Welcome!

Industrial Waste Customer Workshop

May 8, 2025 8:30 AM – 10:30 AM

May 20, 2025 1:00 PM – 3:00 PM

METROPOLITAN COUNCIL

Today’s agenda

Workshop Agenda Items

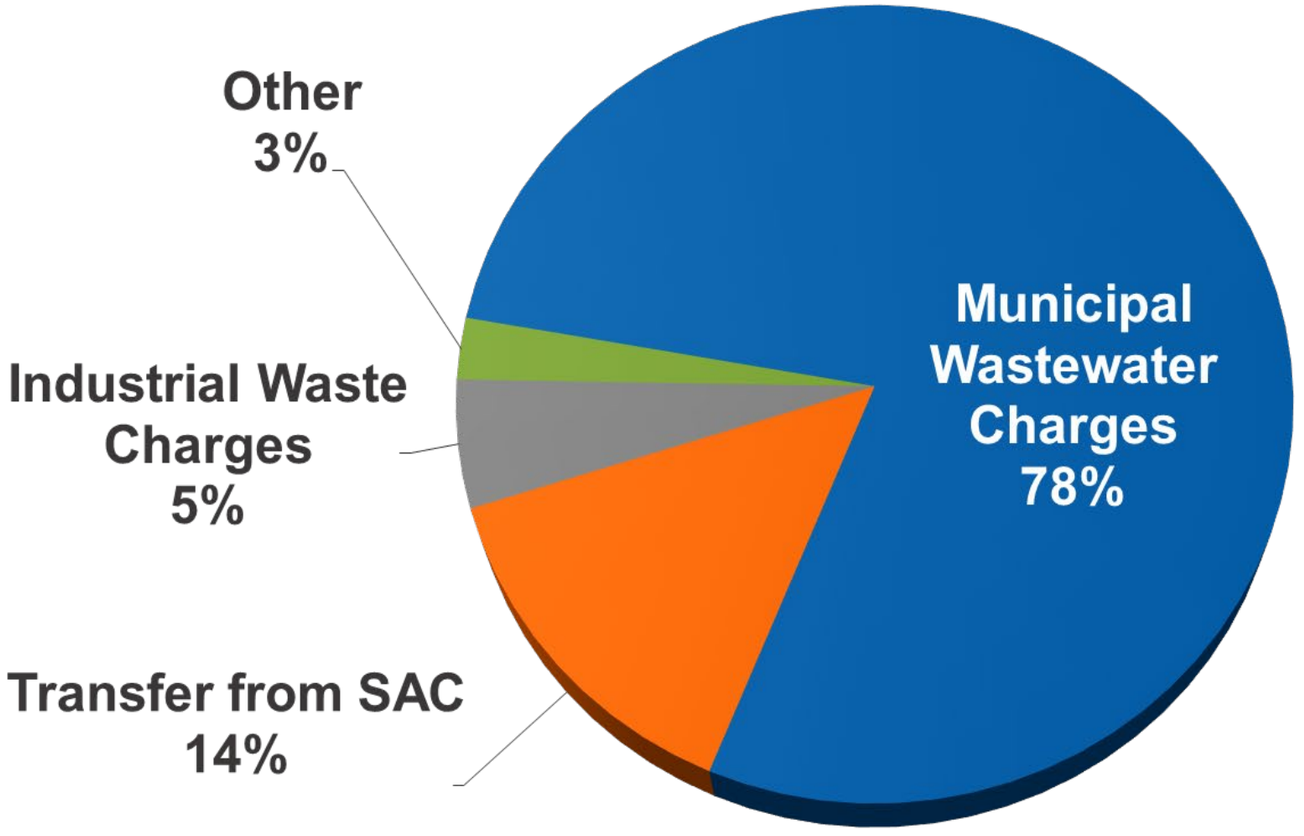
1. Finance and Budget *(Q&A)*
2. Pretreatment Program Overview and Regulatory Updates
3. MnTAP Services and Projects *(Q&A)*
4. Emerging Contaminants
5. Updated Business Management System (Q&A)
6. General Updates & Wrap Up

Meeting logistics (in person)

- Questions - please hold your questions for the Q/A sections
- Bathrooms across lobby, next to elevator
- Feel free to get up for bathroom or coffee break as needed
- Presentation will be posted online for later review

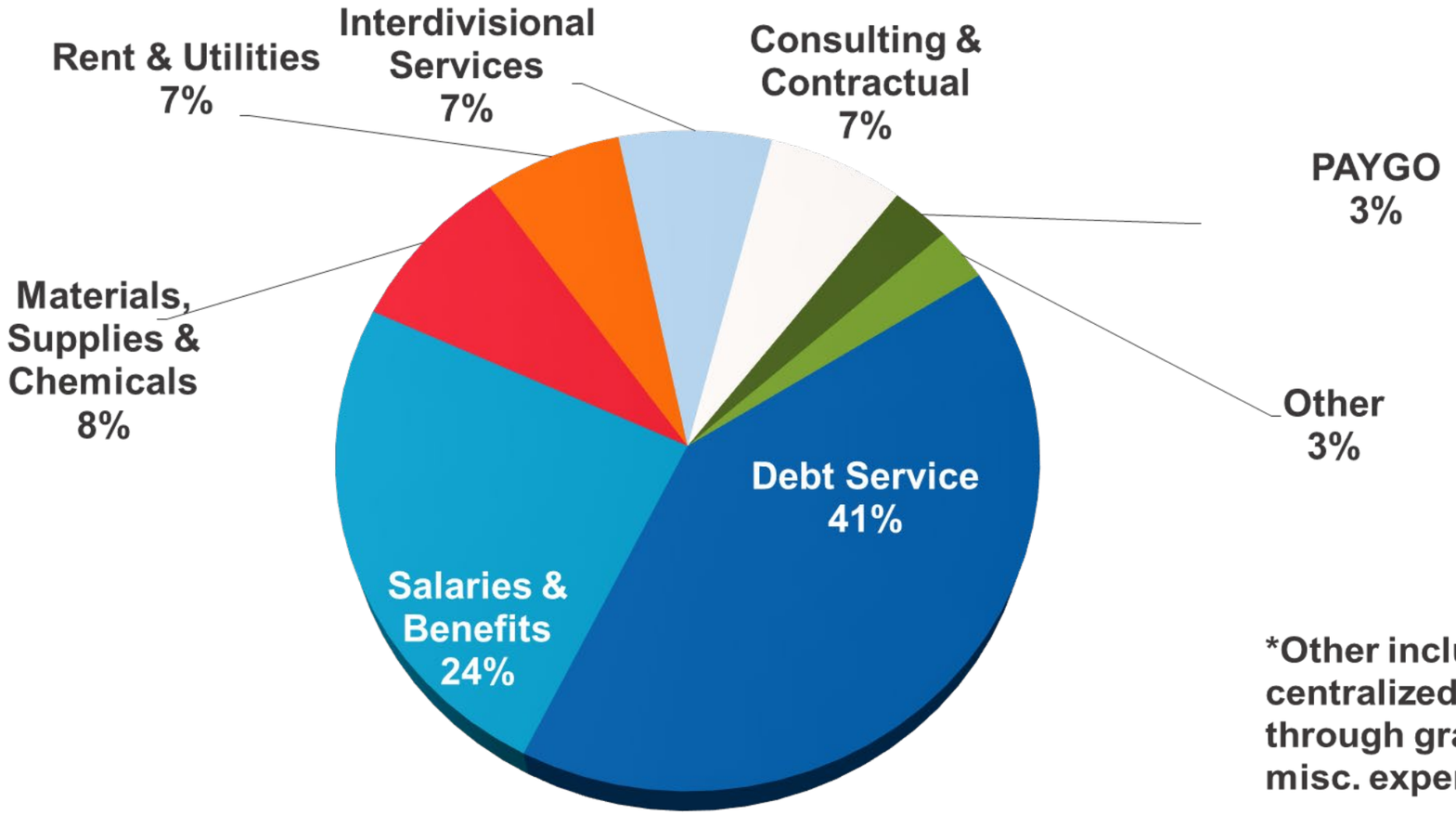
Finance and Budget

2025 Revenue Sources: $379.3M



*Other includes $4.8M use of Reserves

2025 Uses by Category: $379.3M



*Other includes centralized projects, pass-through grants, and other misc. expense

2025 preliminary regional municipal wastewater charge increase drivers

5.6 percent translates to $15.8M

- Labor inflation accounts for 2.3% ($6.5M)
- Interdivisional Charges accounts for 1.3% ($3.9M)
- Contract services accounts for 1.1% ($3M)
- Materials and Supplies for .6% ($1.6M)
- Other accounts for 0.3% ($.8M)

Preliminary 2026 strength charges and permit fees

- Fees for treatment costs for industrial wastewater with more pollutants than residential wastewater
- Charged in $ per pound of excess strength
  - Chemical Oxygen Demand (COD) over 500 mg/L
  - Total Suspended Solids (TSS) over 250 mg/L
- Based on discharge volume and excess COD and TSS
- Permit fees are billed annually

Charge Type	2025 Rate	Prelim 2026	% Increase
Total Suspended Solids (TSS) Rate	$0.332	$0.359	8.1%
Chemical Oxygen Demand (COD) Rate	$0.166	$0.180	8.1%
Permit Fee (Standards)	$1,325-$13,050	$1,400-$13,800	5.3 - 5.8%
Permit Fee (Generals)	$475-$525	$500-$550	4.8%

Service availability charge (SAC)

- “Connection fee” pays for capacity in the system
- Metropolitan Council charges SAC directly to local governments for initial connections to the system, if a business grows, or the property use changes
- One SAC unit is equivalent to 274 gallons of discharge per day
- SAC collected helps to pay debt for expansion and rehabilitation of wastewater infrastructure

Charge Type	2025 Rate	Prelim 2026	% Increase
Service Availability Charge (SAC)	$2,485	$2,485	0%

Industrial capacity charge (ICC)

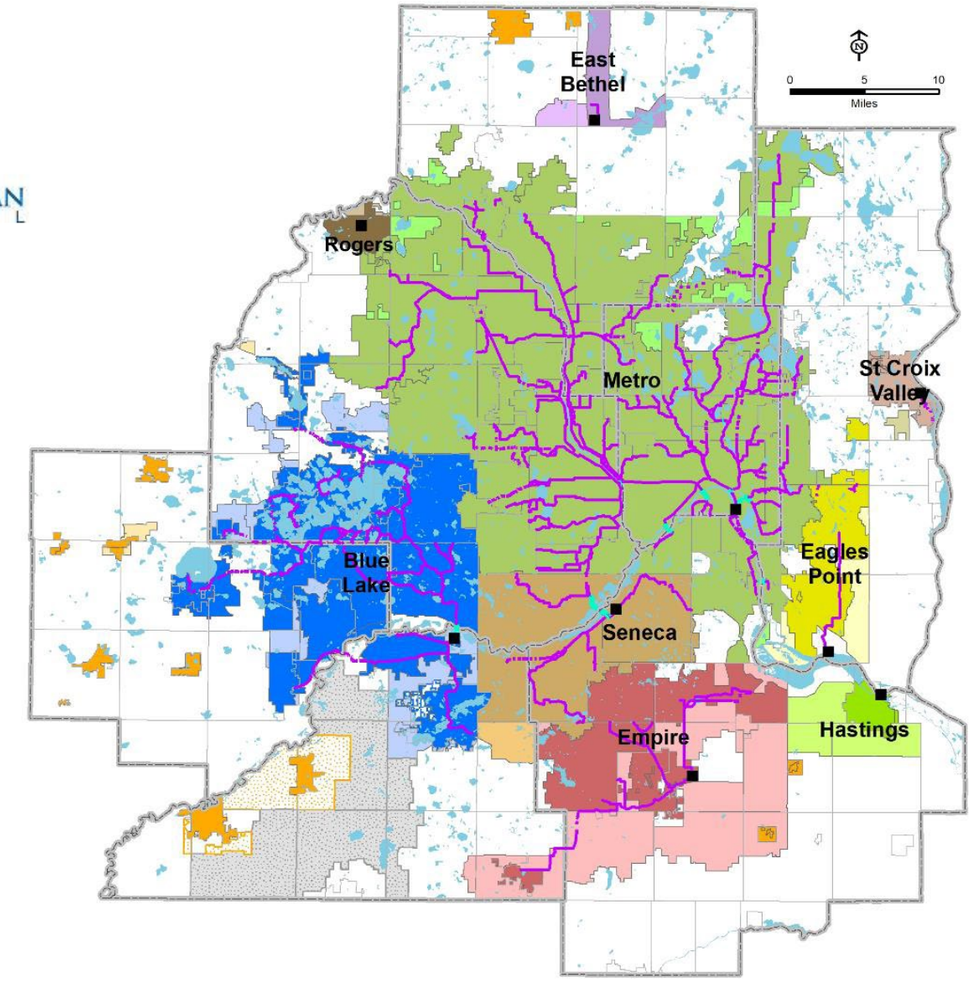
- Alternative fee charged directly to permitted industrial users for any volume that exceeds the permitted industrial user’s ICC threshold at each reporting period
- Can pay ICC in lieu of increasing your SAC baseline
- Rate charged per 1,000 gallons of discharge over the SAC baseline
- Does not increase the facility's SAC baseline
- Designed to help businesses with volume fluctuations

Charge Type	2025 Rate	Prelim 2026	% Increase
Industrial Capacity Charge (ICC)	$2.35	$2.38	1.3%

1st Question and Answer Session

Pretreatment Program Overview and PFAS Updates

Metropolitan Council
ENVIRONMENTAL SERVICES



Protects public health and safety

Protects the environment

Fosters the economic growth of the region

WHO WE SERVE

7-county Twin Cities Metro Area
111 communities
3,600,000+ people

OUR FACILITIES

9 water resource recovery facilities
640 miles of interceptors
$7 billion in valued assets

OUR ORGANIZATION

600+ employees
250 million gallons per day (avg)
$150 million / year capital program

Overview

Industrial Waste and Pollution Prevention (IWPP)

2.8M People served in Twin Cities region

111 Communities connected to our system

938 Active industrial discharge permits administered

- ✓ 509 Standard Discharge Permittees
- ✓ 92 Special Discharge Permittees
- ✓ 89 Liquid Waste Haulers
- ✓ 248 General Discharge Permittees
- ✓ 832 Dental Clinics in the Amalgam Recovery Program

Clean water regulation

Clean Water Act / 40 CFR Part 403

- ✓Categorical Standards
- ✓General Pretreatment Regulations

EPA Region 5

- ✓Delegated to Minnesota Pollution Control Agency
- ✓Approval of Local Pretreatment Programs

Met Council Approved Pretreatment Program

- ✓Waste Discharge Rules
- ✓Local Limits

Permit types

Permit Criteria/Characteristic	Standard/Special Discharge Permit	Low Impact Standard Discharge Permit	General Discharge Permit
Effective Duration	3 years	5 years	5 years
Reporting Frequency	Quarterly, Semi-Annual, Annual	Annual	Annual
Required to Sample	Yes, every reporting period	Yes, once per permit cycle	No
Subject to General Permit Conditions	Yes	Yes	Yes
Subject to Specific Permit Conditions	Yes	Yes	Yes
Subject to Best Management Practices	No	No	Yes
Required Submittals with SMRs	Yes	Yes	Yes
Number Issued:	**601**	**39**	**248 + 832**

