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Water Pollution Control Updates

Heather Peters, Water Pollution Control Branch Chief

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Staffing Changes

- Automate Permit Applications
- Connect to Secretary of State's webpage
- More e-Permitting?
- Permit "Pizza Tracker"

Track your Permit Here! Your permit is almost ready!

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Long-term Goals & Special Projects

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New Permit Challenges

- New Concentrated Animal Feeding Operations
  - 2023- 11 new or expanding CAFOs
  - 2024- 18 new or expanding CAFOs
  - 2025- 10 new or expanding CAFOs

- Land Application Permits
  - Public Hearings
  - Appeals expected
- Land Application Rules

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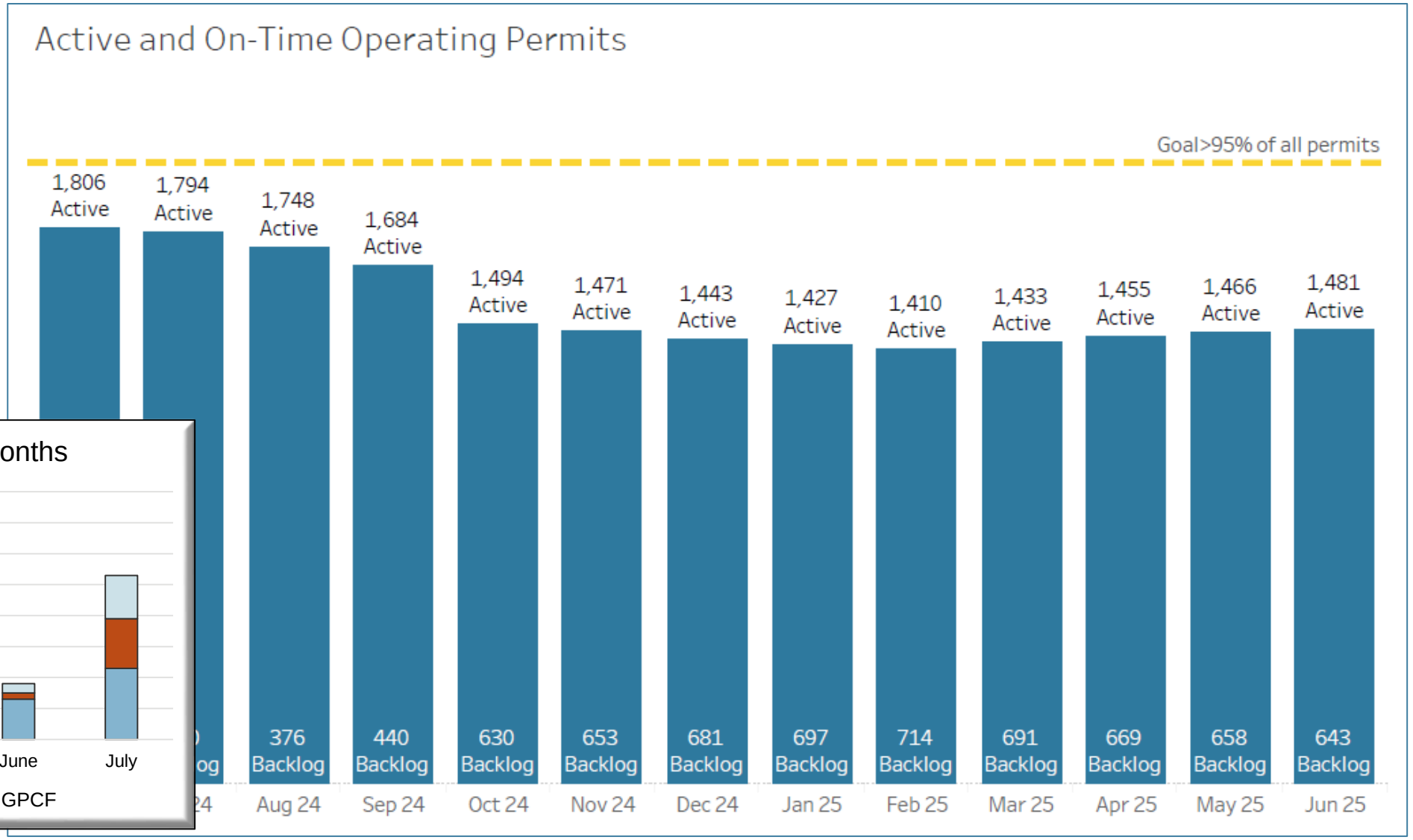
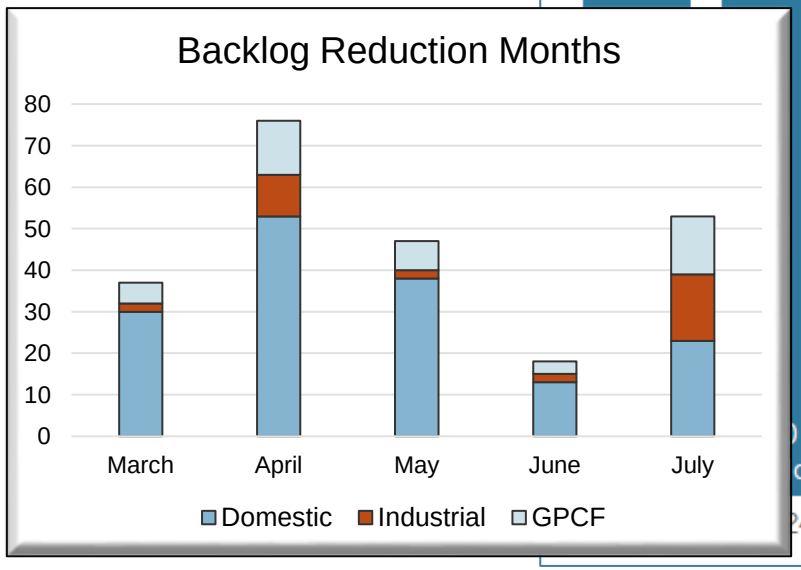
Permitting

