency**	• Increase On-Site Renewable Energy on Water/Wastewater Treatment Plant Sites**
	• Update Aging Water/Wastewater Treatment Plant Infrastructure with Energy Efficient Options**
	  • *Develop Strategic Energy Management and Conservation Plan for Water Utilities*
	  • *Benchmark Utility Energy Consumption Using Energy Star Portfolio Manager or Similar Tools.*
	• Implement Bio-Gas Capture & Reuse in Wastewater Treatment Plants
		• Water & Wastewater Service Providers

Repair Aging or Failing On-site Sewage Facility Systems	• Provide Financial Rebates to Upgrade OSSF	• Authorized Permitting Authorities
Provide Sanitary Sewage Upgrades in Developing Areas with Existing On-Site Sewage Facility Systems	• N/A	• Wastewater Service Providers
Improve Biosolids Management	• Convert Biosolids from Wastewater Treatment into Biochar • Divert Biosolids from Wastewater Treatment into Waste-to-Energy Facilities	• Wastewater Service Providers
Potential "bundled" projects that are essential to achieving measures but don't provide emission reductions includes: Outreach and education, studies/research, infrastructure development, and workforce development		

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**Emission reductions from 2030 and 2050 implementation will be subtracted from the Energy Sector

DFW AQIP: CAP Draft Water & Wastewater Measures

Measures	Associated Projects (if applicable)	Implementing Agencies
Implement Methods for Non-Potable Water Reuse	• N/A	• Wastewater Service Providers
Implement Building-Scale Rainwater Harvesting for Commercial and Municipal Buildings	• N/A	• Commercial and Municipal Property Owners
Improve Local Water Conservation	• Establish Property Water Conservation Audits and Smart Water Rebate Programs • Implement Municipal and Commercial Irrigation Repair Programs • Utilize Automated Metering Infrastructure to Identify and Repair Potential Sources of Water Loss • Develop Aquifer Protection and Land Preservation Efforts • *Conduct a Study to Determine ASR Regional Feasibility.*	• Water Service Provides
Potential "bundled" projects that are essential to achieving measures but don't provide emission reductions includes: Outreach and education, studies/research, infrastructure development, and workforce development		

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Action Item

Approval of the Dallas - Fort Worth Air Quality Improvement Plan - Comprehensive Action Plan (DFW AQIP- CAP) Water and Wastewater Elements.

- Questions?
- NCTCOG staff will seek the WRC's approval of the water and wastewater elements of DFW AQIP-CAP.

Discussion

Recognition of WRC Service Milestones

5 years

- Caroline Waggoner
- Sally Wright

PFAS Roundtable

Speaker Presentation

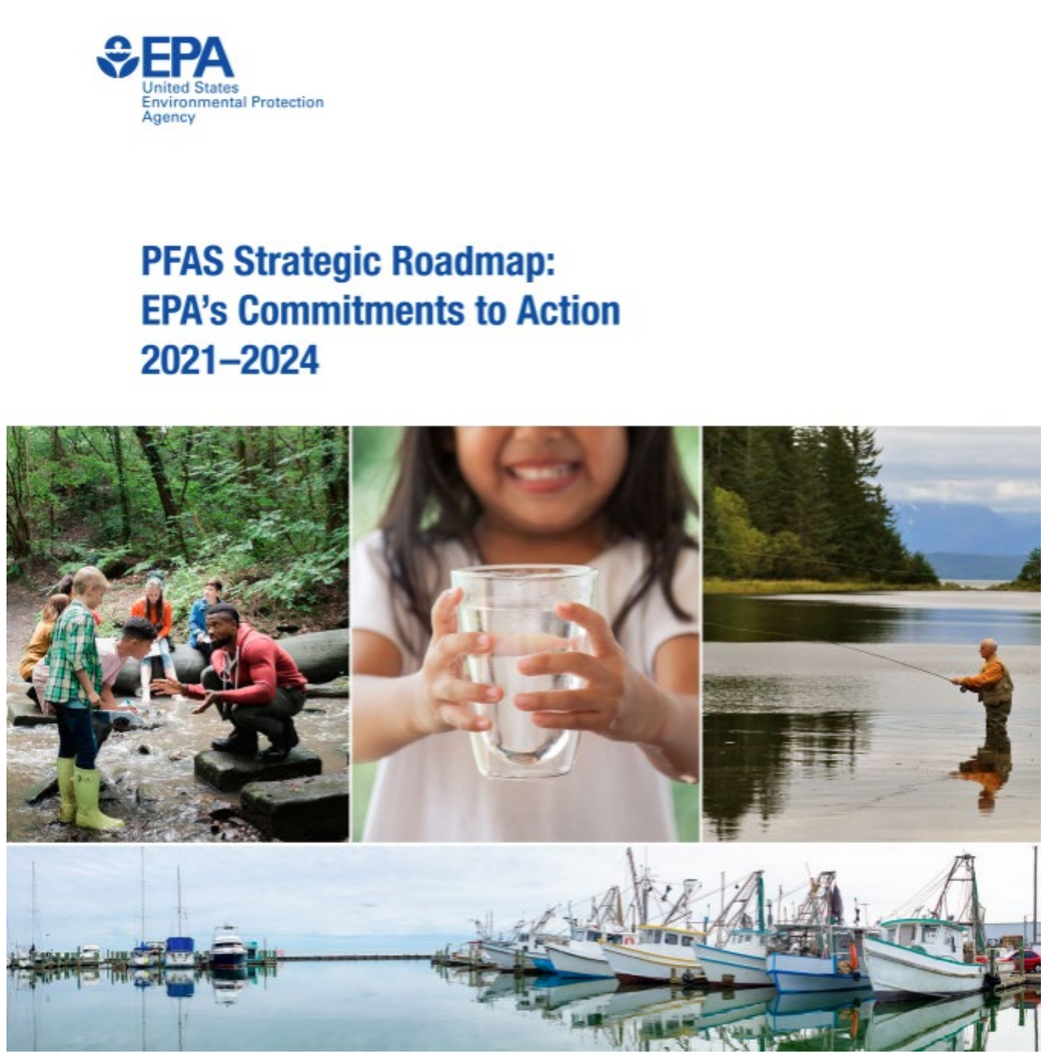
Joseph Fielding, Trinity River Authority