General Permit Types: Hospitals, Microbrewery, Sewer Cleaning Waste Haulers, Water Treatment Plants, and Zero Discharge Categorical Industrial Users, and Dental Clinics

Special Discharge Approvals

Special discharge approval is required for ANY industrial waste separate from your existing permit-regulated waste stream(s)

Any additional industrial discharges can:

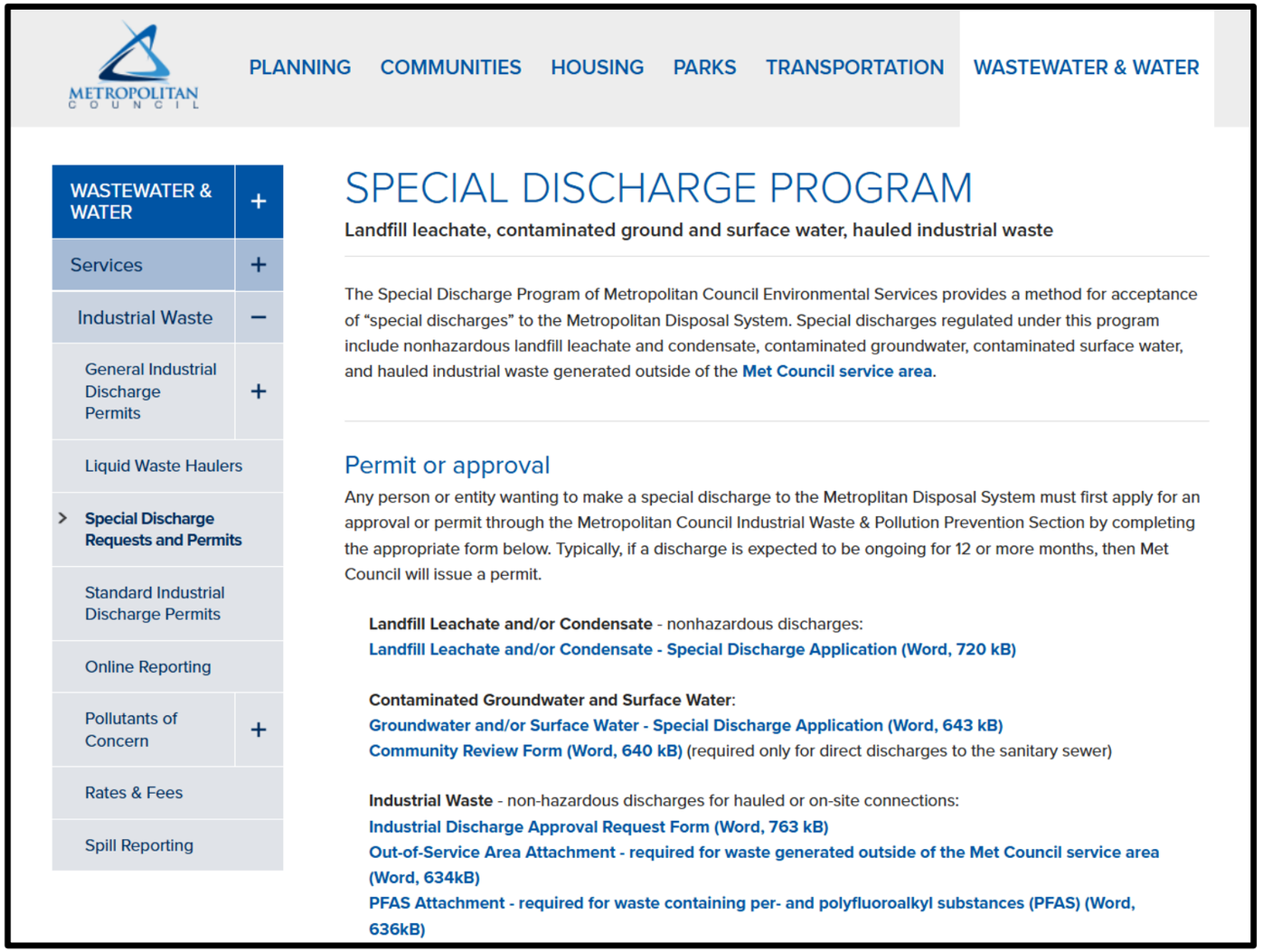
- Be high in Chemical Oxygen Demand, Suspended Solids, Oil and Grease, metals, and other pollutants of concern that can cause operational issues or recover cost recovery
- Have a potential for pass through leading to detrimental compliance or environmental impacts

Contact your IWPP permit contact for more information and clarification

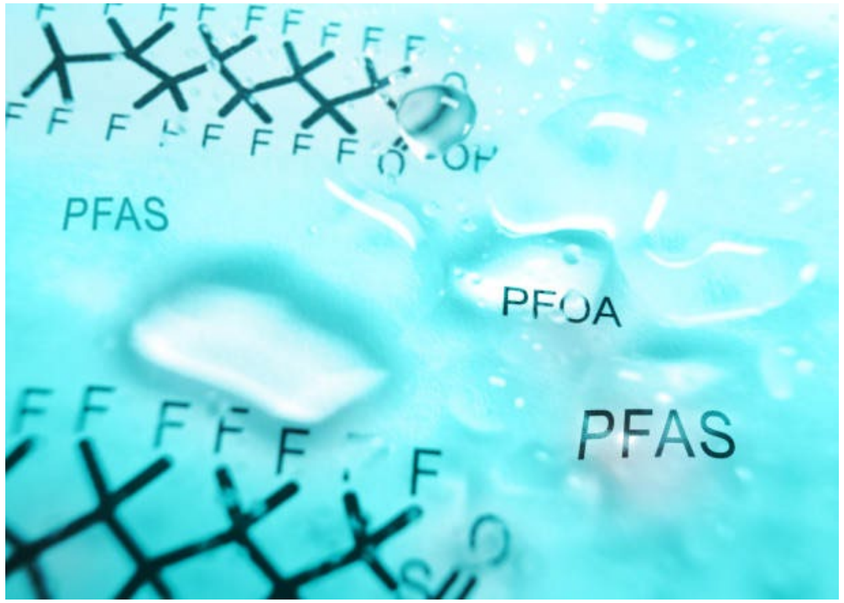
Special Discharge Approval Process

Visit our Website

- Complete the Request Form and additional forms, if required
- Submit your request to your IWPP permit contact
- We will review your request and make a determination
- Must meet all applicable pretreatment standards and not be a prohibited waste
- If approved, you will receive an Approval Letter that outlines discharge conditions and requirements
- Determination process can take up to 30 days



Regulatory updates



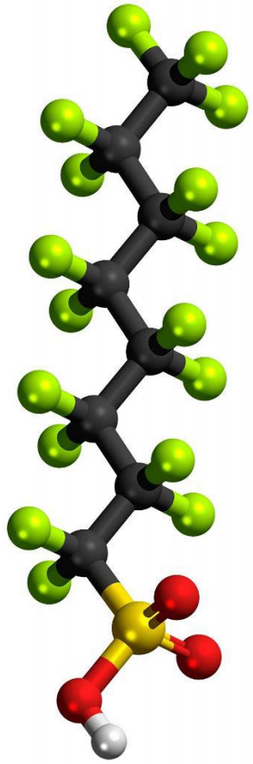
- PFAS 101
- EPA’s Effluent Guidelines Plan (ELG) 16
- Completed PFAS Source Identification and Reduction Work
- Upcoming PFAS Source Identification and Reduction Work
- Impacts to Met Council’s Industrial Users

What is PFAS?

Per-and polyfluoroalkyl substances

- A class of over 9,000 man-made chemicals
- Used in industrial and consumer products for over 70 years
- Repel oil, water and heat
- Used in firefighting foam and fume suppressants

Why is PFAS an issue?



PFAS are nicknamed the “forever chemicals”

- PFAS contain a strong carbon-fluorine bond that doesn’t break down in the environment
- Many bioaccumulate in the bodies of humans and animals
- Found in many public drinking water supplies
- Many exhibit health concerns at very low levels
  - Elevated serum-cholesterol
  - Ulcerative colitis
  - Thyroid disease
  - Kidney and testicular cancers
  - Pregnancy-induced hypertension
  - Immunotoxicity in children

Where is PFAS found?

Everywhere

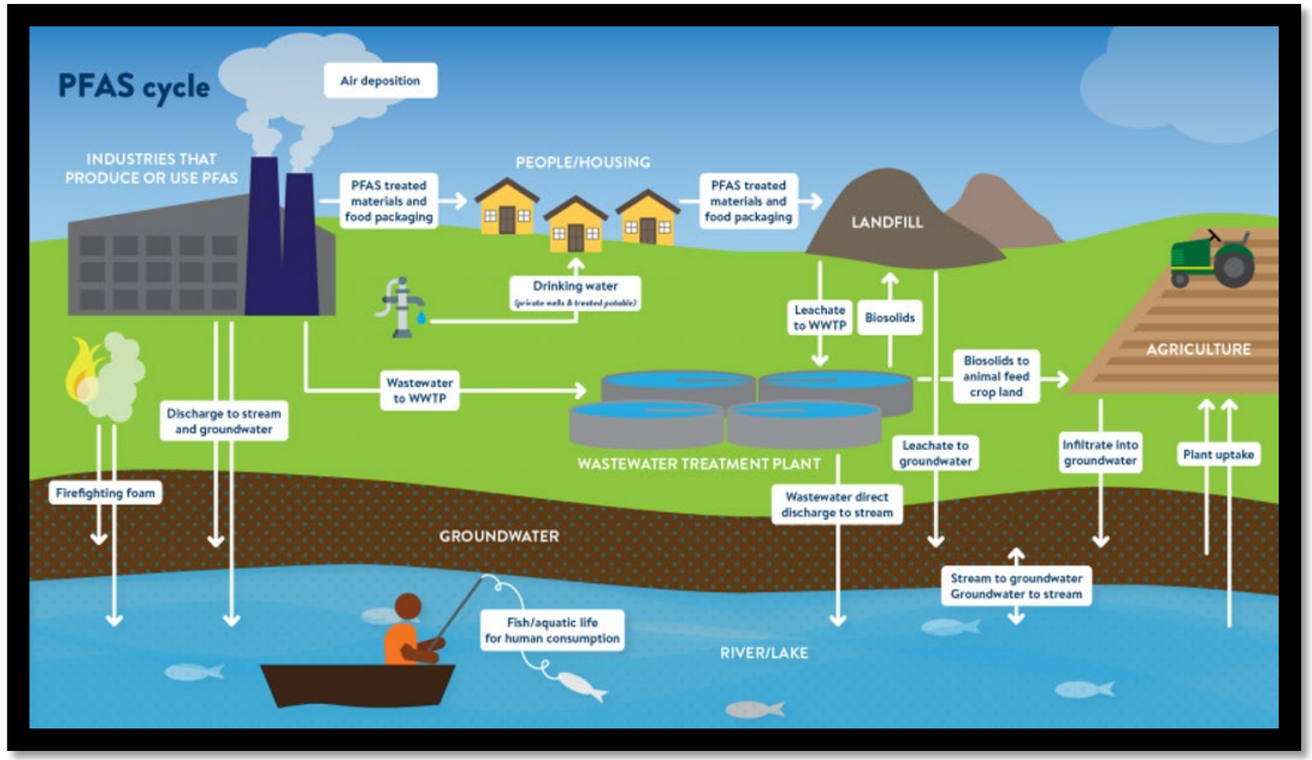
- Recycles between sources
- Degrades to terminal compounds

Sources

- Industrial
- Residential

Major Conduits

- Wastewater treatment plants
- Solid waste landfills



Source: MPCA Website - https://www.pca.state.mn.us/waste/pfas-101

EPA's Effluent Limits Guideline (ELG) Plan 16

Plan 16 was published in December 2024

- **Initiation of new studies to collect information and determine if revisions or new rulemaking is needed:**
  - **Battery Manufacturing Category (1986)**
    - Significant changes in the types and number of batteries produced in the US
    - Increased nutrients and metals in discharges as manufacturing processes evolve
    - Existing ELGs do not cover wastewater from recycling operations
  - **Centralized Waste Treatment (CWT) Category (2003)**
    - Michigan data shows most CWTs have detectable PFAS in the wastewater they discharge to POTWs
    - Goal is to better understand sources of PFAS to CWTs and to characterize their discharges and ability to treat for PFAS

EPA's Effluent Limits Guideline (ELG) Plan 16

Update on Ongoing Studies

- **Pulp, Paper and Paperboard**
  - Industry planned to eliminate PFAS use by 2023
  - Grease-proofing materials containing PFAS are no longer sold in the US, per FDA
  - No revisions to the ELGs are needed
- **Textile Mills Category**
  - Few alternatives to PFAS exist for textile and carpet manufacturers
  - They will continue to use PFAS to remain competitive with their products
  - Study will continue with a mandatory questionnaire and evaluation of existing ELGs
- **POTW Influent Study**
  - Second comment period has ended
  - No other updates are available at this time

EPA’s Effluent Limits Guideline (ELG) Plan 16

Updates on Ongoing ELGs and Rulemaking Efforts

Pollutant(s) to be Addressed	Category	December 2024 Status
Nutrients	40 CFR Part 432 - Meat and Poultry Products	Final action by August 2025
PFAS	40 CFR Part 433 - Metal Finishing	Published rule in Spring 2026
PFAS	40 CFR Part 413 - Electroplating	Published rule in Spring 2026
PFAS	40 CFR Part 445 - Landfills	Revised ELGs in 2027

Update on EPA Method 1633A

In promulgation process to be added to 40 CFR Part 136

EPA Method 1633A – Published December 2024

- Detects 40 different PFAS compounds
- Started the promulgation process in December 2024
- Once promulgated, this method will be the Clean Water Act method used to determine PFAS substances in the following matrices:

Wastewater	Soil
Surface Water	Biosolids
Groundwater	Sediment
Landfill Leachate	Fish Tissue