Reduction in backlog 4 months in a row!





Simplifying your Permit

Three projects to shorten and simplify your permit:

Standard Conditions I

Sampling & Monitoring

Reporting Requirements

Bypass/Upset

General Operation & Maintenance

Administrative Requirements

StORM

Covered in a later presentation!

Standard Conditions III

Biosolids & Sludge

Domestic Facilities Only

Land Application Rates

Land Application Processes

Keep it simple

✓Identifying different types of permits
✓Not over-complicating renewals
✓Review data & receiving waterbody

What we are not losing:

- Building your permit for you
- Taking the time you need
- Sustainable permits that work for you

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Recent or Emerging Permit Issues

- Flocculants & Coagulants
- Rare Earth Elements – Nutrient Removal
- Water Treatment Plants
- Water Reuse & Drought Mitigation – Drinking Supply Lakes
- Losing Stream Designations

Public Participation - Communication

- 303(d) list
- Sunshine Law Requests
- Approximately 2-3 public meetings per month
- One public hearing per quarter
- Hotline staffing
- Autodialer follow-ups

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Master General Permits

<u>45 Day Preview</u>

- MOR22B – Wood Preserving.

<u>Public Notice</u>

- MOR23A –Chemical Manufacturing.

<u>In development</u>

- MOG84 – Clay Mining/Processing.
- MOR04/MOR04C – Phase II MS4s.
- MOG05 – Abandoned Mine Land Reclamation.
- MOG251 – Heat Pumps.
- MOG87 – Pesticide Application.

Emaill:
DNR.GeneralPermits@dnr.mo.gov

Integrated Management Plans

Great way to evaluate your needs

Assess costs and resources

Establish timelines

Adapt to changing demands

Part of Administrative Agreements

Basis for Permit Schedules of Compliance

San Francisco v. EPA

- 5-4 decision
- Effluent limits vs. receiving water
- Permits must be
  - Specific
  - Not “end result” variability
  - Narrative limits must be clear on applicability

FAIR PLAY

- Voids start opening up around lagoon
- More open up
- Start marking them
- Investigation (Missouri Geological Survey)