PFAS REGULATIONS AND PLANNING: A PROACTIVE RESPONSE FROM A UTILITY PERSPECTIVE

JUNE 13, 2025

Trinity River Authority of Texas
Enriching the Trinity basin as a resource for Texans

Background



- Released in October 2021
  - Outlined the EPA strategy for addressing PFAS
  - Indicated specific action items
  - Identified tentative timelines

Background

- Bad Boys of PFAS
  - PFOA and PFOS
- Are there other PFAS compounds of concern?
  - Depends on who is asking
  - Where you are looking at
  - What you are looking in

Background

Concentration Expressions	Abbreviations	Equivalents
Part Per Million	ppm	mg/L or mg/kg or µg/g
Parts Per Billion	ppb	µg/L or µg/kg or ng/g
Parts Per Trillion	ppt	ng/L or ng/kg or pg/g

- How do we measure it?
  - With great difficulty
  - Drinking Water is only “approved” method
  - Wastewater/Solids Method is final but not “approved”

Drinking Water

- UCMR 3 in May 2012
  - 6 PFAS Compounds
- UCMR 5 in December 2021
  - 29 PFAS Compounds

UCMR 3 Contaminant List			
Assessment Monitoring (List 1 Contaminants)			
1,2,3-trichloropropane	bromomethane (methyl bromide)	chloromethane (methyl chloride)	bromochloromethane (Halon 1011)
chlorodifluoromethane (HCFC-22)	1,3-butadiene	1,1-dichloroethane	1,4-dioxane
vanadium	molybdenum	cobalt	strontium
chromium[1]	chromium-6[2]	chlorate	perfluorooctanesulfonic acid (PFOS)
perfluorooctanoic acid (PFOA)	perfluorobutanesulfonic acid (PFBS)	perfluorohexanesulfonic acid (PFHxS)	perfluoroheptanoic acid (PFHpA)
perfluorononanoic acid (PFNA)			
Screening Survey (List 2 Contaminants)			
17-β-estradiol	estriol	estrone	4-androstene-3,17-dione
17-α-ethynylestradiol	equilin	testosterone	
Pre-Screen Testing[3] (List 3 Contaminants)			
enteroviruses	noroviruses		

Drinking Water

- Proposed NPDWR March 2023
- Final NPDWR April 2024
  - Published in the Federal Register on April 26, 2024
  - 5 pollutants with a MCL and Hazard Index MCL
    - Running Annual Average used for determining compliance

Drinking Water

Pollutant	MCL	PQL	Unit
PFOA	4.0	4.0	ng/L
PFOS	4.0	4.0	ng/L
PFHxS	10.0	3.0	ng/L
PFNA	10.0	4.0	ng/L
HFPO-DA (GenX Chemicals)	10.0	5.0	ng/L
PFBS	N/A	3.0	ng/L
Hazard Index	1	N/A	Unitless

- Initial Monitoring complete by April 25, 2027
- Compliance Monitoring with reporting after April 25, 2027
- Final Compliance with MCLs by April 25, 2029

Drinking Water

Surface Water Systems
serving all population sizes

- Quarterly within 12-month period
- Samples collected 2 to 4 months apart.

Groundwater Systems
serving > 10,000 customers

- Quarterly within 12-month period
- Samples collected 2 to 4 months apart.

Groundwater Systems
serving ≤ 10,000 customers

- Twice within 12-month period
- Samples collected 5 to 7 months apart.

- Exception to Groundwater would be GUI Systems

Drinking Water

- What is TRA doing about the NPDWR?
  - Identified the significant impact of potential impacts of the NPDWR and began an initial monitoring campaign
  - Procured two PFAS testing instruments
    - Obtained TCEQ Accreditation for EPA Methods 533 & 537.1
      - Supporting other utilities by providing local and in-state testing services for Texas Utilities, contact pfastesting@trinityra.org

Drinking Water

- What is TRA doing about the NPDWR?
  - Enhanced monitoring campaign to gather additional data sets
    - Raw and Produced water monitoring
    - TCWSP – bimonthly sampling
    - HRWSS, LRWSS, TCRWSS – quarterly monitoring
  - Developed compliance calculator with automated notifications

Drinking Water

- What is TRA doing about the NPDWR?
  - Conducting PFAS Treatability Study
    - Collecting PFAS and Water Quality samples
    - Evaluating potential raw water contamination sources
    - Evaluate potential treatment technology
    - Pilot testing potential treatment solutions

Drinking Water

- Lessons Learned
  - Designate a SME for your organization
  - Understand the rule and the impact(s) to the organization
  - Invest in testing services
  - Develop sampling protocols and verify them
  - Plan for data management resources/systems
  - Third-party support for treatment options

Drinking Water – UPDATE

- May 14, 2025 announced changes to the NPDWR forthcoming
  - Keep MCL at 4 ng/L for PFOA & PFOS
  - Rescind all other MCLs and the Hazard Index
  - Extend Final Compliance with MCLs to 2031
  - Proposed Rule Update Fall 2025
  - Final Rule Update Spring 2026
- Enhanced Communication and Outreach
- Holding polluters accountable

Other PFAS Regulations

Wastewater

- Effluent Guidelines Program Plan 15
  - Pretreatment standards
  - Landfill pretreatment standards in development
  - Conducting additional studies on several other categories

Wastewater

- POTW Influent PFAS Study
  - The data collection is to gather data on sources of PFAS discharges and prioritize industrial categories for potential regulation
  - Mandatory sampling at utility expense
  - 27 Texas POTWs impacted by this

Wastewater & Biosolids

- CERCLA
  - PFOA & PFOS designated hazardous substances effective July 8, 2024
  - Releases of a pound or more in any 24-hour period

Plant Effluent Flow (MGD)	Effluent PFOA Result (ng/L)	Mass Load of PFOA in Plant Effluent (ppd)	Effluent PFOS Result (ng/L)	Mass Load of PFOS in Plant Effluent (ppd)
165.89	23	0.03182102	20	0.027670452
171.13	7.8	0.011132349	6.4	0.009134235
135.494	8.6	0.009718172	5.7	0.006441114
144.34	5.9	0.007102394	12	0.014445547