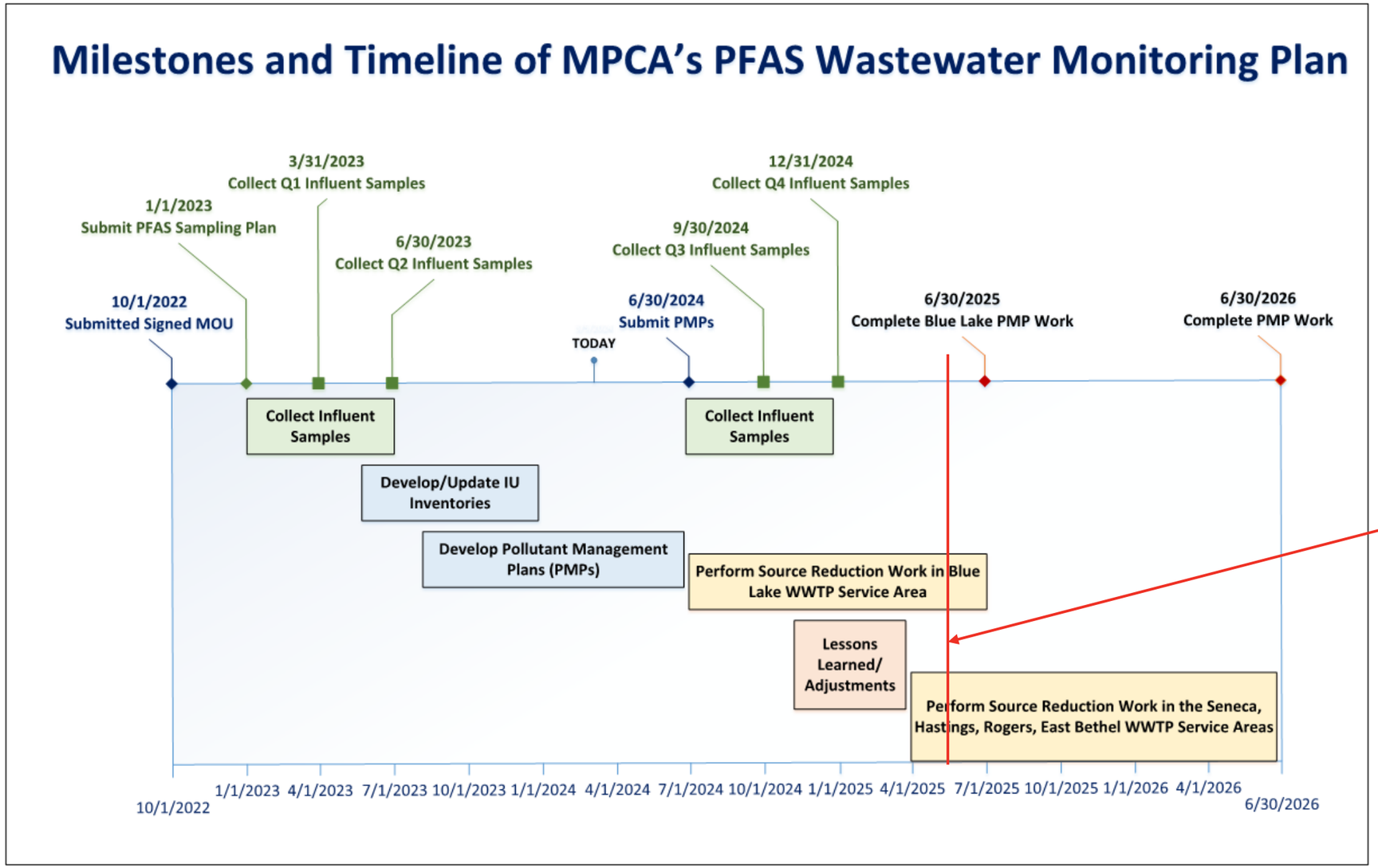
We continue to partner with MPCA

MPCA's PFAS Monitoring Plan published in March 2022

Objectives:

1. Gather information to craft policies around PFAS and their incorporation into MPCA programs
2. Identify areas of concern that need quick action
3. Gather data to support source reduction and pollution prevention

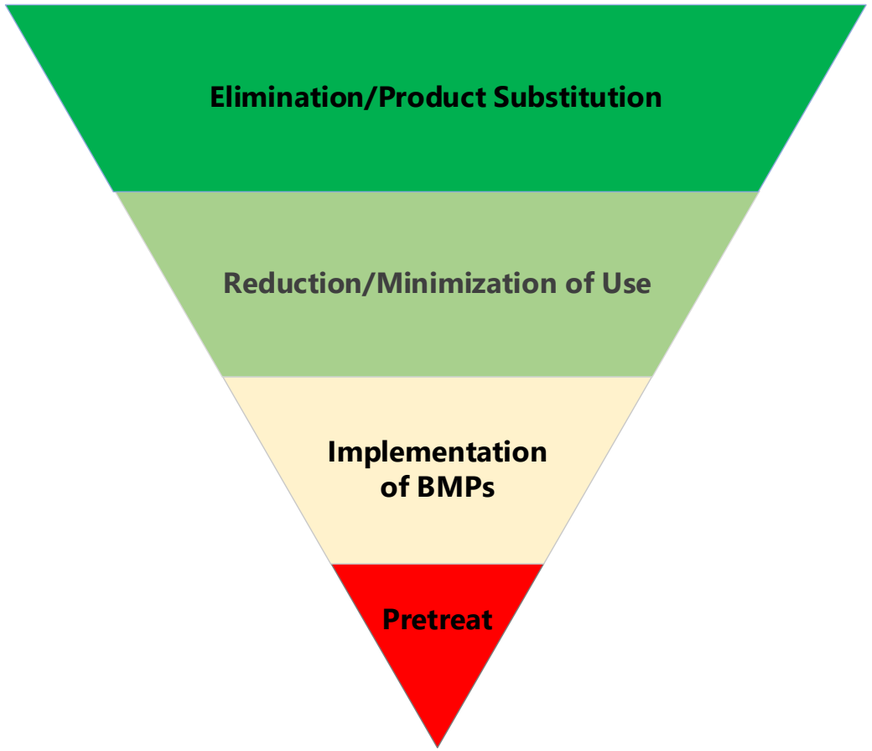
Timeline – Wastewater monitoring plan



We are here

Source Reduction Works!

Source Control Hierarchy



Pollutant Management Plan Goals

- Identify sources of PFAS in our influent
- Prioritize efforts on higher loading sources and work our way down
- Discuss intentional and unintentional PFAS that may be in their wastewater discharge
- Encourage product substitutions and elimination
- Minimize the need for extensive pretreatment systems

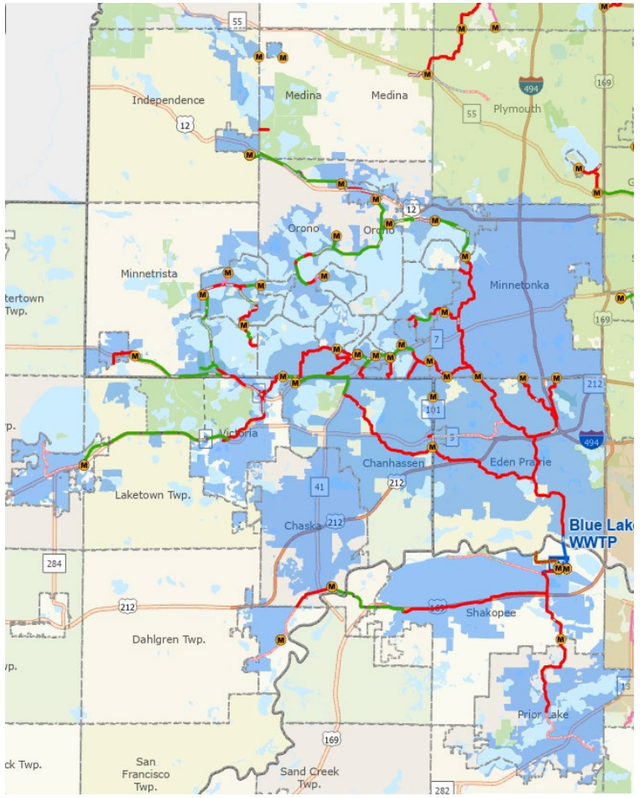
Work Completed since 2024 Workshop

- **The remaining influent samples were collected**
- **We submitted our PFAS Pollutant Management Plan to MPCA**
- **We sampled our biosolids at Blue Lake for PFAS**
  - PFOA + PFOS < 20 ppb
  - Remains an Exceptional Quality biosolids
- **We focused initial sampling and source reduction work on our Blue Lake service area**
  - We completed extensive sample in the collection system
  - We met with industries to identify sources
  - We have begun source reduction conversations
  - We are assembling a list of products known to contain PFAS

2024 Blue Lake Collection System Study

Conducted a 5-day project to identify sources

- Automatic samplers were set-up at three locations
- A 100 mL sample was collected every 20 minutes into a 10L carboy to collect a time-paced 24-hour sample
- Samples were analyzed for 40 PFAS compounds using EPA 1633

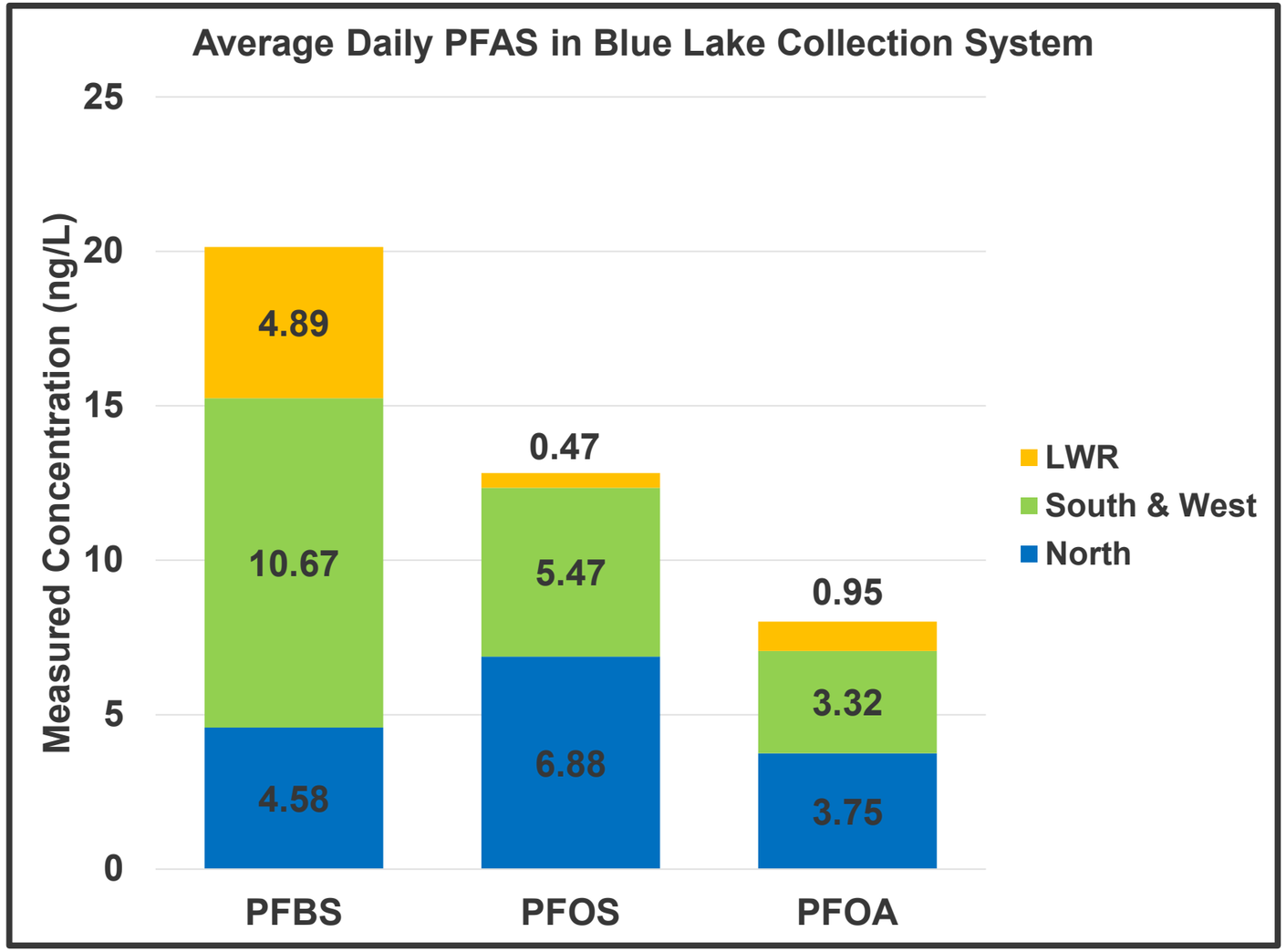


Location	Sewershed
I-6904	Communities south and west of the plant
I-6903	Meter 409 + Liquid Waste Receiving (LWR)
Meter 409	Communities north of the plant

Blue Lake Study Results

Conclusions

- For PFOS and PFOA, fairly equal concentrations are coming from communities to the north and from the south and west
- No true “smoking gun” to help prioritize industrial source identification and reduction work
- Hauled waste contributes extra loading for these 3 PFAS compounds



2024 Industrial Sampling

We sampled 27 facilities discharging to Blue Lake

- We collected 33 samples in total
- We tried to collect composite samples to get a better idea of how much PFAS was in a facility's discharge
- Only 9 samples were grabs, the rest were composite samples
- For composite sampling, automated samplers were set up to collect a 100 mL sample every 15 minutes into the 10-liter carboy container

Industry Type	Number Sampled
Metal Finishing	7
Chemical Products	6
Semi-Conductors	3
Medical Products	2
Printed Products	2
Landfills	2
Paper Products	1
Plastic Products	1
Building Materials	1
Industrial Laundry	1
Water Treatment	1

Where we found PFOA, PFOS and PFBS

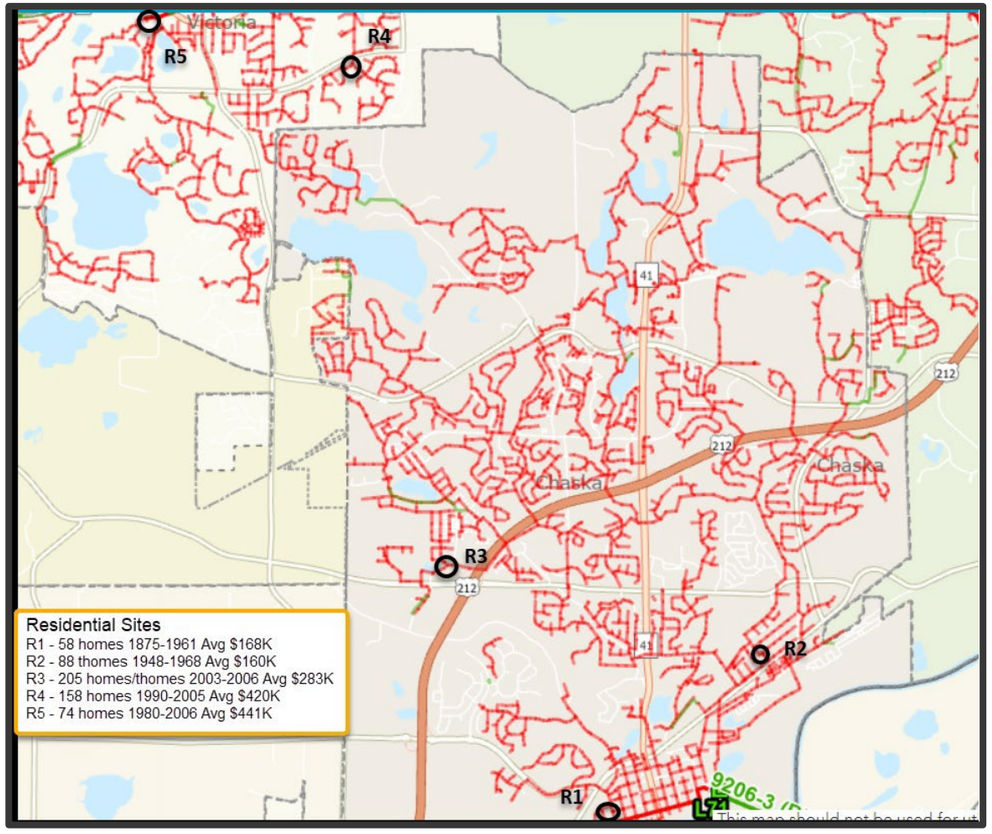
Higher Concentrations

- Chemical manufacturers
- Personal care product manufacturers
- Printers
- Paper/packaging manufactures