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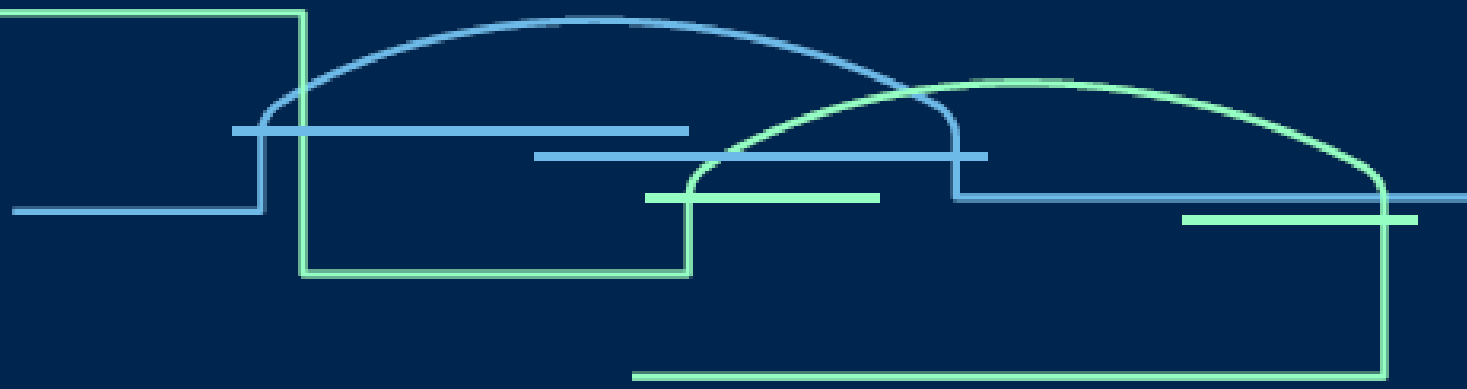
50
100ft

FILL MATTERS


Simmons
Harnessing a Sustainable Future
A Simmons Renewable Energy Project
Food for families and pets we love

The Solution

Anaerobic Digestion



Managing Waste

Simmons values being a good neighbor to our communities and environment, including managing waste that is produced in making food for the families and pets we love.

Anaerobic Digestion

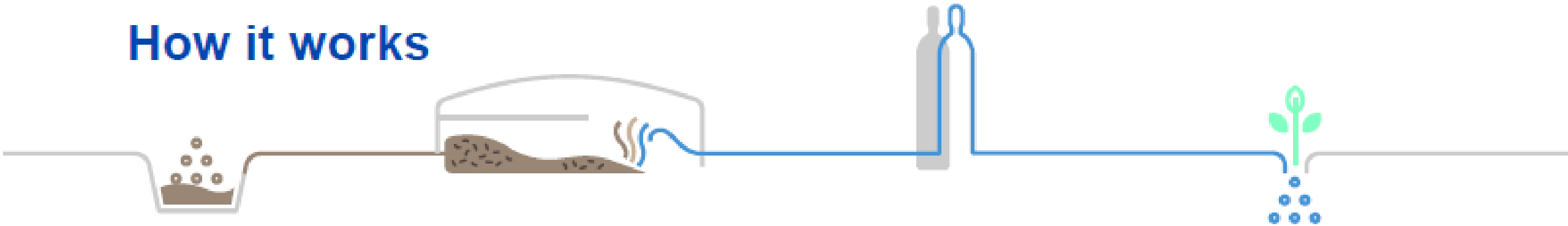
Overview

Convert waste into valuable products using anaerobic digestion — a process through which bacteria break down organic matter like animal manure, wastewater biosolids, and food wastes in the absence of oxygen.

Energy Creation

This process then produces renewable natural gas (RNG) that can then be used as natural gas, compressed for vehicle fuel, or processed further to generate alternative transportation fuel, energy products, or other advanced biochemicals and bioproducts.

How it works



Waste Collection

Simmons gathers 520 million pounds of food processing residues each year.

Anaerobic Digestion

These residues are processed in a digester to produce biogas.

Biogas Upgrading

The biogas is purified to produce high-quality renewable natural gas.

By-Products

Valuable by-products like CO2, fertilizer, and liquid nutrients are captured and utilized.

The potential impact

Simmons Renewable Energy Project

Job Creation

Adds 40 new jobs in the local community, including technical and management roles.

Agricultural Support

Produces 154 million pounds of fertilizer and 4.5 million pounds of liquid nutrients for agriculture.

Renewable Energy

Generates 500 million cubic feet of renewable natural gas annually.

Environmental Impact

Reduces waste and captures 24 million pounds of CO2, turning it into beverage-grade liquid CO2.

Simmons

Energy behind making this a reality

Project timeline

Design & Installation

From April 2024 to January 2026

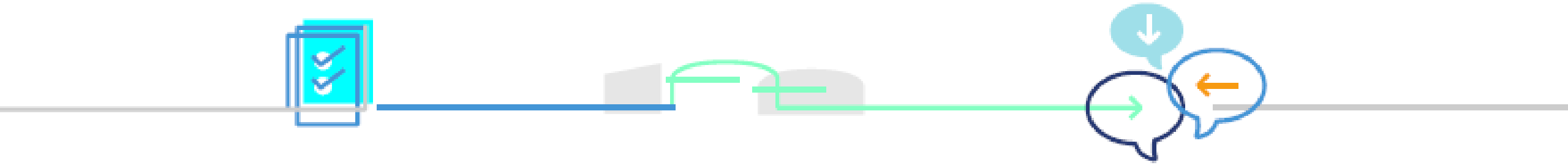
Commissioning & Hyper Care

From October 2025 to August 2026

Start-Up

Aim to start operations by 2026

The procedure



Permitting

Securing necessary permits for construction and operation.