Biosolids

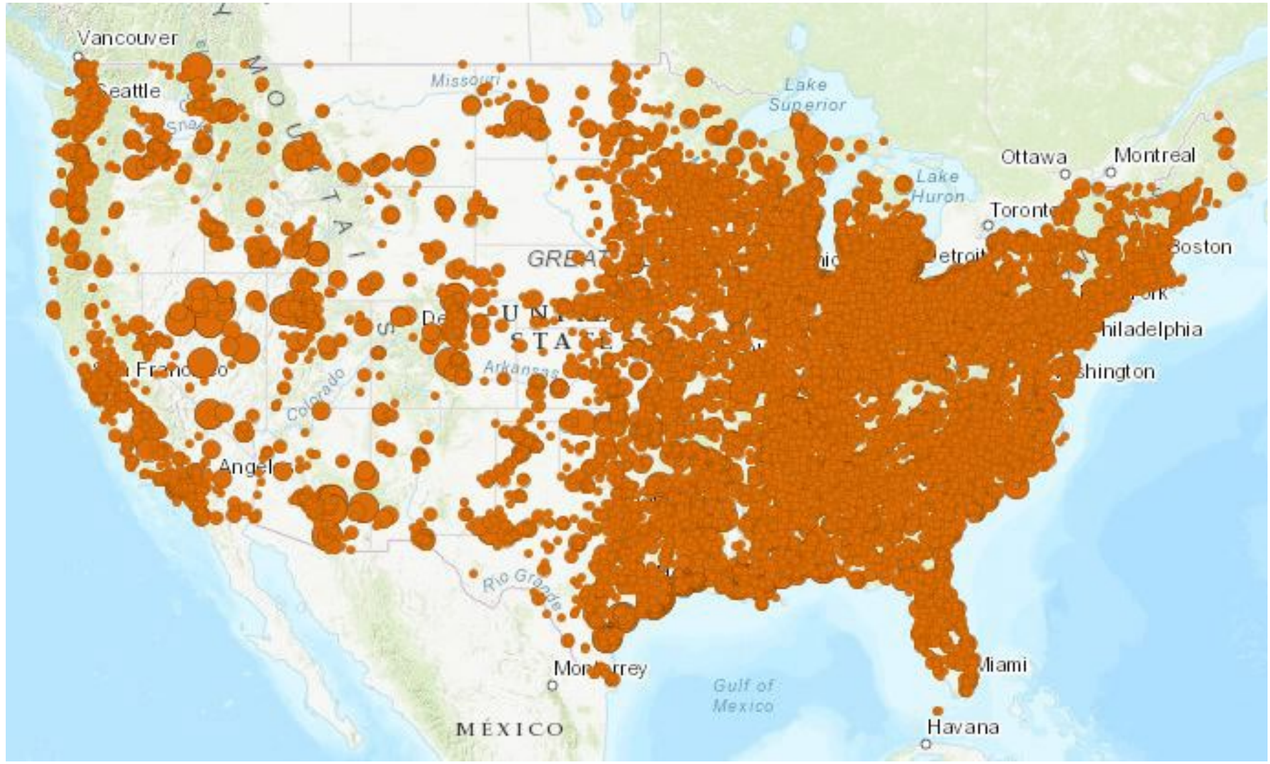
- EPA Draft Sewage Sludge Risk Assessment
  - Risk from use or disposal of sewage sludge by land application
  - Does NOT create any new regulatory requirements or standards
  - Problem
    - Unrealistic conditions
    - 1 ppb for PFOA and PFOS

Biosolids

- National Sewage Sludge Study (NSSS)
  - Data collection intended to establish a national data set of sewage sludge
  - Mandatory sampling at utility expense
  - 27 Texas POTWs impacted by this

Toxic Release Inventory

- Eliminated an exemption allowing facilities to avoid reporting on PFAS when used in small concentrations.



Questions?

Joseph K. Fielding
Manager, Regulatory Services and Compliance, Northern Region
Trinity River Authority of Texas
fieldingjk@trinityra.org
972-975-4374

PFAS Testing Services at
pfastesting@trinityra.org

Speaker Presentation

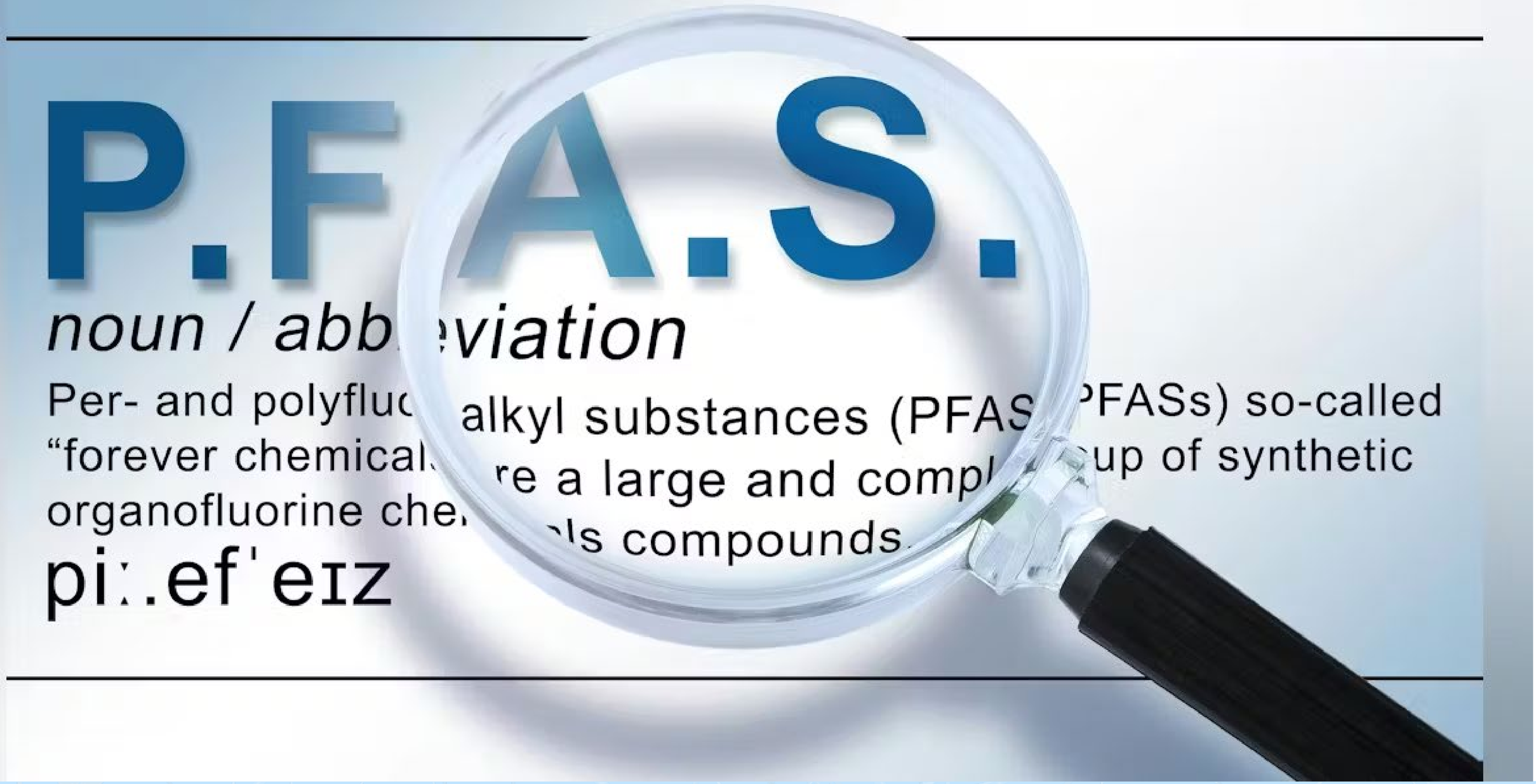
Jerry Pressley and Casey Nettles, City of Fort Worth