Lower Concentrations

- Most metal finishers
- Semi-conductor/electronic products manufacturers
- Building materials manufacturers
- Industrial laundry
- Municipal water treatment facilities
- Food/beverage manufacturers

We also Sampled at 5 Residential Sites



- **We collected samples as grab composites:**
  - Early morning (6 - 8 am)
  - Midday (11 am – 1 pm)
  - Early evening (5 – 8 pm)
- **We collected samples on 3 separate days:**
  - Tuesday
  - Thursday
  - Saturday
- **All sites have no known detectable PFAS compounds in source drinking water per MDH's PFAS dashboard**

Site	Community	No of Homes	Age of Homes
1	Chaska	58	1875 – 1961
2	Chaska	83	1948 – 1968
3	Chaska	232	2003 – 2006
4	Victoria	156	1990 – 2005
5	Victoria	74	1980 - 2006

Residential PFAS results – 5 WRRFs

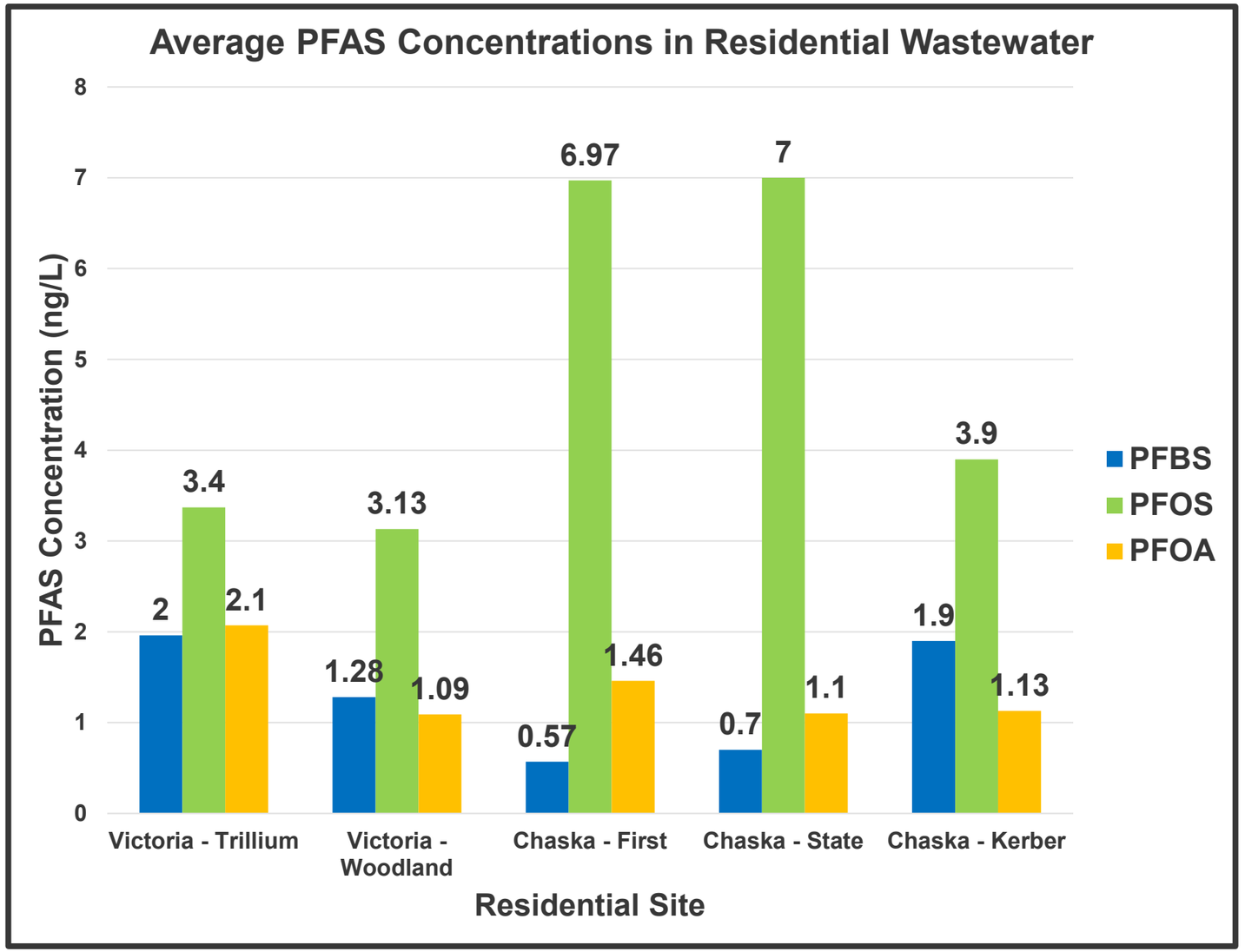
PFAS Compound	95% Confidence Interval using Half the PQL Value (ng/L)	EPA Maximum Contaminant Limit for Drinking Water (ng/L)
PFOA	1.22 – 3.65	4.0
PFOS	2.98 – 5.21	4.0
PFBS	1.26 – 2.25	
PFHxS	0.82 – 1.45	10.0
PFNA	0.55 – 1.04	10.0
HFPO-DA	1.78 – 3.99	10.0

- Data from Met Council, Western Lake Superior Sanitary District, St Cloud, Rochester and Mankato
- Table represents 34 samples from 24 different sites
- PQL = Practical Quantification Limit, not equivalent to the Method Detection Limit
- Source water for 3 of 5 communities had no detectable PFAS
- In the broader study, home age and median value were not statistically significant

Average PFAS Concentrations by Site

Conclusions

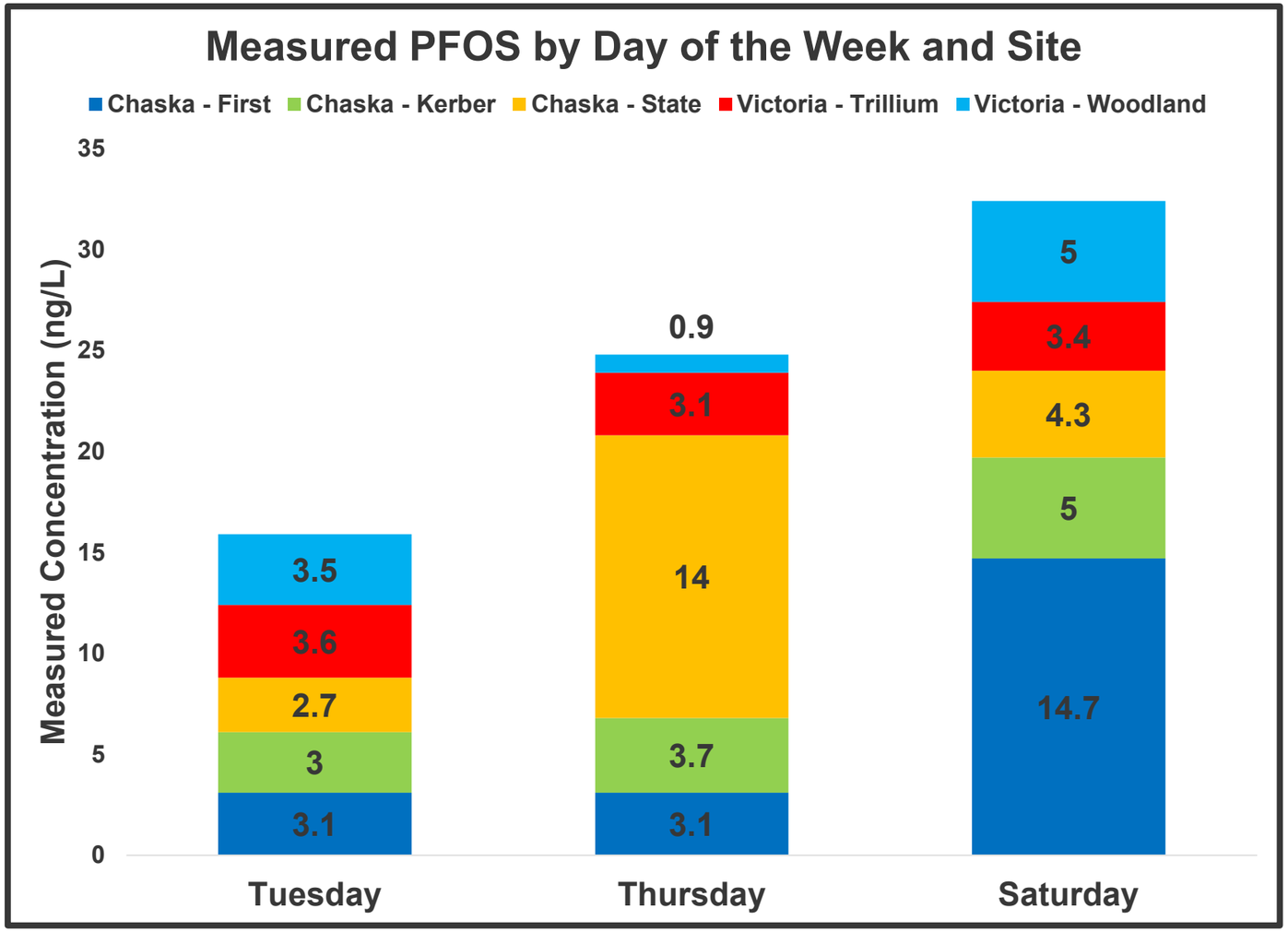
- This is only Met Council data
- This represents averages of samples collected on Tuesday, Thursday and Saturday
- PFOS averages are driven by higher concentrations at two Chaska sites
- Homes at these two sites were built before 1970, when PFOS and PFOA were widely in use
- Median home values for those two Chaska sites was lower than the other three sites



PFOS Concentrations by Site and Day

Conclusions

- We see the highest PFOS concentrations coming from the two Chaska sites on Thursday and Saturday
- Four of the five sites had the highest PFOS on Saturday, when people may be home catching up on cleaning and laundry
- More sampling of weekend wastewater is needed



MPCA Study on PFAS in Domestic Septage

13 Minnesota communities will participate

- **Study will characterize the types and concentrations of PFAS in domestic septage using EPA Method 1633A:**
  - Portable toilet waste
  - Single family residential septic tank
  - Domestic holding tank waste
  - Large septic systems from mobile home parks
- **All samples will be collected by May 15, 2025**
- **Domestic waste is an uncontrollable source of PFAS for pretreatment programs**
- **Data will help communities prioritize source control work**
- **Study provides a baseline to measure the success of Minnesota's product bans**

Met Council SIU Sampling Change in 2025

PFAS sampling across our service area

- We decided to sample for PFAS at SIUs across our service area in the next two years
- We have elected to collect these samples and incur this expense
- SIUs represent 25% of our issued permits and almost 80% of the total flow from industrial users
- **Now is the time for source identification and reduction work, before there are limits and expensive pretreatment equipment and processes are required**

2025-2026 PFAS Work Plan

Activity	April – June 2025	July – December 2025	January – June 2026	July 2026 and Beyond
Conduct PFAS sampling at SIUs across our service area				
Conduct PFAS (and sulfates) sampling at 32 municipal water treatment facilities				
Conduct collection system monitoring in Seneca service area, including domestic and commercial sources				
Study industry practices and conduct PFAS sampling at carpet cleaning facilities				
Develop BMPs (and possibly a general permit) for carpet cleaning facilities				
Hold a PFAS Meeting via Teams in July for all services areas				
Continue to build a list of products that contain PFAS				
Work with IUs to identify and reduce PFAS in their discharge				

How we are funding this work

MPCA Grant of $125,000 to help offset analytical costs

- Conduct extensive monitoring in our Seneca service area
  - Collection system monitoring
  - Residential and commercial sources
  - Sample ~30 permitted IUs
- Sample discharge from 154 SIUs across our entire service area ; approximately 122 samples will be covered by the grant.
- Sample discharge from 30 municipal water treatment facilities
- Partner with 5-6 carpet cleaners to study their industry and collect 30 samples from a variety of sites serviced
- Develop a general permit and Best Management Practices for carpet cleaners
- Work with IUs to reduce PFAS in their discharge

How will you be impacted?

We are expanding our work to ALL service areas in 2025

- We will ask you to use MPCA's desktop screening tool to assess your facility's PFAS risk
- We will share tips on how to review SDS for products with PFAS
- We will ask you to complete and submit our PFAS Products Survey
- We will develop and share an anonymous list of known PFAS-containing products reported on the survey
- We will encourage you to explore our PFAS educational website to learn how to manage PFAS at work and in your home

PFAS - Metropolitan Council (metrocouncil.org)

MPCA’s desktop screening tool

Goals

- Identify PFAS-containing products that are not essential to your operations or your final product
- Proactively evaluate changes that could affect operational costs
- Prepare you for PFAS product bans and MPCA’s Reporting Rule effective January 1, 2026
- If needed, aid in developing a source reduction plan

Tips for reviewing Safety Data Sheets (SDS)

- **Obtain PDFs to make electronic searching easier**
- **Focus on these SDS sections:**
  - Composition
  - Ingredients
  - Regulatory Information
  - Compliance
- **Look for compounds with very long names**

SECTION 2: INGREDIENTS

Ingredient	C.A.S. No.	% by Wt
WATER	7732-18-5	83 - 87
DIETHYLENE GLYCOL BUTYL ETHER	112-34-5	5
ALKYL SULFATE SALT +(5890P)	Trade Secret	1 - 5
AMPHOTERIC FLUOROALKYLAMIDE DERIVATIVE + (5887P)	Trade Secret	1 - 5
INORGANIC ACETATE SALT + (5892P)	Trade Secret	1 - 5
THICKENERS + (5127P, 5123P)	Trade Secret	1 - 5
PERFLUOROALKYL SULFONATE SALTS(5) +(5144P)	Trade Secret	0.1 - 1
RESIDUAL ORGANIC FLUOROCHEMICALS	Mixture	Not Known

- **Key search words:**
  - Fluor or Fluoro
  - Surfactant
  - Confidential, Trade Secret or Proprietary
  - PTFE – acronym for polytetrafluoroethylene
- **Other fluoropolymers to search for:**
  - Ethylenechlorotrifluoroethylene (ECTFE)
  - Ethylene tetrafluoroethylene (ETFE)
  - Fluorinated ethylene propylene (FEP)
  - Perfluoroalkoxy alkanes (PFA)
  - Polychlorotrifluoroethylene (PCTFE)
  - Polyvinylidene fluoride (PVDF)

Completing our PFAS Products Survey

Report your PFAS risk and information on PFAS-containing products

- Product Name
- Manufacturer
- CAS Number of each PFAS compound present (if known)
- Frequency of use
- Quantity used per year and reported units
- Why is the product containing PFAS used?
- Is the product discharged to the sanitary sewer?
- Do you know of any acceptable substitutes that are PFAS-free?