Construction

Building the digestor and related facilities.

Community Engagement

Working with local stakeholders and the community.

Triennial Review

Current Rulemaking

Ammonia (excluding Missouri & Mississippi Rivers)

Ammonia Variances

Bioaccumulative *

Future Reviews/ Rulemaking

Ammonia Phase II

Ammonia Variances

Aluminum

HHP

MUDD revisions

???

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Department PFAS Surface Water and Fish Tissue Sampling

Review of Sample Results

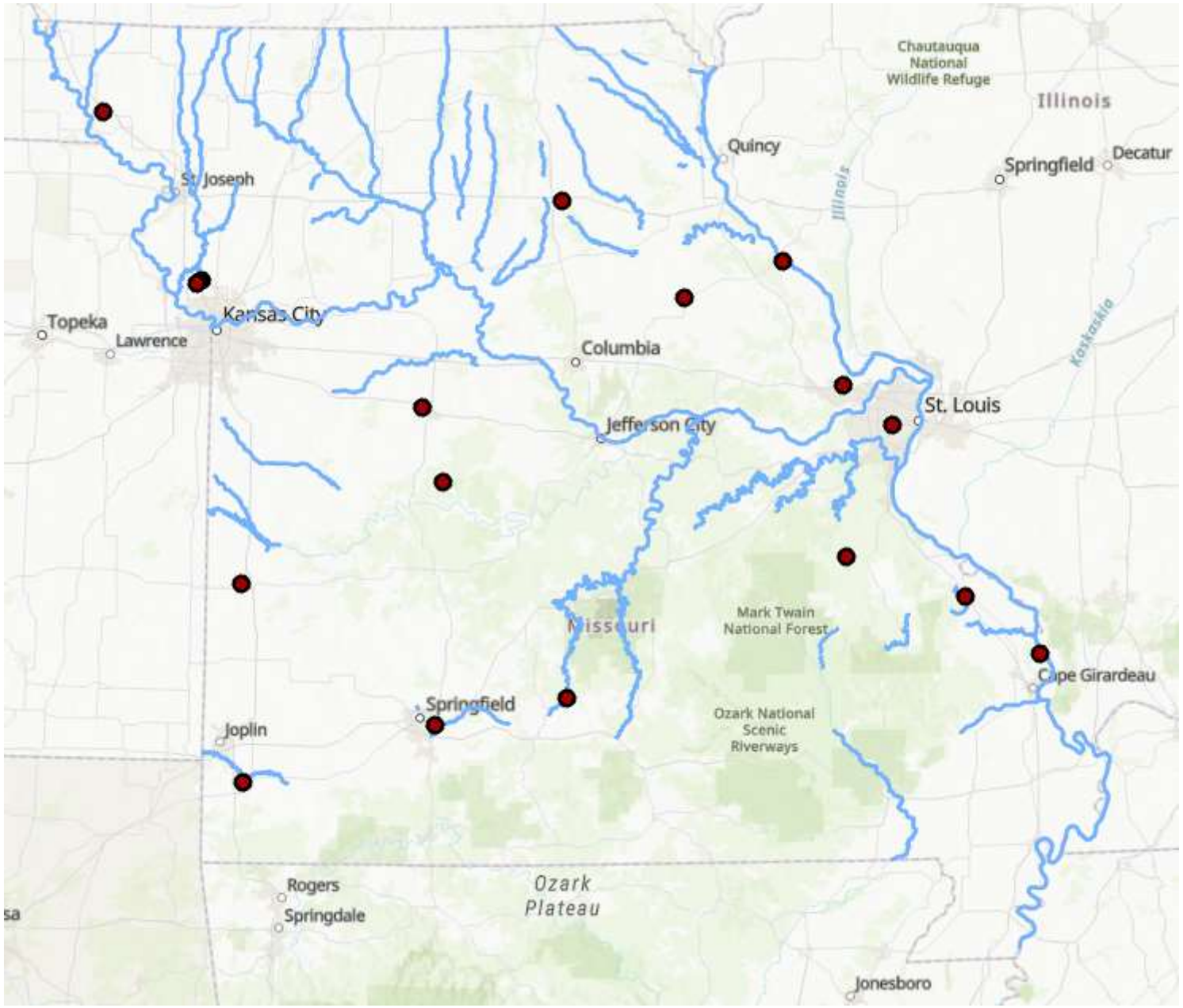
We are not currently proceeding with any PFAS water quality criteria or land application standards at this time.