Fort Worth's PFAS Regulatory Initiative

15Oct25

Goals of Presentation

- Explain Fort Worth's strategy to monitor and regulate PFAS
- Share Key Findings
- Share Regulatory Actions


P.F.A.S.
noun / abb eviation
Per- and polyfluc alkyl substances (PFAS PFASs) so-called
“forever chemical re a large and compl up of synthetic
organofluorine che ls compounds.
pi:.ef'eɪz

Where is PFAS Commonly Found?

Drinking Water

Drinking contaminated municipal water or private well water

Fish

Eating fish that was caught from water contaminated by PFAS. Specifically with high levels of PFOS

Food Packaging

Eating food that was packaged in material that contains PFAS. Such as fast food wrappers, some grease-resistant paper, microwave popcorn bags, pizza boxes, and candy wrappers

Soil + Dust

Accidentally swallowing soil or dust that was contaminated with PFAS, can lead to PFAS exposure.

Coatings + Cleaning

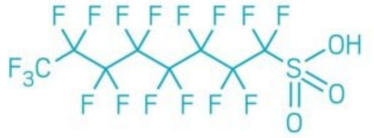
Stain resistant carpeting and water repellant clothing. Cleaning products. Personal care products and cosmetics. Paints, varnishes, and sealants

Source: ATSDR Agency for Toxic Substances and Disease Registry

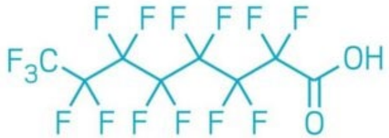
How did we get here?

PFAS Concerns

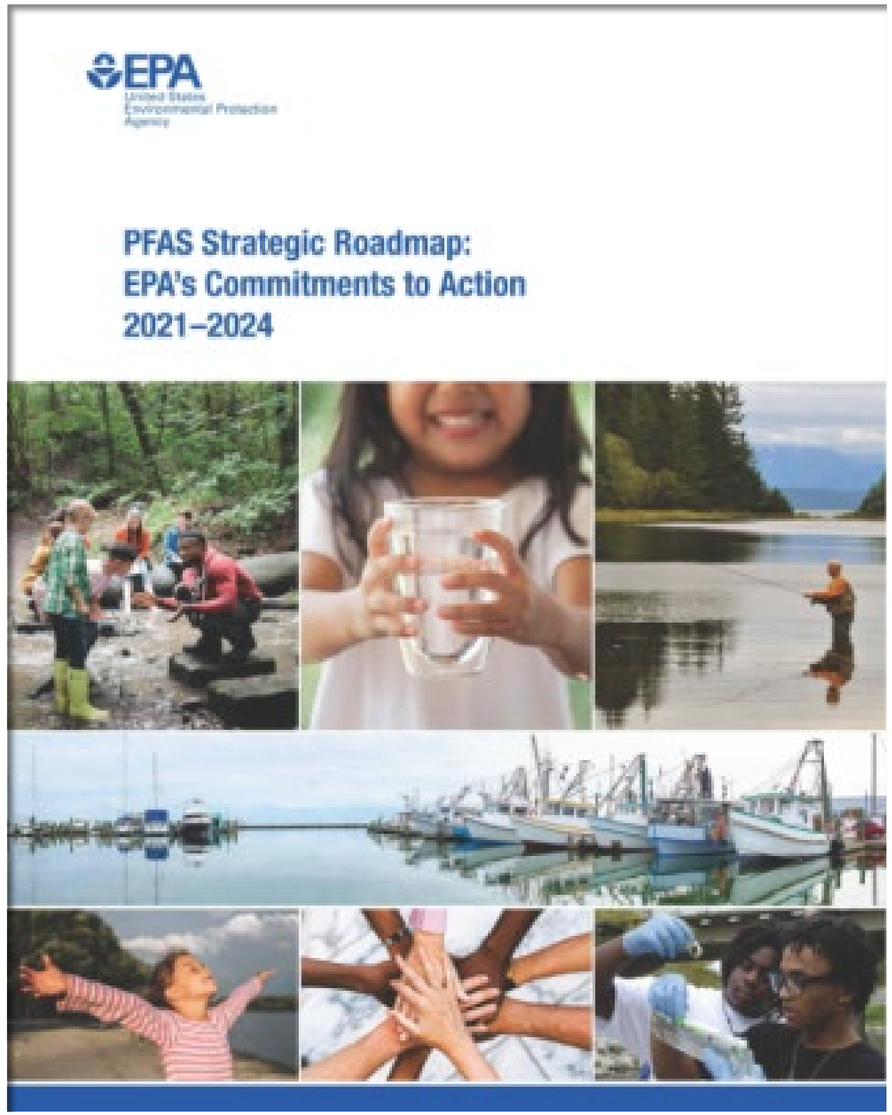
- PFAS is an “emerging pollutant”
- Human Health and ecological risks
- Regulatory pressures with limited guidance
  - EPA Biosolids Study
  - Michigan and California regulations
  - EPA Drinking Water Standards
  - CERCLA Hazardous Substance Designation
- Litigation



PFOS



PFOA



"Every level of government—federal, Tribal, state, and local—needs to exercise increased and sustained leadership to accelerate progress to clean up PFAS contamination, prevent new contamination, and make game-changing breakthroughs in the scientific understanding of PFAS. This strategic roadmap represents the Agency's commitment to the American people on what EPA seeks to deliver from 2021 to 2024."