	A	B	C	D
1	**Permittee/Company Name:**			
2	**Met Council Permit Number:**			
3	**Industry Type:**			
4	**Self-Reported NAICS Code(s):**			
5	**Name of Respondent:**			
6	**Title of Respondent:**			
7	**Email of Respondent:**			
8	**Phone Number of Respondent:**			
9				
10	**Select the Risk Rating from MCPA's Desktop Tool:**		Medium	
11				
12	**Please list all products used at your facility that contain PFAS:**			
13	Product Name	Manufacturer	CAS Number of PFAS compound	Frequency of Use
14				
15				
16				

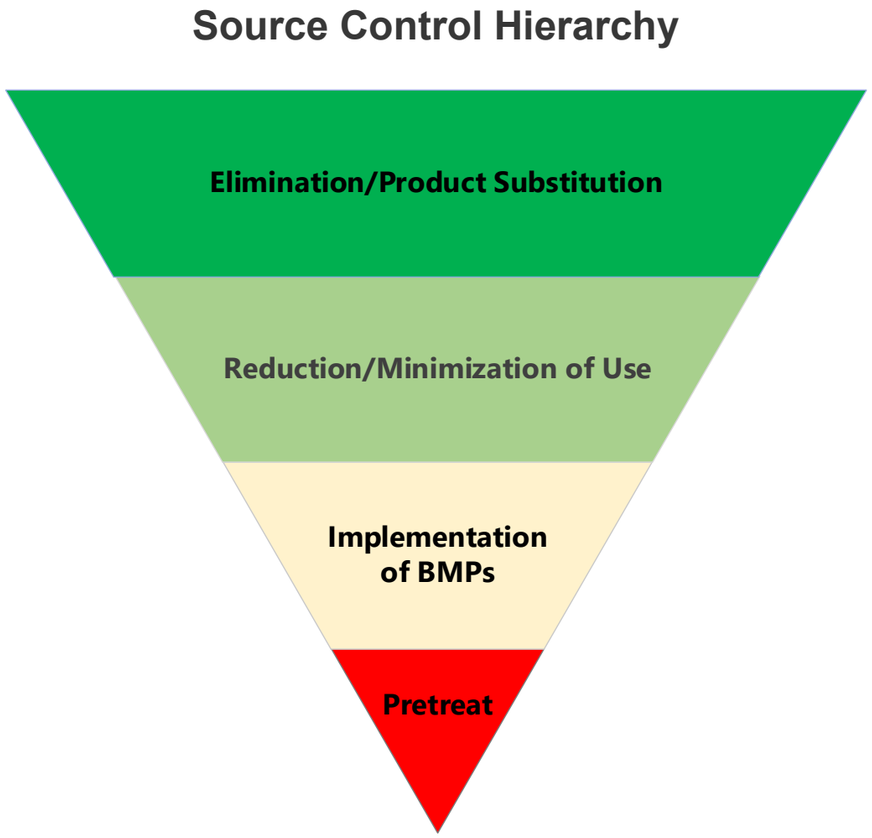
Allows for the submittal of confidential information from your supplier

Results: PFAS Products Survey

We are compiling a list of products with PFAS

- Permitted IUs in Blue Lake are submitting their surveys
  - 56 surveys have been received
  - 8 have asked for extensions
- Over 150 unique products have been reported
- List will not identify any facilities that use the product
- Products types where PFAS is found:
  - Adhesives, glues and sealants
  - Lubricants and refrigerants
  - Cleaners and degreasers
- List will be available in July 2025

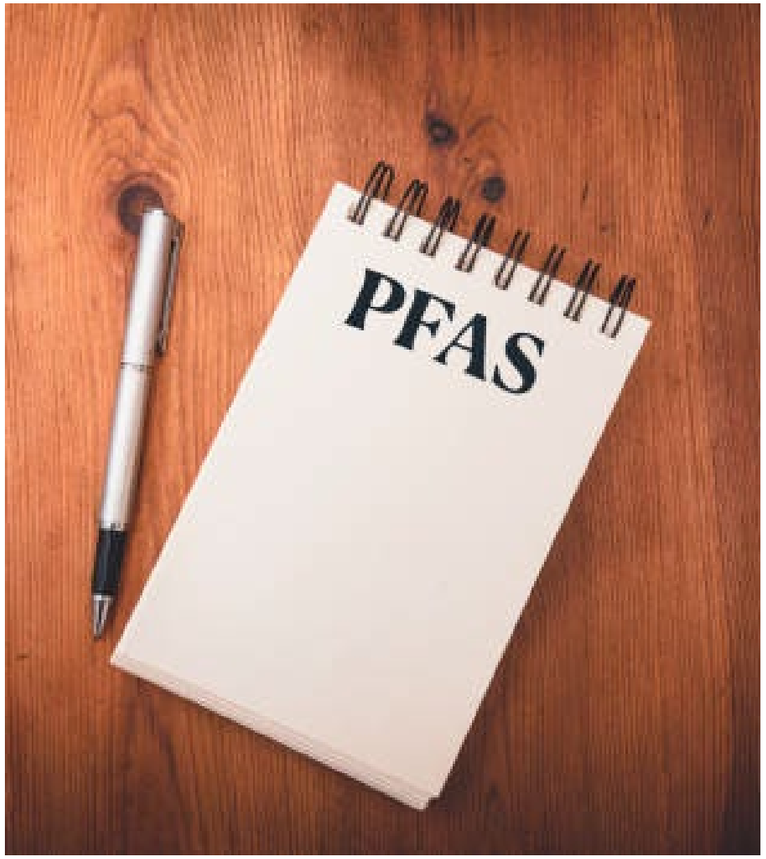
What if you use products with PFAS?



Are they essential to your operations?

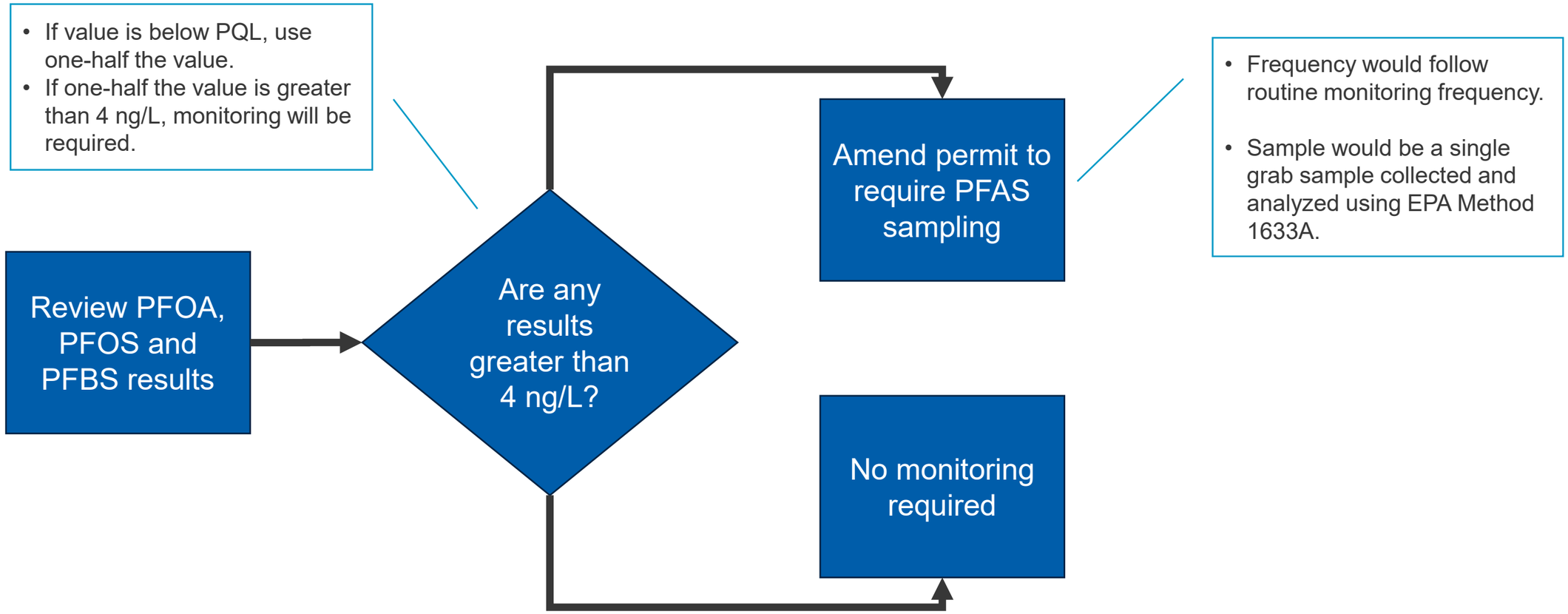
- **If NO:**
  - Eliminate the usage of the product
  - Reduce and develop a plan to eliminate use
  - Pretreatment should always be the last resort
- **If YES**
  - Consider looking for safer alternatives
  - Consider replacement costs versus future regulatory compliance costs and liability risks
  - Consider replacing fluorine-containing fire suppression foam
  - Develop a plan for 2032 when the full product bans goes into effect in Minnesota

We are developing policies and strategies



- **Short-term:**
  - When to require PFAS monitoring for known dischargers
  - How to reduce PFAS from domestic and commercial sources
- **Longer-term:**
  - When to require facility to submit pollutant minimization plans
  - When and where to require pretreatment prior to discharge

Proposed required monitoring policy



Provide feedback to Tina Nelson at 651-602-4728 or via email at martina.nelson@metc.state.mn.us

Regulatory landscape is evolving

We will continue to monitor MPCA and EPA

- **MPCA finalized their PFAS biosolids strategy in January 2025**
- **MPCA is currently working on their municipal wastewater treatment plant permitting strategy**
  - 7 of our 9 WRRFs discharge upstream or directly into Pool 2 of the Mississippi River
  - Current Water Quality Criteria for PFOS in Pool 2 is 0.05 ng/L
  - None of our NPDES permits will be renewed until the strategy is implemented
- **No recent updates from EPA on the POTW Influent Study and in-progress PFAS rulemaking**

MINNESOTA POLLUTION CONTROL AGENCY

EPA United States Environmental Protection Agency

PFAS Bans in Minnesota

It will be harder to buy products with PFAS

- **January 2024:** Bans on firefighting foam and PFAS in food packaging
- **January 2025:** Amara's Law prohibits the sale of many products with intentionally added PFAS.
- **January 2026:** Manufacturers must report products not covered by Amara's Law that have intentionally added PFAS and why PFAS is added to them.
- **January 2032** – All products that contain intentionally added PFAS will be prohibited from sale in Minnesota unless they obtain an unavoidable use exemption.

2025 PFAS prohibitions | Minnesota Pollution Control Agency (state.mn.us)

Disposal of PFAS Containing Products (MPCA)

Do not dispose of any liquid products in the sanitary sewer or a septic system.

Place in Solid Waste

- Carpet, rugs and upholstered furniture
- Cookware
- Cosmetics and personal care products
- Dental floss
- Food packaging
- Juvenile products
- Menstruation products
- Textile furnishings and water-resistant fabrics

Bring to Hazardous Waste Center

- Class B firefighting foam concentrate
- Aerosol propellant-based cleaners and air fresheners
- Cleaning products, including glass and hard surface cleaners
- Dishwashing rinse aids
- Liquid/spray fabric treatments for fabric, upholstery and carpets
- Ski wax
- Waxes and polishes for floors, furniture and vehicles

[Disposing of PFAS products | Minnesota Pollution Control Agency (state.mn.us)]

Minnesota Technical Assistance Program (MnTAP) Projects

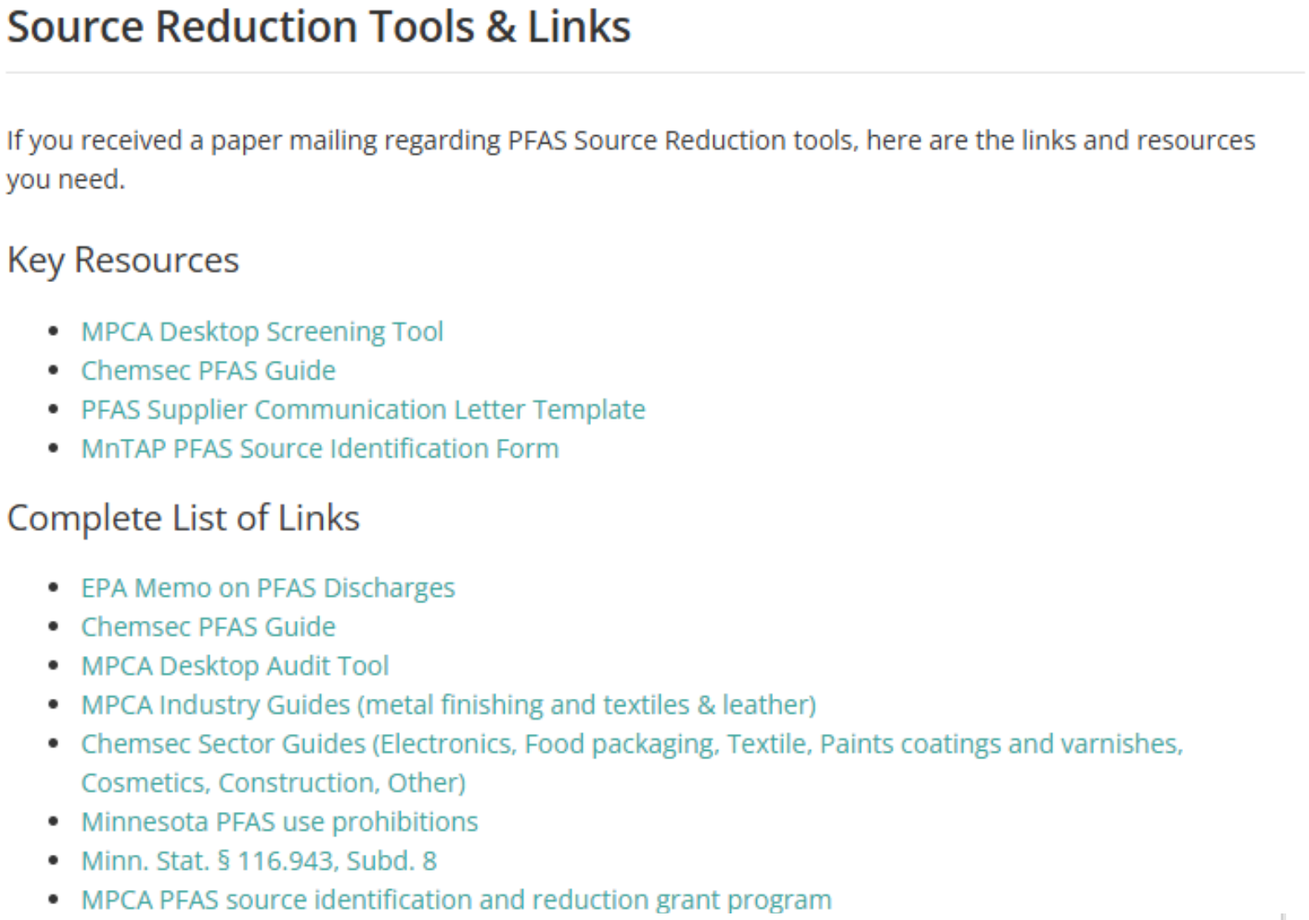
Kelsey Klucas and
Kevin Philpy

MnTAP is here to help!

- New tools and resources
- New and ongoing projects focusing on reducing PFAS in industry
- New project focusing on destroying PFAS in biosolids and spent media
- New position focused on supporting PFAS work

Tools and Resources

- We are building our new PFAS website at http://www.mntap.umn.edu/focusareas/chemicals/pfas/
- All our resources are posted on this webpage
- More improvements and additions to come!



