Focus Group Session 1

Exceptional Water Supply Significance for C1 Waters

March 26, 2024

Division of Water Monitoring Standards and Pesticide Control
Division of Water Supply and Geoscience

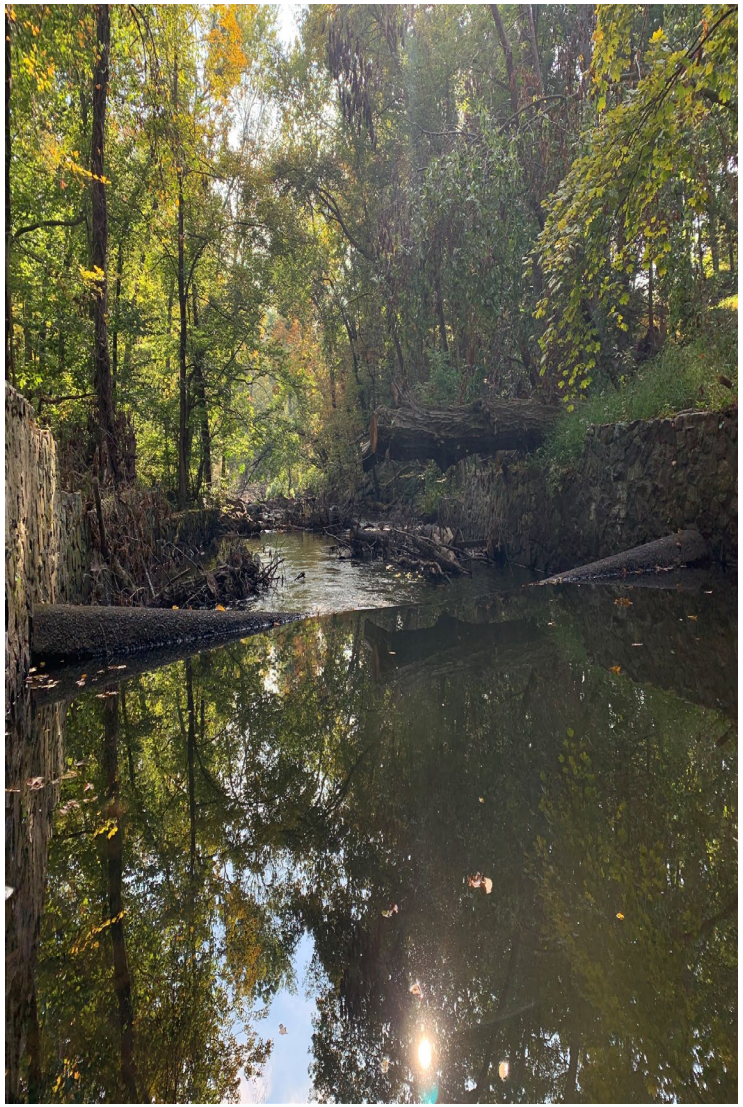
Agenda

Background

Changes Considered to Definition / New Strategy

Discussion

Next Steps



Exceptional Water Supply Significance (EWSS)