Fort Worth's Approach

Sampling Objectives

- Establish background levels for PFAS
  - Residential
  - Wholesale Customer Cities
  - Commercial/Industrial
- Identify areas or industries of concern

Fort Worth's Approach

Sampling

- Landfill (direct and indirect discharges) - 2022
  - Indirect (hauled) leachate is no longer accepted (Feb 2023)
- Collection System – 2023
  - Major trunk lines in collection system
  - Wholesale Customer Cities
  - Points of Interest (Industrial and Commercial Users)
- Industrial Users – 2024/2025

Fort Worth's Approach

Sampling - Key Findings

- Background levels throughout the collection system were consistent
- Identified Industrial Users of concern
  - Chrome platers
  - Landfills
  - Federal government installations
  - Food processors using plastic packaging

Regulatory Strategy

City Code Amendments

- EPA Roadmap
- Added PFAS specific provisions
  - Discharges from Industrial Users above 25ng/L for the PFAS compounds without an approved plan of correction
  - Trucked/hauled waste from Categorical Pretreatment Industrial Users with ***detectable*** quantities of PFAS

Management Strategy

Industrial Users

- Any Industrial User with PFAS levels above 25ng/L
  - Submit a PFAS Source Identification Report
    - Investigate internal PFAS sources
  - Submit a Reduction/Elimination Plan
    - After potential sources are identified
- Best Management Practices
  - Follow EPA PFAS Roadmap guidelines
  - Sector – specific
  - Emphasis on pollution prevention and product substitution

City Owned Landfill

Response

- Studying and Designing an onsite PFAS treatment facility
  - Leachate
  - Condensate

Ongoing Monitoring

Sampling

- Monthly Sampling
  - Village Creek WRF – Biosolids, Influent, and Effluent
  - Landfills
  - Federal government installation
- Wholesale Customer Cities
  - Quarterly Sampling

Next Steps

- Industrial Users
  - Continued sampling and compliance tracking
  - Enforcement for non-cooperative industries
- Commercial Source focus – 2025/2026
  - Car washes, carpet cleaners, food service establishments

Regional Collaboration Opportunity

- Coordinate PFAS source identification and solutions
- Share data, BMPs, and regulatory templates
- Explore shared treatment options
  - Landfill leachate treatment

Conclusion

- Fort Worth is taking a proactive, data driven approach to PFAS management
- Address both known industrial sources and emerging commercial sources

Questions?

- Jerry Pressley
  jerry.pressley@fortworthtexas.gov
- Casey Nettles
  casey.nettles@fortworthtexas.gov

Speaker Presentation

Brian Neal, Trinity River Authority

PRETTY FUN AWESOME SUBSTANCES –

DEVELOPING A LABORATORY PROGRAM FOR PFAS

OCTOBER 15, 2025

Trinity River Authority of Texas
Enriching the Trinity basin as a resource for Texans

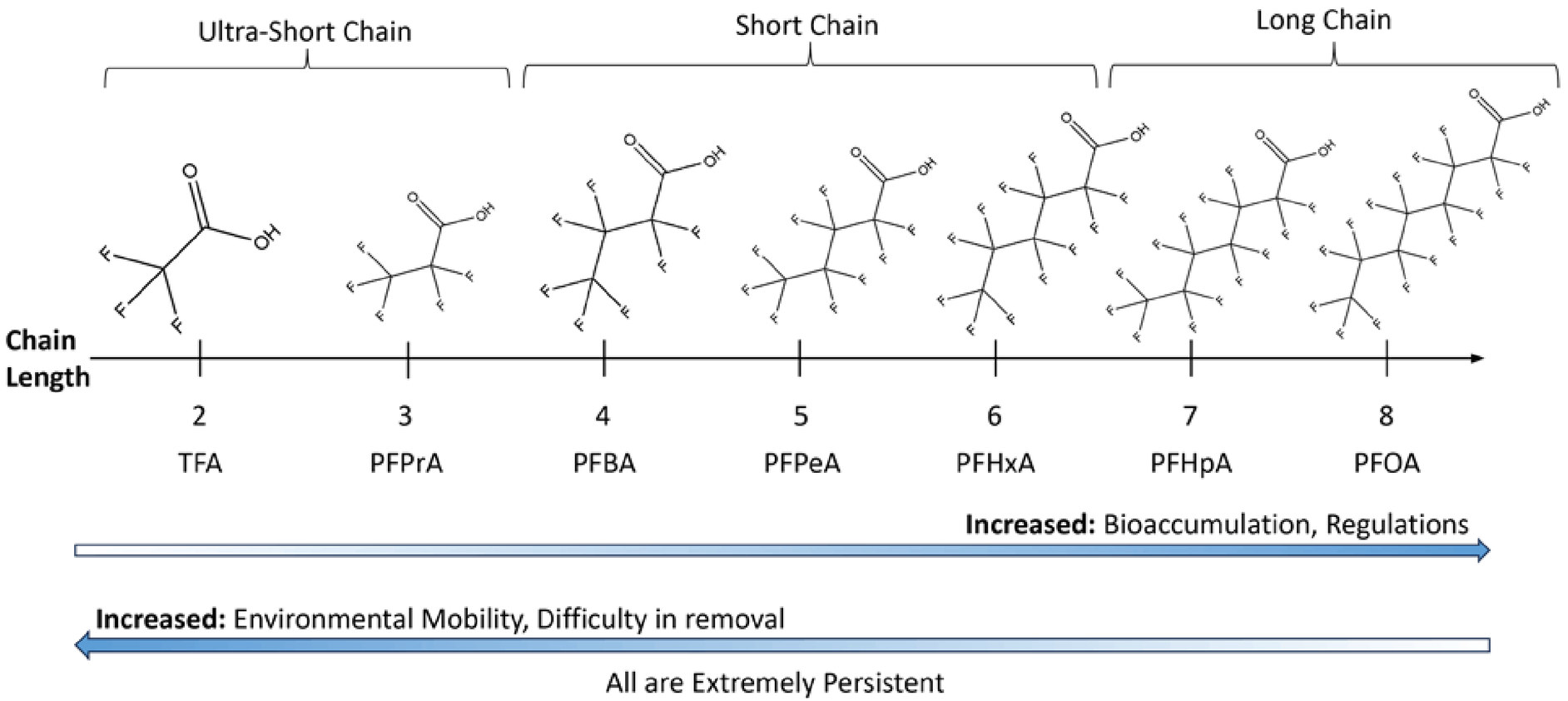
What is PFAS?