Source Reduction Tools & Links

If you received a paper mailing regarding PFAS Source Reduction tools, here are the links and resources you need.

Key Resources

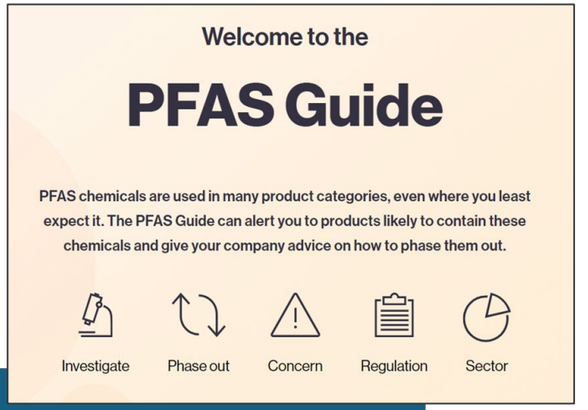
- MPCA Desktop Screening Tool
- Chemsec PFAS Guide
- PFAS Supplier Communication Letter Template
- MnTAP PFAS Source Identification Form

Complete List of Links

- EPA Memo on PFAS Discharges
- Chemsec PFAS Guide
- MPCA Desktop Audit Tool
- MPCA Industry Guides (metal finishing and textiles & leather)
- Chemsec Sector Guides (Electronics, Food packaging, Textile, Paints coatings and varnishes, Cosmetics, Construction, Other)
- Minnesota PFAS use prohibitions
- Minn. Stat. § 116.943, Subd. 8
- MPCA PFAS source identification and reduction grant program

ChemSec Analysis and Customizable List

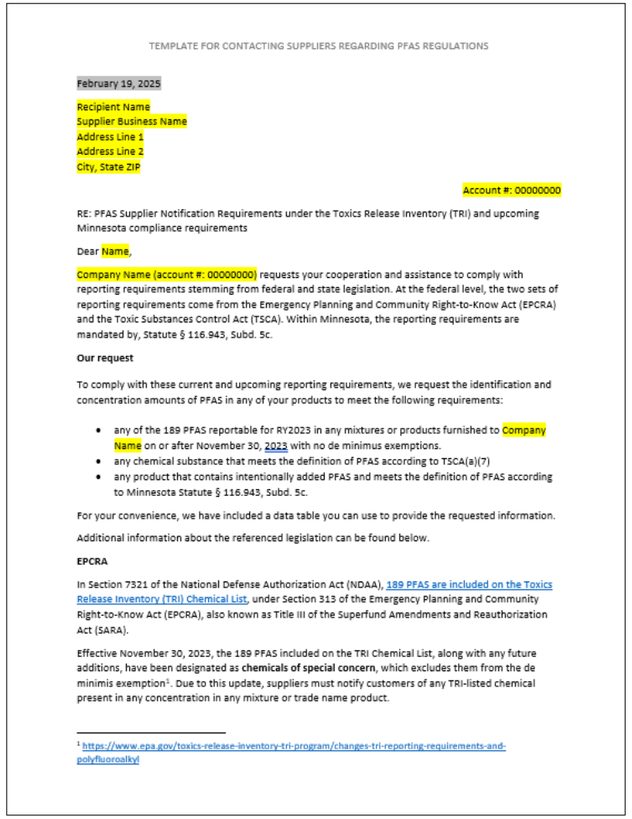
- This tool is based on the PFAS Guide developed by ChemSec provides a guide for where to look for sources of PFAS in your operations
- It identifies common uses of PFAS customized by industry, as well as uses common to any business (floor wax, Teflon tape, etc).



Relevant	Industry	Ubiquitous	Sector	Use	Function	Material	CAS
TRUE	No	Ubiquitous	Building and Construction	PTFE tape	-	Plastics	9002-84-0
TRUE	Yes		Coatings, paints and varnishes	Coatings	Lubricity	-	9002-84-0
TRUE	Yes		Coatings, paints and varnishes	Metal protection	Durability	Metal	-
TRUE	Yes		Coatings, paints and varnishes	Paints additives	Anti-blocking properties	-	-
TRUE	Yes		Coatings, paints and varnishes	Paints additives	Corrosion resistance	-	24937-79-9, 9002-84-0, 146915-43-7, 25101-45-5, 25067-11-2
TRUE	Yes		Coatings, paints and varnishes	Paints additives	Durability / abrasion resistance/ scratch resistance / UV resistance	-	24937-79-9, 9002-84-0, 146915-43-7

PFAS Supplier Communication Template

- Currently, the only way to know for sure if a material contains PFAS is to **ask your supplier**. This should become easier after 2026 reporting deadlines.
- **Various definitions** of PFAS are used by EPA, Minnesota, and other groups. This can make it difficult to get the right information.
- Per MN Law, "PFAS" means **a class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom**.
- This letter template is intended to help explain more clearly what information is needed to comply with upcoming Minnesota regulations.
  - Designed to be sent to suppliers when asking about PFAS in their products.
  - Includes specific information for the Minnesota reporting requirements.
  - Also includes PFAS definitions and EPCRA and TSCA information.
  - A table is provided to assist in collecting the requested information.



TEMPLATE FOR CONTACTING SUPPLIERS REGARDING PFAS REGULATIONS

February 19, 2025

Recipient Name
Supplier Business Name
Address Line 1
Address Line 2
City, State ZIP

Account #: 00000000

RE: PFAS Supplier Notification Requirements under the Toxics Release Inventory (TRI) and upcoming Minnesota compliance requirements

Dear Name,

Company Name (account #: 00000000) requests your cooperation and assistance to comply with reporting requirements stemming from federal and state legislation. At the federal level, the two sets of reporting requirements come from the Emergency Planning and Community Right-to-Know Act (EPCRA) and the Toxic Substances Control Act (TSCA). Within Minnesota, the reporting requirements are mandated by, Statute § 116.943, Subd. 5c.

Our request

To comply with these current and upcoming reporting requirements, we request the identification and concentration amounts of PFAS in any of your products to meet the following requirements:

- any of the 189 PFAS reportable for RY2023 in any mixtures or products furnished to Company Name on or after November 30, 2023 with no de minimus exemptions.
- any chemical substance that meets the definition of PFAS according to TSCA(a)(7)
- any product that contains intentionally added PFAS and meets the definition of PFAS according to Minnesota Statute § 116.943, Subd. 5c.

For your convenience, we have included a data table you can use to provide the requested information.

Additional information about the referenced legislation can be found below.

EPCRA

In Section 7321 of the National Defense Authorization Act (NDAA), 189 PFAS are included on the Toxics Release Inventory (TRI) Chemical List, under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA), also known as Title III of the Superfund Amendments and Reauthorization Act (SARA).

Effective November 30, 2023, the 189 PFAS included on the TRI Chemical List, along with any future additions, have been designated as **chemicals of special concern**, which excludes them from the de minimis exemption[1]. Due to this update, suppliers must notify customers of any TRI-listed chemical present in any concentration in any mixture or trade name product.

[1] https://www.epa.gov/toxics-release-inventory-tri-program/changes-tri-reporting-requirements-and-polyfluoroalkyl

PFAS Management Strategy Framework

- **We suggest developing a plan that will guide your organization through the process of identifying PFAS in operations and create a framework for documenting the progress and outcomes.**
- **The following are suggested activities to consider incorporating into your plan:**
  - Investigate facility for potential sources of PFAS.
    - A variety of tools are available to help with this.
  - Work with vendors/suppliers to evaluate raw materials and products for any intentionally added PFAS.
    - Use the supplier letter when requesting information on the presence of PFAS.
    - MnTAP has developed a supplier letter template which we have attached to this email.
  - Maintain a full list of materials to be considered.
    - Document what has been evaluated, when, and the determination/response at that time.
  - Identify potential alternatives for PFAS containing materials.
    - Evaluate alternatives for substitution.
    - Document decision making criteria for whether products can be substituted. Why or why not.
  - Develop timeline for substituting or eliminating PFAS.

PFAS Source Identification and Reduction Projects

Two ongoing projects focusing on reducing PFAS in industry:

Project 1:

MnTAP PFAS Source Reduction Project

2022 – 2025

Focused on understanding where PFAS is found, assisting companies in finding it, and building tools to share knowledge and strategies

Project 2:

MnTAP PFAS in Metal Finishing Project

2025 - 2028

Focused on providing technical assistance to metal finishing industry by leveraging lessons learned in Project 1.

LCCMR Project 2024-257: Breaking the PFAS Cycle

This full-scale pilot will evaluate supercritical water oxidation (SCWO) for managing PFAS in biosolids and water treatment residuals. SCWO can destroy PFAS in a variety of wastes and recover energy.

Project outcomes will demonstrate the potential benefits of implementing SCWO for PFAS waste management in Minnesota. Implementing PFAS destruction reduces the potential load of PFAS that could be routed back to the environment, preserving the state's natural resources, improving water quality, and reducing potential for human exposure.

Funded by State of Minnesota LCCMR Project 2024-257

What is Supercritical Water?

- In “supercritical phase,” water behaves more like a “**non-polar” solvent**, where:
  - things like oxygen and organics become very soluble.
  - things like salts (Na, Ca, Fe, Cl, P, etc.) precipitate.
- The conditions are **highly oxidizing** and have no diffusion limits.
- As a result, most organics, including PFAS, are mineralized to CO_2

590°C (1100°F)
3500 PSI (240 Bar)

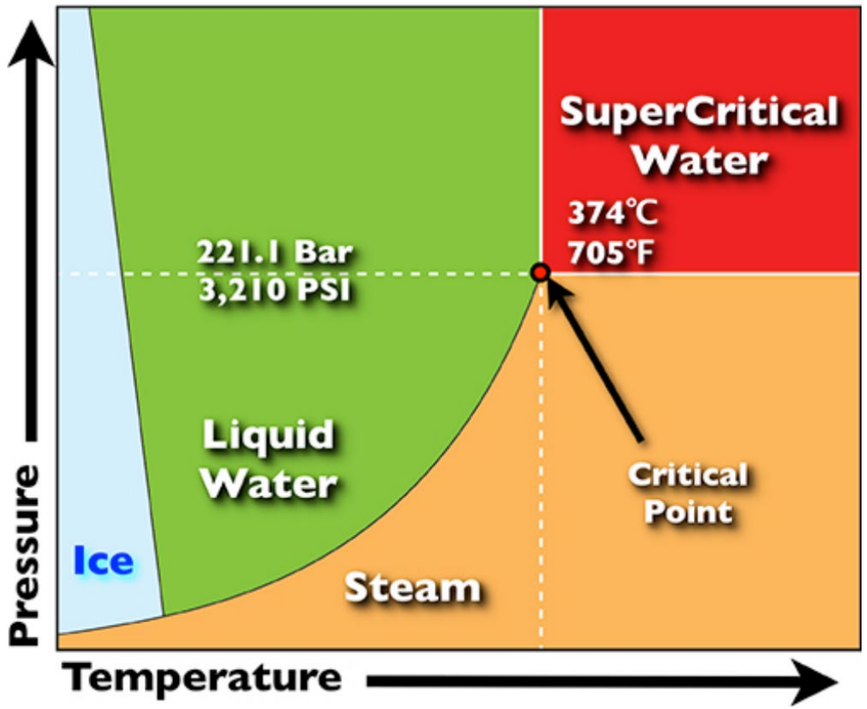
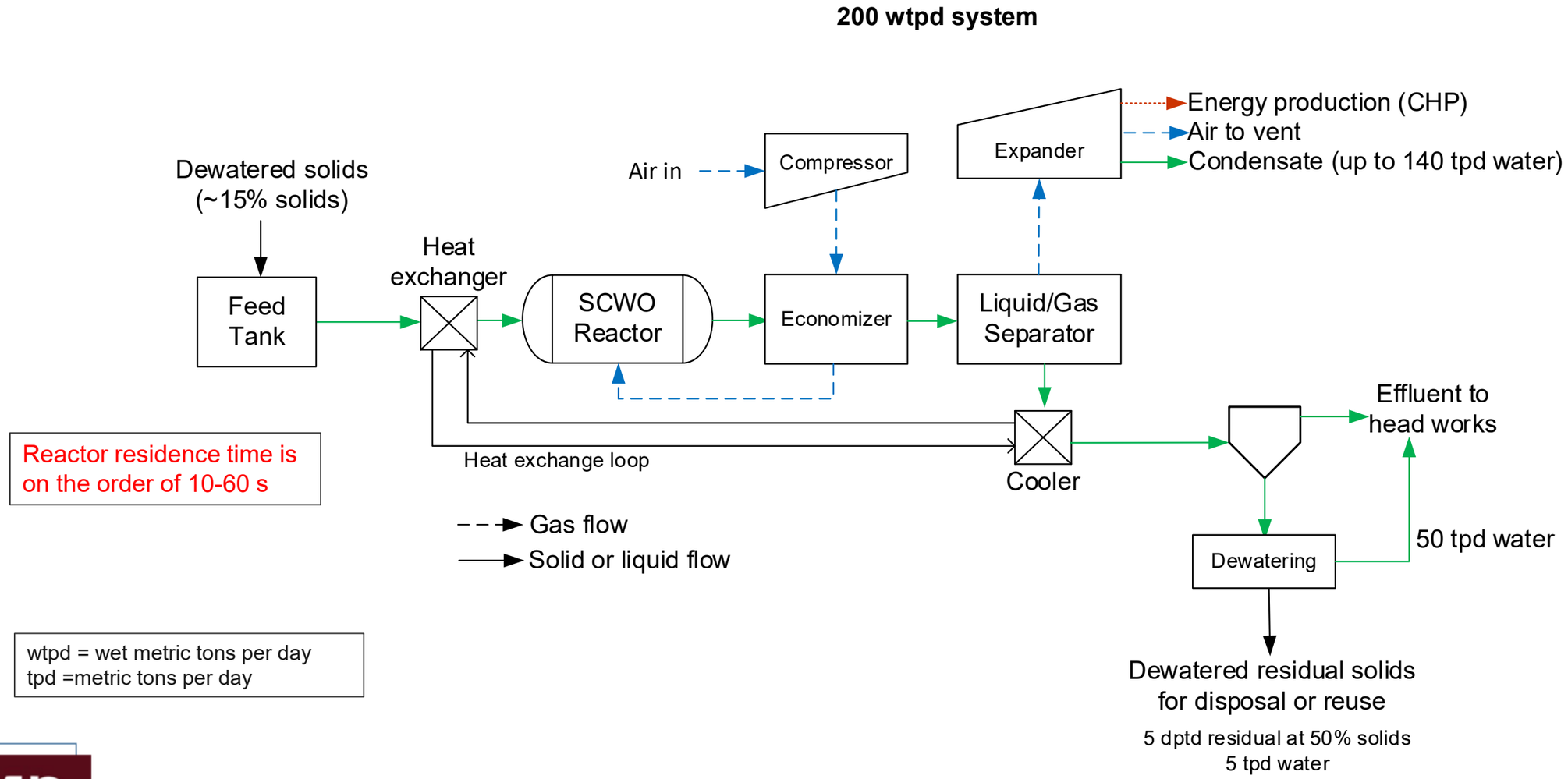


Image Credit: U.S. EPA PFAS Innovative Treatment Team. Potential PFAS Destruction Technology: Supercritical Water Oxidation. Research Brief. January 2021.