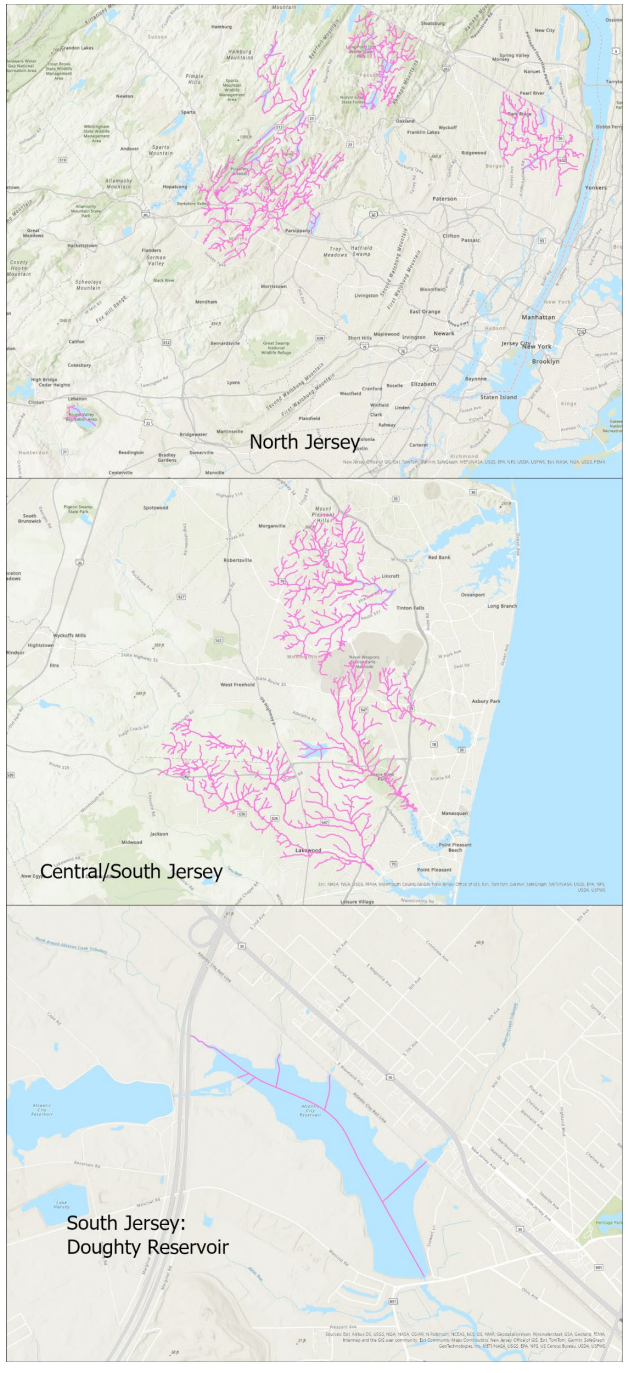
Current definition:

"Exceptional water supply significance" means a water supply system that serves a population greater than 100,000, including any reservoirs and their natural tributaries from source to the reservoir.

Feedback received:

- NJDEP should upgrade additional waters based on EWSS to C1 designation.
- A few waterbodies were recommended for C1 designation based on EWSS.
- NJDEP should revise current definition to remove "100,000" population qualifier, i.e., all surface drinking water supply systems should receive C1 designation.
- NJDEP should designate EWSS segments from source to the drinking water intakes.

(Draft Maps) Current EWSS C1 Waters

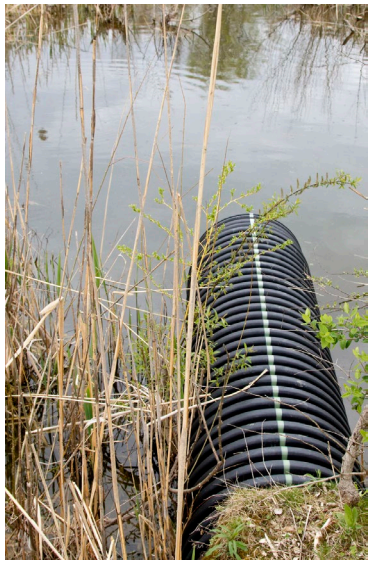


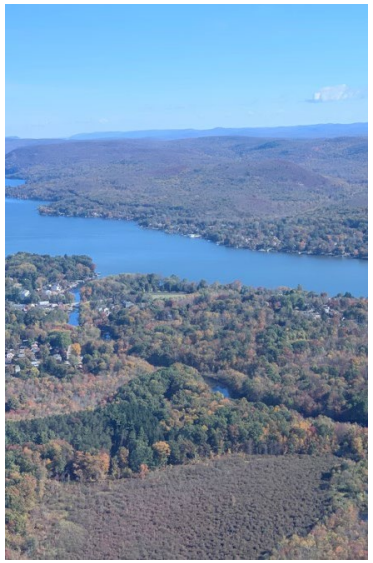
Exceptional Water Supply Significance

Changes considered:

Additions in **bold,** deletions in [brackets].