Unfortunately it ***does not*** stand for Particularly Fun Awesome Substances

Per- and polyfluoroalkyl substances

- Takes thousands of years to degrade naturally
- Some classified as carcinogenic
- Found all over the world
- Primarily categorized as long chain and short chain compounds

What is PFAS?


Ultra-Short Chain
Short Chain
Long Chain
Chain Length
2
3
4
5
6
7
8
TFA
PFPrA
PFBA
PFPeA
PFHxA
PFHpA
PFOA
Increased: Bioaccumulation, Regulations
Increased: Environmental Mobility, Difficulty in removal
All are Extremely Persistent

Where do we find PFAS?

Collecting PFAS

Collecting PFAS

How do we measure PFAS?

Instrumentation!

These instruments are so sensitive, measuring in parts per trillion (ppt or ng/L) is roughly the equivalent of:

- Identifying a drop of blood in an Olympic-sized swimming pool
- Measuring thirty seconds out of every million years
- Finding a hat against the state of Texas
- The width of a strand of hair compared to the distance to the moon

PFAS Levels

Concentration Expressions	Abbreviations	Equivalents
Part Per Million	ppm	mg/L or mg/kg or µg/g
Parts Per Billion	ppb	µg/L or µg/kg or ng/g
Parts Per Trillion	ppt	ng/L or ng/kg or pg/g

PFAS Instrumentation

There are three main components:

Extraction unit for SPE/clean-up (Solid Phase Extraction)

Evaporation unit for concentration

LC-MS/MS

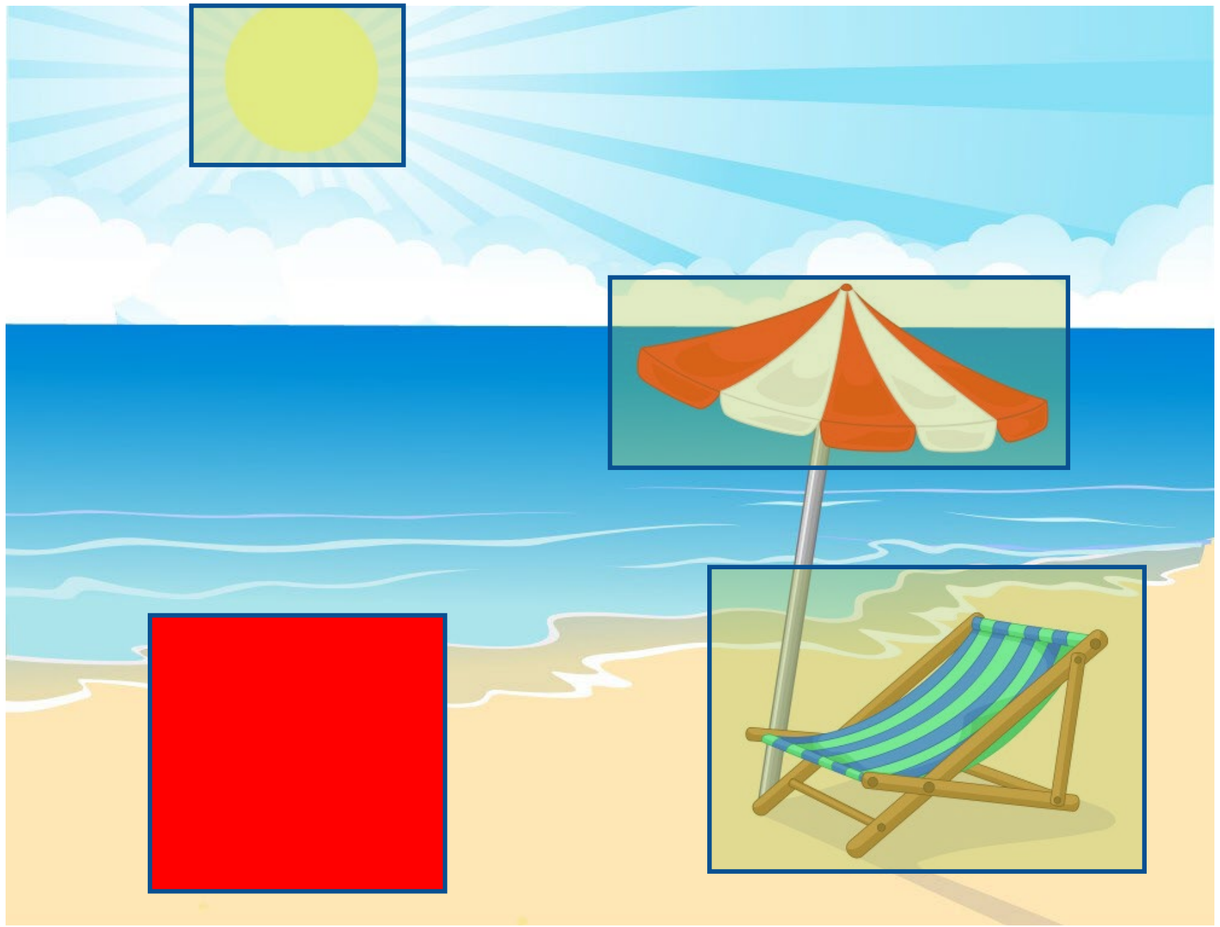
- Liquid Chromatography
- Tandem Mass Spectrometer

PFAS Instrumentation

What does an LC-MS/MS do?

- 1 cup butter
- ¾ cup granulated sugar
- ¾ cup brown sugar
- 2 eggs
- 2 tsp vanilla
- 2 ¼ cup flour
- 1 tsp baking soda
- ½ tsp salt
- 2 cups chocolate chips

The Magic of MRM



PFAS Methodology

What methods are commonly used for measuring PFAS?