Surface Water PFAS Sampling Locations

Sampling started in 2023

18 locations sampled
for the 40 PFAS analytes
in EPA Method 1633

28 samples collected



Streams highlighted have Drinking Water Source use

Surface Water PFAS Detections

11 of the 18 locations had PFAS detections (highlighted blue)

3 of those 11 hits were on or within 2 miles of a waterbody designated for use as a Drinking Water Supply

Streams highlighted have Drinking Water Source use

Surface Water PFAS Detections near Drinking Water Supply

Pearson Creek sample near the James River (designated as a Drinking Water Supply) had a PFAS detection above the EPA PFAS MCLs

Result for Pearson Cr:

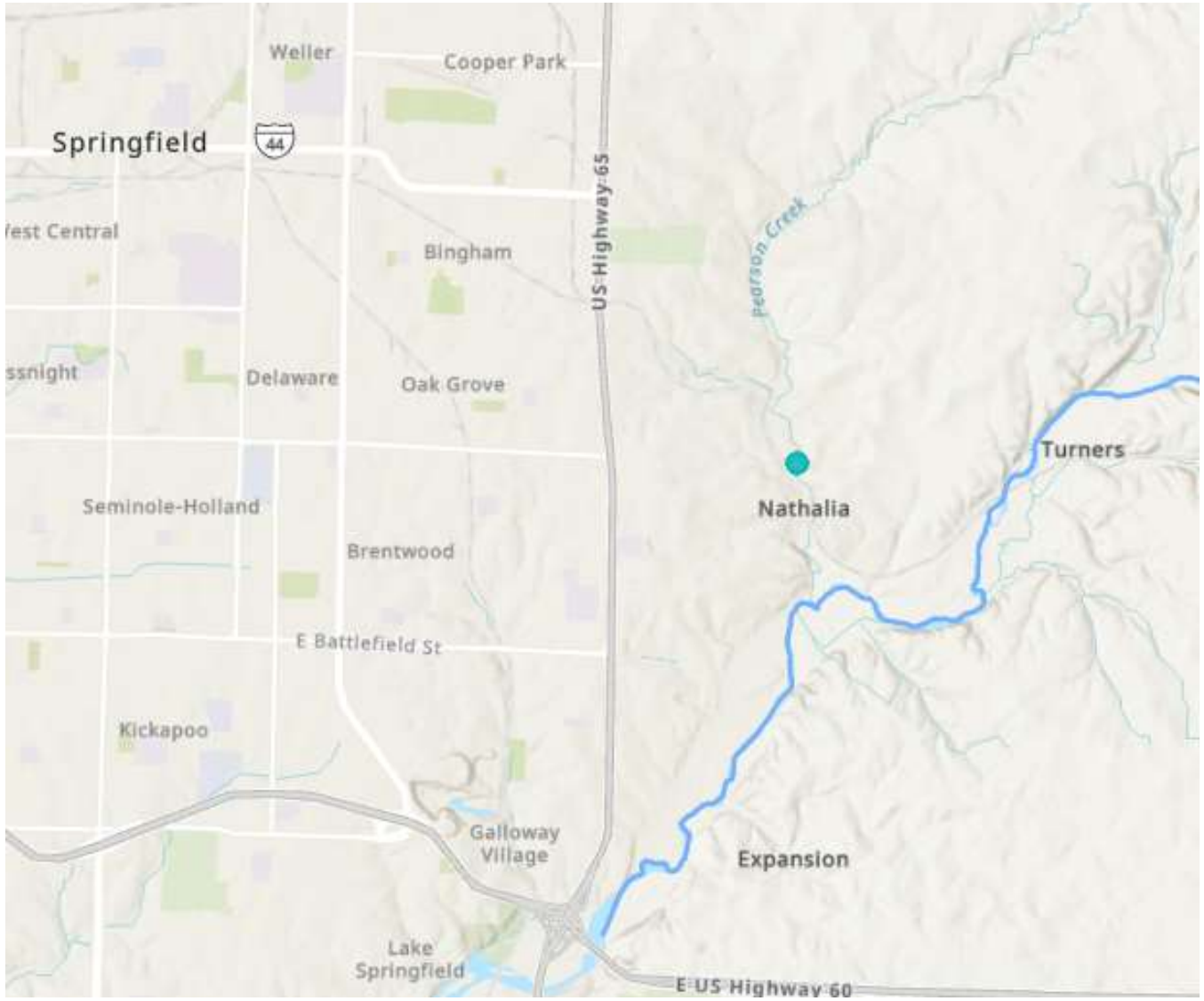
PFHxS = 12 ng/L

Hazard Index = 4.88

EPA MCLs:

PFHxS = 4 ng/L

Hazard Index = 1



Surface Water PFAS Ranges for Values Above Non-Detect

PFAS	Result (ng/L)	# of detects (n=28)	% of samples with detects
PFOA	2.3 - 68	13	46.4
PFOS	2.0 - 36	10	35.7
PFHxS	2.7 - 39	10	35.7
PFNA	2.1 - 3.9	3	10.7
HFPO-DA (GenX)	4.1	1	3.6
PFBS	2.4 - 7.9	10	35.7
PFBA	3.9 - 14	10	35.7
PFDA	2.2 - 2.9	2	7.1
PFHA	2.60 - 51	13	46.4
PFHPA	2.20 - 8.4	8	28.6
PFPeA	1.9 - 110	13	46.4
PFPeS	2.5 - 4.9	2	7.1
6:2FTS	8.8 - 92	3	10.7

Fish Tissue PFAS Sampling Locations

Sampling started in 2022

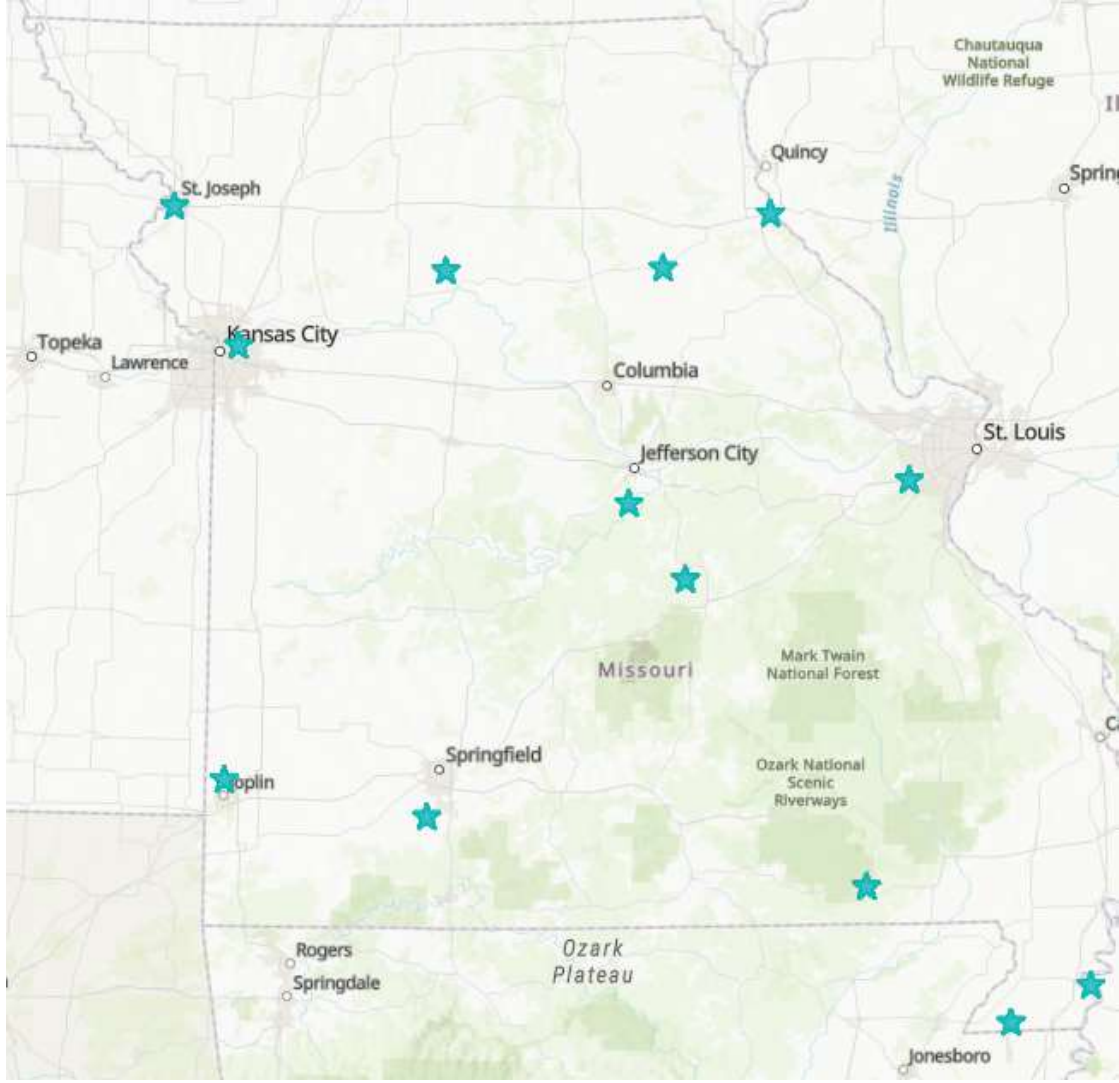
Long term trend locations sampled
for the 40 PFAS analytes
in EPA Method 1633