SCWO Treatment Process



Slide credit: Ali Ling

Project Team

BARR

Project management and delivery
Sampling coordination
Pilot plant design support

UNIVERSITY OF St.Thomas

Experimental design
Data analysis and evaluation
Undergraduate led sampling activities

CITY OF ST.CLOUD MINNESOTA

Host site for pilot, biosolids feedstock
Pilot installation and operational support

374WATER

Pilot equipment
Pilot operation

MnTAP

Communication and outreach
Student Intern

ENVIRONMENT AND NATURAL RESOURCES TRUST FUND

MnTAP is here to help!

We are building our team to support you with PFAS!

For assistance or questions contact:

- Jane Paulson, Senior Engineer
- 612-624-1826
- janep2@umn.edu
- OR
- Kelsey Klucas, Director
- 612-624-4619
- kluc0035@umn.edu

QR Code for MnTAP PFAS Page

Metropolitan Council

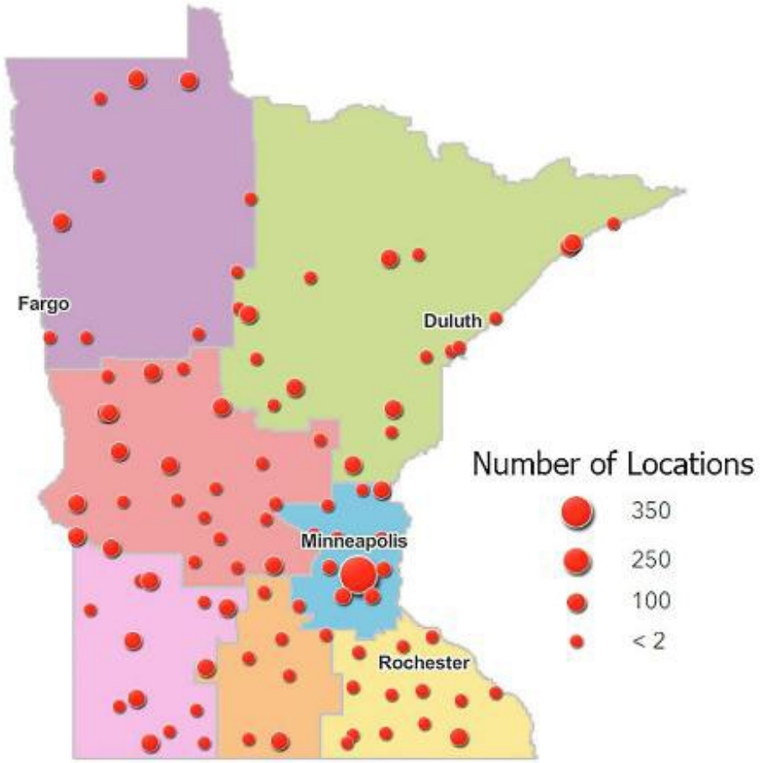
2nd Question and Answer Session

Strategies for Source and Load Reduction in Industrial Effluent

Kevin Philpy
Senior Engineer
Minnesota Technical Assistance Program

Minnesota Technical Assistance Program

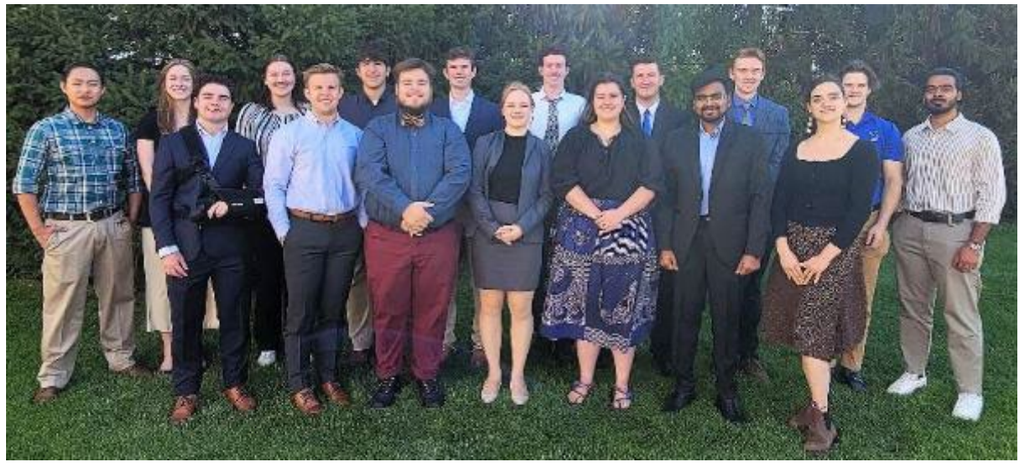
- Confidential, grant-funded environmental support for MN businesses
  - Prevent pollution at the source
  - Optimize resource consumption
  - Reduce waste and energy use
- 12 engineers and professionals
- Based in School of Public Health at University of Minnesota



Supported Facilities 2017-2021

MnTAP Summer Intern Program

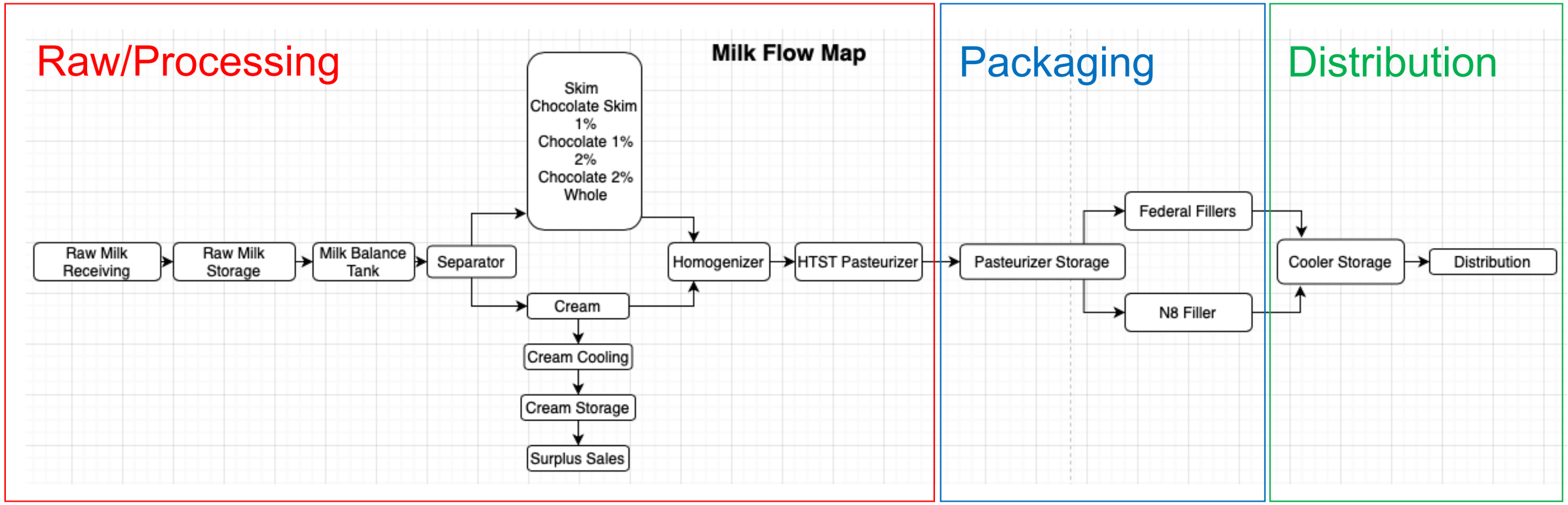
- 17 projects for 2025
- Develop real solutions for a company/organization focusing on:
  - **Pollution prevention**
  - **Process efficiency/lean manufacturing**
  - **Waste minimization**
  - **Water & energy conservation**
- Full time, 500 hrs (13 weeks)
- $19/hr + $1,500 stipend ($22/hr)
- Intern: project lead
- 1 MnTAP and 1 Company advisor



The 2023 MnTAP Intern Cohort

2023-24 Internships

Dairy Processing



Dairy Product Conservation

- **Reduce product lost to wastewater**
  - Average Shrink of 2%
  - Shrink: 100 jugs made, 98 jugs make it to distribution
- **Evaluate key processes for milk loss**
- **Decrease strength charges resulting from milk loss to drain**

Federal Fillers

Rotary filler for half and full gallon jugs

Start Up:

- Milk is run through to rinse out sanitizer
- Milk flow is shut off manually once sanitizer is removed

Shut Down:

- At end of run, remaining milk is discharged to floor drain
- Bowl and lines are rinsed before cleaning

Recommendations for Federal Fillers

Proposed Solution for Start Up

- Implement an inline conductivity sensor before bowl of filler
- Eliminates operator variability in shutoff time
- Cost: TBD

Potential Annual Savings

- 94,000 gallons of milk
- $114,000 in revenue
- $38,000 in strength charges

Recommendations for Federal Fillers

Proposed Solution for Shut Down

- Best practice sharing between operators
- Reduce milk left in bowl before filler is shut down
- Cost: $1,000

Potential Annual Savings

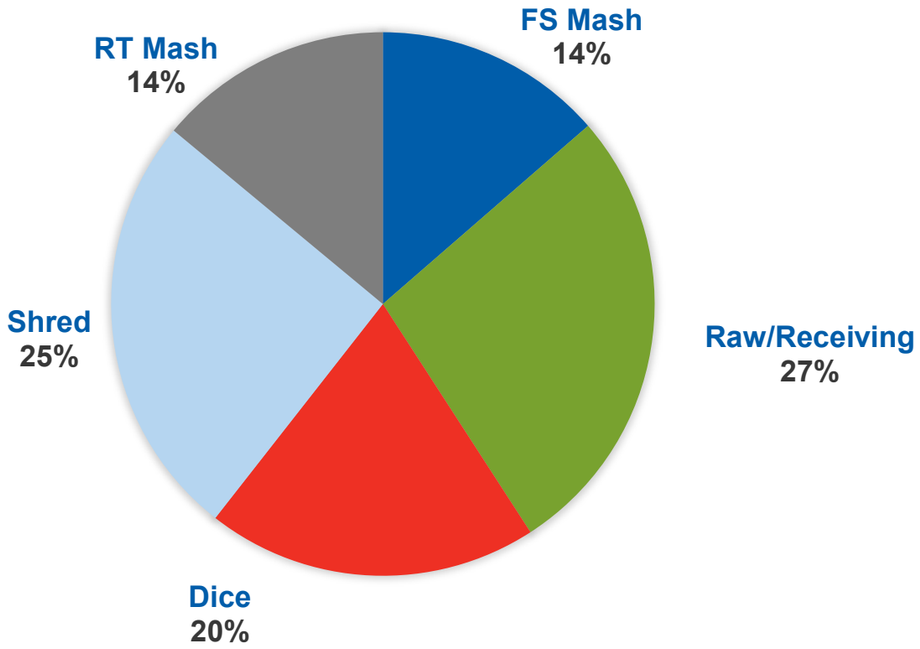
- 29,000 gallons of milk
- $35,000 in revenue
- $11,700 in strength charges

Potato Processing

MICHAEL FOODS INC.

- Water conservation at Chaska facility
- Hashbrowns, diced and mashed potatoes
- 259 million pounds produced per year

Process and Approach



Excludes water from Utility Room, Waste Room, CIP

Approach

- Flow Mapping
- Understanding Equipment
- Researching Options
- Recommending

Raw Receiving

80,000 gallons daily

- 25 million gallons annually
- 27% of annual water use

Washer

- Uses majority of water in Raw/Receiving
- Washer fill + sprayers
- Conveyor system to move potatoes

Washer Recommendations

Install sprayer flow restrictor

- Implementation Cost:
  - <$100
- Annual Savings:
  - 3.6 million gallons
  - $38,000

Automate sprayer shut off

- Implementation Cost:
  - $1,000
- Annual Savings:
  - 520,000 gallons
  - $5,000

Peel Starch Separators

Background

- Large rotating drum
  - Require 5 GPM
  - Removes peel
- Lines 2, 3, and 4
  - Running almost 24/7
  - Using over 10 GPM

Recommendations

- Install flow restrictors
  - Implementation cost:
    - <$500
  - Annual Savings
    - 4.7 million gallons
    - $49,000

Solutions

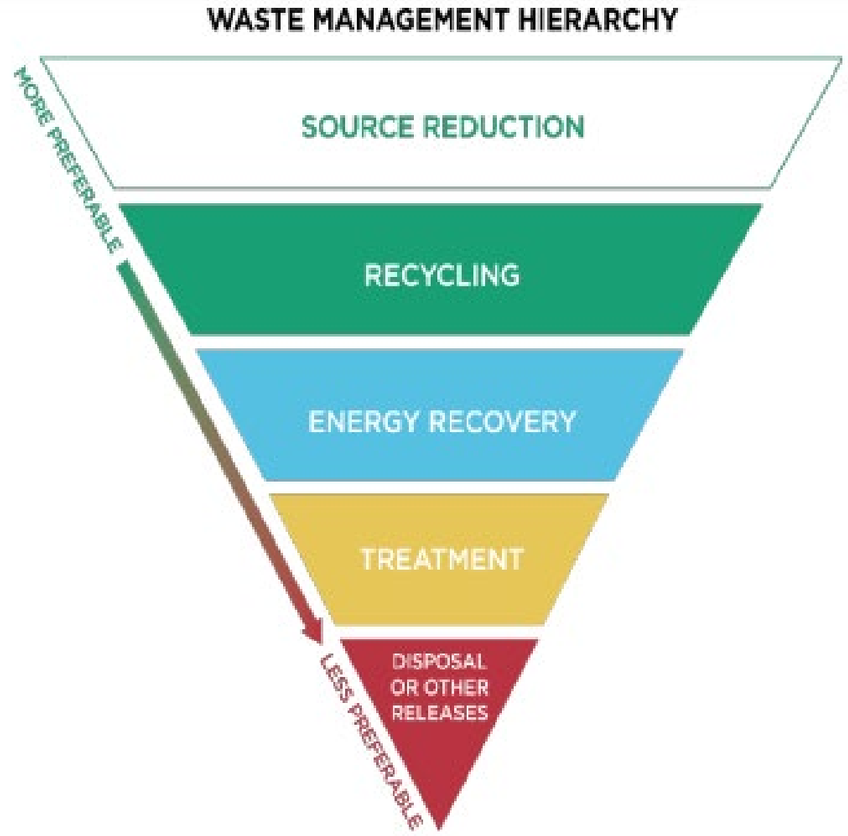
Recommendation	Annual reduction	Total cost	Annual savings	Payback period	Status
Install Flow Restrictors on Peel Starch Separators	4.7 million gallons	<$500	$49,000	4 days	Recommended
Install Flow Restrictor on Washer Sprayers	3.6 million gallons	<$100	$38,000	1 day	Recommended
Automate Raw/Receiving Sprayer Shut Off	520,000 gallons	$1,000	$5,000	2 months	Recommended
Automate FS Mash Water Shut-Off	180,000 gallons	$5,000	$2,000	2.5 years	Tentatively Recommended
Install Nozzle on USDA Hose	75,000 gallons	<$100	$800	2 months	Recommended

5.7% water reduction if all recommendations are implemented

Source reduction is the goal!

1. Divert or limit high-strength waste from <u>wastewater</u>
2. Minimize or reuse <u>water</u>
3. Minimize the need for <u>chemicals</u> (which can be expensive!)