- EPA 537.1 and EPA 533
- EPA 1633
- EPA 1621
- ASTM D8421

EPA 537.1

- Emphasis on long-chain PFAS compounds
- Originally written in 2008, 537.1 was release in 2018 with v2.0 was released in 2020
  - The update included four “replacement” PFAS compounds that had replaced PFOA and PFOS in many manufacturing processes
- Uses **internal standard technique** to measure concentration
- Uses surrogates to monitor extraction efficiency and matrix interferences

EPA 533

- Emphasis on short-chain PFAS
- Published in 2019 as part of the EPA's PFAS Action Plan
- Uses **isotope dilution technique** to measure concentration
- This method is an evolution of EPA 537.1
- Measures 25 compounds
- Included 7 more compounds than 537.1 due to their increased usage in manufacturing processes
- Does not cover four compounds found in 537.1 due to these compounds were dropped by manufacturers in favor of others found in this method

537.1 vs 533

Analyte	Abbreviation	CASRN	Method 533	Method 537.1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	763051-92-9	x	x
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acd	9Cl-PF3ONS	756426-58-1	x	x
4,8-Dioxa-3H-perfluorononanoic acid	ADONA	919005-14-4	x	x
Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6	x	x
Perfluorobutanesulfonic acid	PFBS	375-73-5	x	x
Perfluorodecanoic acid	PFDA	335-76-2	x	x
Perfluorododecanoic acid	PFDoA	307-55-1	x	x
Perfluoroheptanoic acid	PFHpA	375-85-9	x	x
Perfluorohexanoic acid	PFHxA	307-24-4	x	x
Perfluorohexanesulfonic acid	PFHxS	355-46-4	x	x
Perfluorononanoic acid	PFNA	375-95-1	x	x
Perfluorooctanoic acid	PFOA	335-67-1	x	x
Perfluorooctanesulfonic acid	PFOS	1763-23-1	x	x
Perfluoroundecanoic acid	PFUnA	2058-94-8	x	x
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	4:2FTS	757124-72-4	x	
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	6:2FTS	27619-97-2	x	
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	8:2FTS	39108-34-4	x	
Nonafluoro-3,6-dioxaheptanoic acid	NFDHA	151772-58-6	x	
Perfluorobutanoic acid	PFBA	375-22-4	x	
Perfluoro(2-ethoxyethane)sulfonic acid	PFEESA	113507-82-7	x	
Perfluoroheptanesulfonic acid	PFHpS	375-92-8	x	
Perfluoro-4-methoxybutanoic acid	PFMBA	863090-89-5	x	
Perfluoro-3-methoxypropanoic acid	PFMPA	377-73-1	x	
Perfluoropentanoic acid	PFPeA	2706-90-3	x	
Perfluoropentanesulfonic acid	PFPeS	2706-91-4	x	
N-ethyl perfluorooctanesulfonamidoacetic acid	NEtFOSAA	2991-50-6		x
N-methyl perfluorooctanesulfonamidoacetic acid	NMeFOSAA	2355-31-9		x
Perfluorotetradecanoic acid	PFTA	376-06-7		x
Perfluorotridecanoic acid	PFTrDA	72629-94-8		x

Drinking Water

Pollutant	MCL	PQL	Unit
★ ★ PFOA	4.0	4.0	ng/L
PFOS	4.0	4.0	ng/L
PFHxS	10.0	3.0	ng/L
PFNA	10.0	4.0	ng/L
HFPO-DA (GenX Chemicals)	10.0	5.0	ng/L
PFBS	N/A	3.0	ng/L
Hazard Index	1	N/A	Unitless

EPA 1633

- Introduced in 2021, this method covers all non-potable waters, soils, biosolids, and tissues; a catch-all method
- A combination of both prior methods, uses both internal standard technique and isotope dilution technique
- Measures 40 compounds (24 via ID and 16 via IS)
- Finalized in 2024

EPA 1621

A screening method to identify total organofluorine compounds

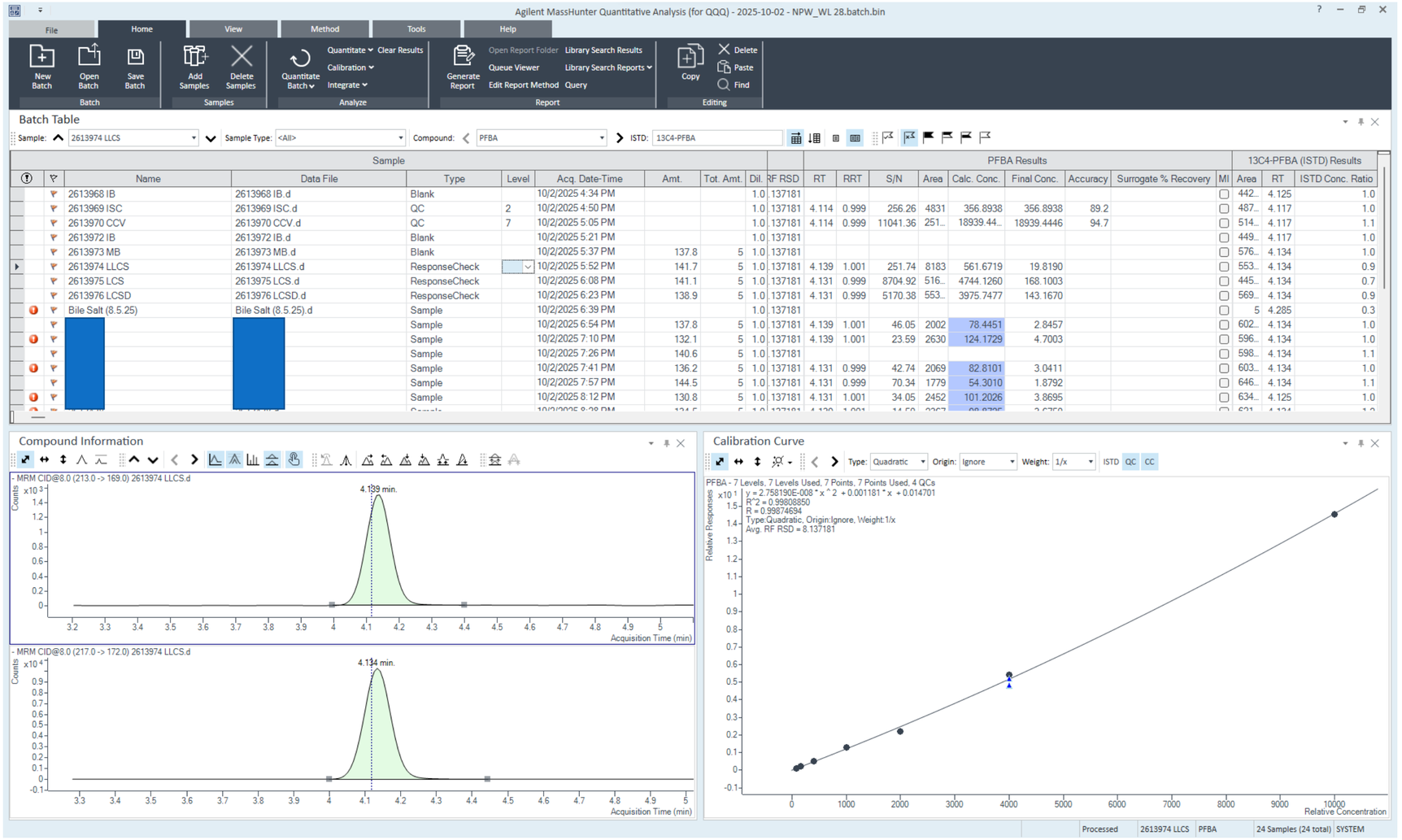
Trap PFAS in carbon → Combust trapped PFAS ≥ 1000 °C → Measure via ion chromatography