19 samples collected total

Fish Tissue PFAS Detections

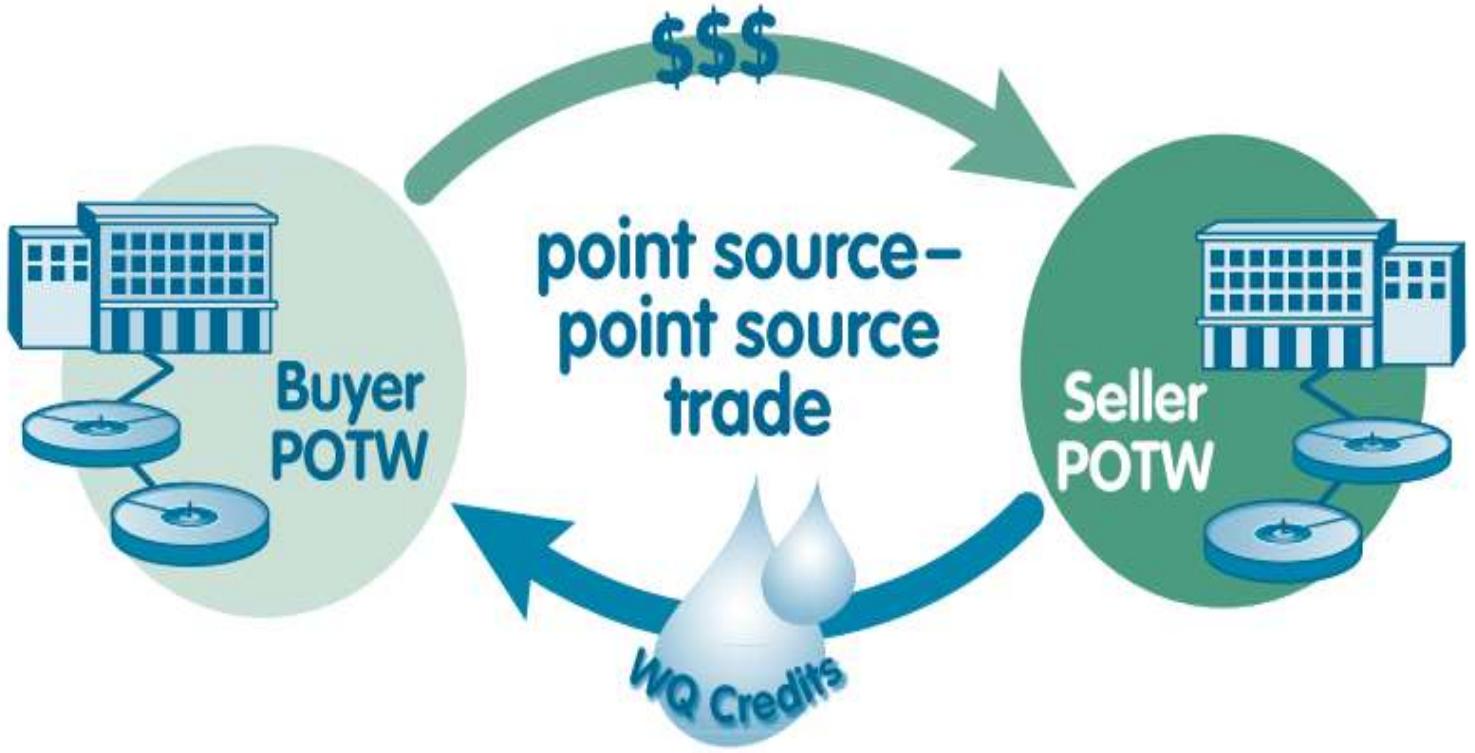
All 13 locations had PFAS detections (highlighted