Source reduction benefits everyone!



Toxics Release Inventory (TRI) Program | US EPA

Thank you!

Find additional resources:

- www.mntap.umn.edu
- www.mntap.umn.edu/potw/pfas

For assistance or to participate in our project, please contact:

- Kevin Philpy, Senior Engineer, 410-707-4027, philp029@umn.edu
- Jane Paulson, Senior Engineer, 612-624-1826 janep2@umn.edu

Minnesota Technical Assistance Program

Strengthening Minnesota businesses by improving efficiency while saving money through energy, water, and waste reduction

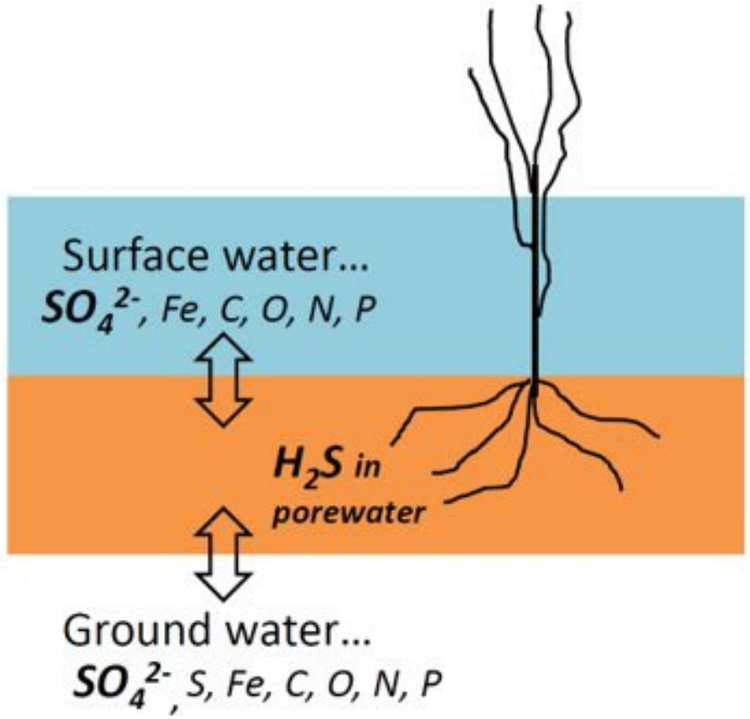
3rd Question and Answer Session

Emerging Contaminants

What is wild rice?

- Wild rice is not a rice at all, but a grass
- Wild rice became our state grain in 1977
- Early summer maroon and gold flowers bloom, developing into dark brown kernels in late summer
- Harvesting wild rice for non-tribal members requires a wild-ricing license
- There are more acres of natural wild rice in Minnesota than any state
- Minnesota’s annual crop harvest is $>2 million
- Wild rice has great cultural significance to Minnesota’s Anishinaabe and Dakota communities

Sulfate and Wild Rice



Source: 2018 Governor's Task Force on Wild Rice

EPA requires MPCA to start enforcing the standard in 2023

- There is a 1973 Water Quality Standard of 10 mg/L for wild rice
- Based on a 1947 study that found no wild rice growing in waters with sulfate above 10 mg/L
- Recent studies by the University of Minnesota have looked at different stages of wild rice growth and impacts from sulfide
- A 2011 study found sulfate was not toxic to wild rice, but the sulfide in the sediment porewater is impacting wild rice growth

Challenges in Meeting the Standard

- Sulfate is naturally occurring in surface and groundwater in Minnesota
- Sulfate moves between sources and is increased by human activities
- Upstream concentrations are higher than the 10 mg/L standard
- To meet the standard, we estimate a permit limit in the range of 12-14 mg/L based a waste load allocation formula
- None of our WRRFs will be able to meet this standard without the additional treatment processes

Multi-Discharger Variance (MDV)

MPCA is working to develop a variance

- An MDV is a single variance that applies to several facilities unable to attain water quality-based effluent limits for the same reason, sometimes termed “eligibility factors.”
- MPCA will be hold listening sessions to gather feedback during the development process
- The timeline for establishing the MDV is not yet known
- EPA will need to approve the MDV before MPCA has issue variances
- Once established, variances will be granted for 5 years
- Facility receiving a variance will need develop a Sulfate Reduction Plan and demonstrate progress toward reducing sulfate and meeting the limit
- Met Council will apply for this variance when available

Total Nitrogen

Why is Nitrogen a problem?

Too many nutrients like nitrogen and phosphorus flowing down the Mississippi River contribute to a large oxygen-depleted zone in the Gulf of Mexico, affecting commercial and recreational fishing and the Gulf's overall health of the Gulf.

How much reduction is needed?

- Minnesota must reduce the amount of nitrogen in the Mississippi River by 45% by 2045

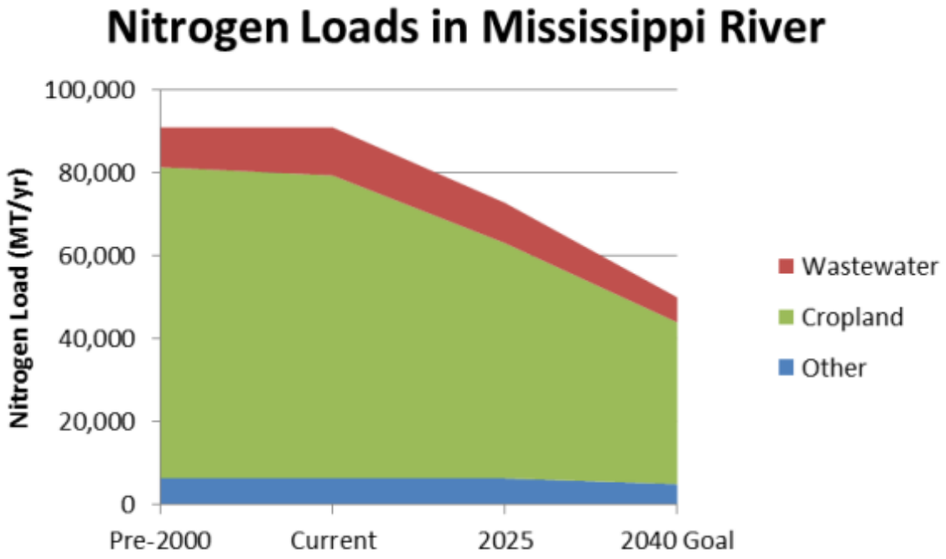
How are reductions made?

- Many agricultural improvements are needed by farmers
- Municipal wastewater plants will need to do source identification and will need to update treatment processes

MPCA released a strategy in 2024

Strategy shares their roadmap for the 45% reduction goal

- Proposes a Total Nitrogen discharge limit of 10 mg/L
- There is not enough point sources to meet this standard
- Upgrades to our nitrogen treatment processes will cost approximately $1.6 Billion
- WRRFs discharging over 30 mg/L will need to have a Nitrogen Management Plan
- Working on a management plan for Hastings WRRF
  - Identifies internal process changes that can be made now
  - Identifies if there is possible source identification and reduction work
- We will likely implement a similar plan at all our WRRFs



Impacts to Industrial Users

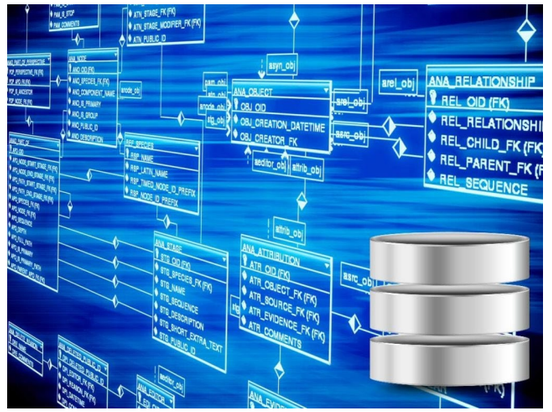
We will be sampling your discharge

- We will begin adding analyses when sampling our Significant Industrial Users
  - Sulfate (SO4) added in 2025
  - Total Kjeldahl Nitrogen, Nitrate, and Nitrite to be added in 2026
- Expand in our monitoring at all permitted facilities in the future
- Data will be used to identify how much is coming from controllable sources (permitted IUs)
- There may be some source reductions possible:
  - Sulfuric acid used for pH adjustment
  - Sulfate is in biocides and in personal care products (therapeutic baths and shampoo)

Updated Business Management System

Why We're Upgrading Our Business Management System

- Our current Business Management System is nearly 15 years old.
- We haven't explored system options in over 20 years.
- The system will no longer be supported after December 31st, 2025.
- To maintain security, performance, and reliability, an upgrade is necessary.
- This change helps us stay aligned with modern technology standards and user expectations

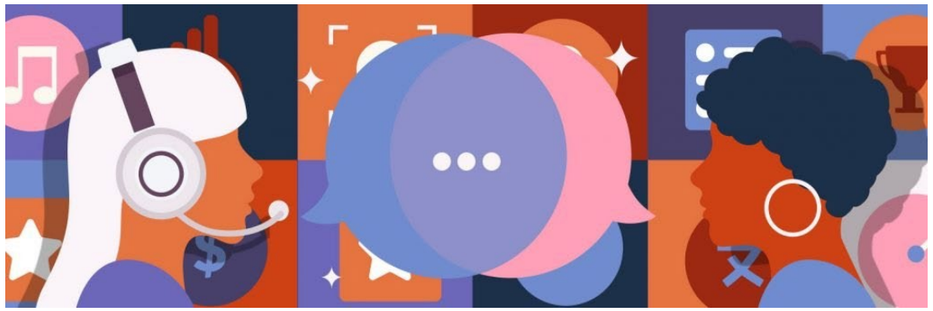


What's Happening Now

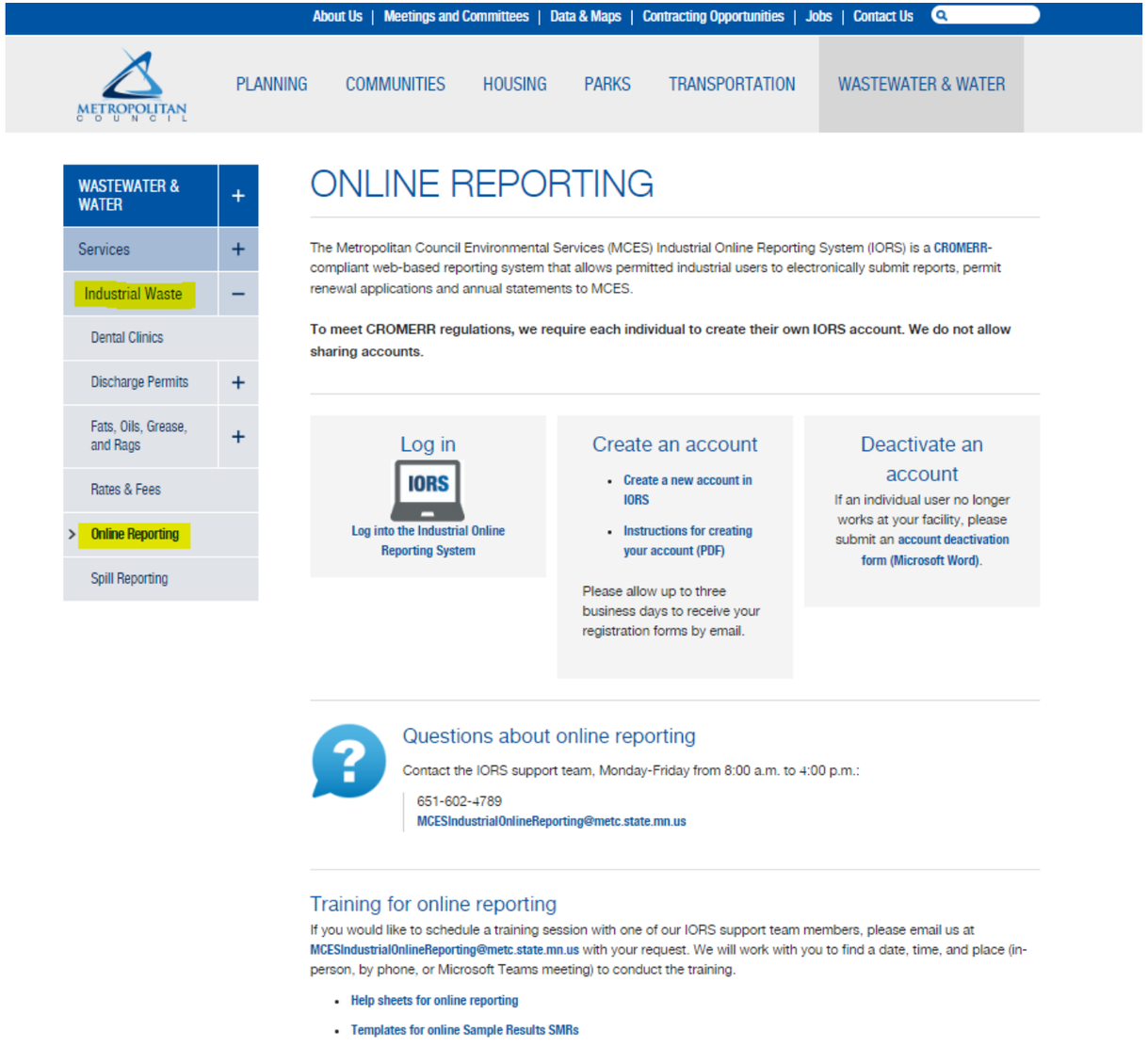
- **We are actively exploring options**:
  - Upgrade to a newer version from our current vendor – late 2026/early 2027
  - Or switch to a new vendor with different software – 2027/2028
- **Either option will affect how you interact with the system, especially:**
  - The online reporting portal - changes in look, feel, and workflow.
- **Training and support will be provided to ensure a smooth transition.**
- **There will be no downtime or disruption to your reporting process.**

What to Expect Next

- We are committed to keeping everyone informed.
- More details about the decision and next steps will be shared in the next Open Channel News.
- Our goal is to keep you informed, prepared, and supported throughout the process.
    - We'll provide training and support to make the transition as smooth as possible.



IORS training materials and support



IORS Support Team is available
Monday – Friday
from 8 AM to 4 PM

Questions or feedback?
Email us at:
MCESIndustrialOnlineReporting@metc.state.mn.us or
call us 651-602-4789

Metropolitan Council

Other communication

- **We send important information via email. Please add to contacts so you do not miss out!**
  - Emails from: **METC@public.govdelivery.com**
  - Report due dates
  - Workshops and trainings
  - Disposal site notifications
  - **NOT SPAM!!**

- **Open Channel News**
- **We will share more as 2026 rates and fees develop**

Final Question and Answer Session

Wrap Up Items

- Thank you for attending!
- If you have any comments or questions that arise after you leave today, please send them to your assigned permit staff
- Help yourself to additional breakfast items
- If you are registered for the Tour, we will meet back in this room at 10:55 am

Thank you

Contact us:

iwpp@metc.state.mn.us

or call us at 651-602-4703

Online reporting questions:

MCESIndustrialOnlineReporting@metc.state.mn.us

To view workshop presentation:

https://metrocouncil.org/Wastewater-Water/Services/Industrial-Waste/Workshops.aspx

METROPOLITAN COUNCIL