ASTM D8421

No initial SPE clean-up, more of a direct injection

1. 1:1 ratio of sample and methanol
2. Filter
3. Measure

Data


Agilent MassHunter Quantitative Analysis (for QQQ) - 2025-10-02 - NPW_WL 28.batch.bin
File
Home
View
Method
Tools
Help
New Batch
Open Batch
Save Batch
Batch
Add Samples
Delete Samples
Samples
Quantitate Batch
Quantitate
Calibration
Integrate
Clear Results
Analyze
Generate Report
Open Report Folder
Queue Viewer
Edit Report Method
Library Search Results
Library Search Reports
Query
Report
Copy
Delete
Paste
Find
Editing
Batch Table
Sample: 2613974 LLCS
Sample Type: <All>
Compound: PFBA
ISTD: 13C4-PFBA
Sample
PFBA Results
13C4-PFBA (ISTD) Results
Name
Data File
Type
Level
Acq. Date-Time
Amt.
Tot. Amt.
Dil.
RF RSD
RT
RRT
S/N
Area
Calc. Conc.
Final Conc.
Accuracy
Surrogate % Recovery
MI
Area
RT
ISTD Conc. Ratio
2613968 IB
2613968 IB.d
Blank
10/2/2025 4:34 PM
2613969 ISC
2613969 ISC.d
QC
2
10/2/2025 4:50 PM
2613970 CCV
2613970 CCV.d
QC
7
10/2/2025 5:05 PM
2613972 IB
2613972 IB.d
Blank
10/2/2025 5:21 PM
2613973 MB
2613973 MB.d
Blank
10/2/2025 5:37 PM
2613974 LLCS
2613974 LLCS.d
ResponseCheck
10/2/2025 5:52 PM
2613975 LCS
2613975 LCS.d
ResponseCheck
10/2/2025 6:08 PM
2613976 LCSD
2613976 LCSD.d
ResponseCheck
10/2/2025 6:23 PM
Bile Salt (8.5.25)
Bile Salt (8.5.25).d
Sample
10/2/2025 6:39 PM
Sample
10/2/2025 6:54 PM
Sample
10/2/2025 7:10 PM
Sample
10/2/2025 7:26 PM
Sample
10/2/2025 7:41 PM
Sample
10/2/2025 7:57 PM
Sample
10/2/2025 8:12 PM
Compound Information
- MRM CID@8.0 (213.0 -> 169.0) 2613974 LLCS.d
4.139 min.
Counts
Acquisition Time (min)
- MRM CID@8.0 (217.0 -> 172.0) 2613974 LLCS.d
4.134 min.
Counts
Acquisition Time (min)
Calibration Curve
Type: Quadratic
Origin: Ignore
Weight: 1/x
ISTD
QC
CC
PFBA - 7 Levels, 7 Levels Used, 7 Points, 7 Points Used, 4 QCs
y = 2.758190E-008 * x ^ 2 + 0.001181 * x + 0.014701
R^2 = 0.99808850
R = 0.99874694
Type:Quadratic, Origin:Ignore, Weight:1/x
Avg. RF RSD = 8.137181
Relative Responses
Relative Concentration
Processed
2613974 LLCS
PFBA
24 Samples (24 total)
SYSTEM

Questions?

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NCTCOG Updates

NCTCOG Webinar: *Let's Grow! Ensuring Success for Water-Wise Landscapes*

- Thursday, November 13, 2025; 10:00 a.m.
- Virtual, via Microsoft Teams
- Register here

NCTCOG Updates

Holiday Grease Roundup

- November 1, 2025 – January 31, 2026
- Email Hannah Ordonez at Hordonez@nctcog.org to sign up.

NCTCOG Updates

Roundtable for Local and Regional Data Center Impacts

- October 27, 2025 10:00 a.m.- 11:30 a.m.
- Location: Virtual, via Microsoft Teams
- Email Chris Northup at dnorthup@nctcog.org to register.

Model Development and Floodplain Ordinances Workshop

Purpose: To receive feedback on elements such as green stormwater infrastructure and nature-based solutions to incorporate into a model development code and model floodplain ordinance for flood prevention and mitigation.

Intended Audience: Anyone with technical expertise, experience, or interest in the areas of flood prevention or mitigation using development or floodplain regulatory tools.

Thursday, January 29, 2026, 10:00 am-12:00 pm

NCTCOG, 616 Six Flags Drive, Centerpoint II, Arlington, Transportation Council Room

Hybrid meeting format

For more info, visit http://www.nctcog.org/TSI

This effort is part of the Upper Trinity River Transportation and Stormwater Infrastructure (TSI) Project that seeks to reduce future flood risk through the integration of transportation, environmental, and stormwater planning.

integrating **Transportation & Stormwater Infrastructure**

Future Agenda Items

- The WRC can present future agenda items & discuss the priority and format of previously requested items.

Roundtable

The WRC is invited to share what is happening in their communities.

Next Meeting

Wednesday, January 14, 2026

- 10:30 AM – 12:30 PM
- Virtual, via Microsoft Teams
- Add to Calendar

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