PFAS	Result (mg/kg)	% of samples with detects
PFOS	0.0015 - 0.0407	89.5
PFDA	0.00049 - 0.0028	42.1
PFDS	0.000618 - 0.0016	10.5
PFHA	0.000525	5.3
PFNA	0.0005 - 0.00094	15.8
PFTrDA	0.00064	5.3
PFUA	0.0005 - 0.0016	26.3
5:3 FTCA	0.026	5.3
PFDDA	0.000647 - 0.00065	10.5



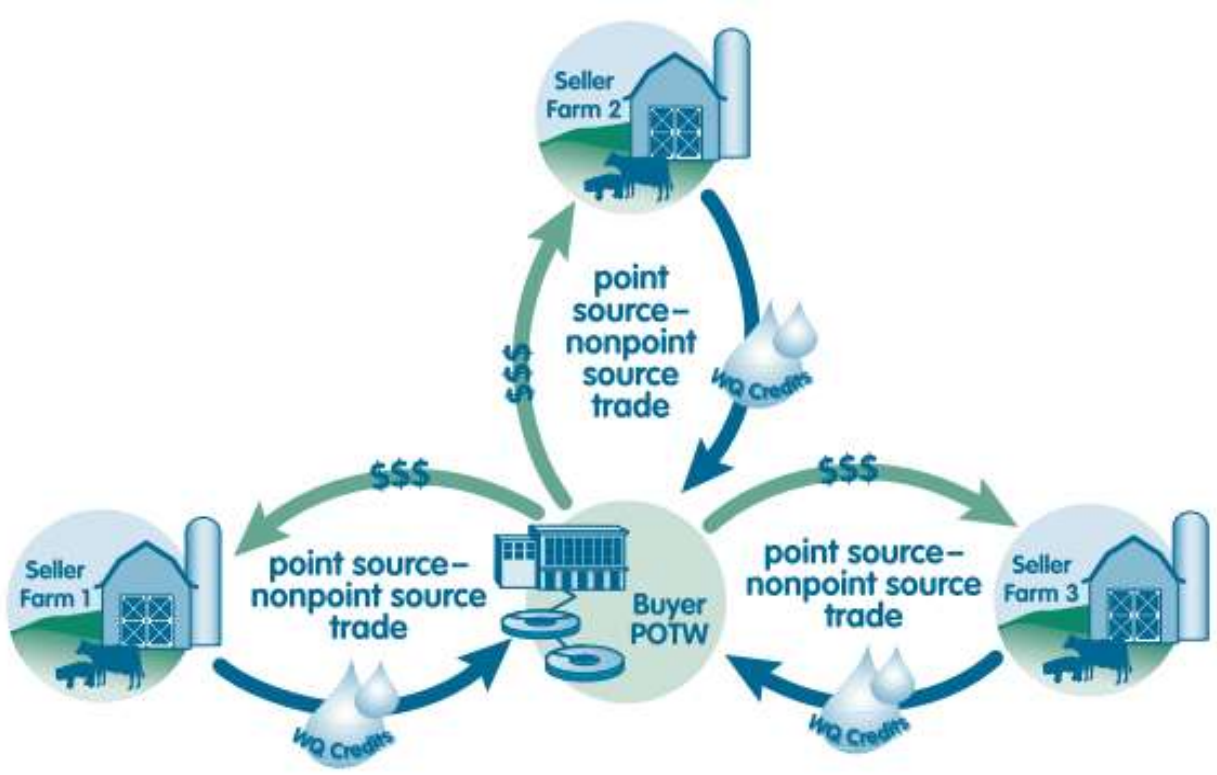
None of the samples were measured above EPA's fish tissue criteria recommendations; all other PFAS compounds were below detection limits.

Point Source to Point Source Trading



Graphic Courtesy of EPA's Water Quality Trading Toolkit for Permit Writers, 2007. The point source credit user (buyer) acquires credits from the credit generator (seller).

Point Source to Nonpoint Source Trading



Graphic Courtesy of EPA's Water Quality Trading Toolkit for Permit Writers, 2007. The point source credit user (buyer) acquires credits from the credit generator (seller).

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Expect the
Unexpected

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