"Exceptional water supply significance" means a **source water to a public** water [supply] system [that serves a population greater than 100,000], including any reservoirs**, streams,** and their natural tributaries [from source to the reservoir] **as identified by the Department in the New Jersey Source Water Assessment Program as supporting public potable water supply after conventional filtration treatment, and prioritized for a Category One antidegradation designation**."

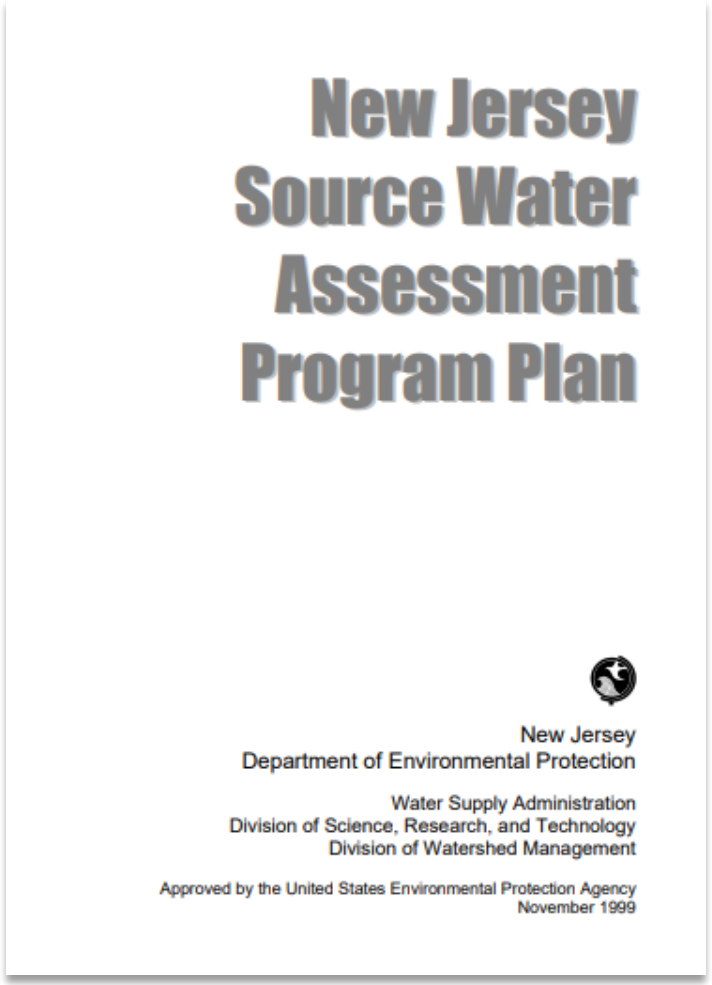




Source Water Assessment and Protection Program

Source: https://www.epa.gov/sourcewaterprotection/assess-plan-and-protect-source-water

https://www.nj.gov/dep/watersupply/swap/



Harmonizing the SDWA and the CWA Source Water Protection and Watershed Management

CWA Tools to Protect the Resource

Designate the use or uses of surface waters

Adopt ambient water quality criteria (numeric or narrative) to protect these designated uses

Protect high-quality waters through anti-degradation provisions

Compliance and Enforcement

SDWA Tools to Protect the Resource

Establishment of Standards

Monitoring and Reporting Requirements

Source Water Assessment Programs

Compliance and Enforcement

NJ Source Water Assessment Program History

- The 1996 Amendments to the federal Safe Drinking Water Act require all states to establish and implement a Source Water Assessment Program for all public water systems

- The Source Water Assessment Program consists of the first three steps of a full Source Water Protection Program.

- Source Water Assessments were completed for NJ Water Systems in early 2000's

Source: https://www.epa.gov/sourcewaterprotection/assess-plan-and-protect-source-water

Source Water Assessment Program Principles

All sources of drinking water are important to the citizens of New Jersey

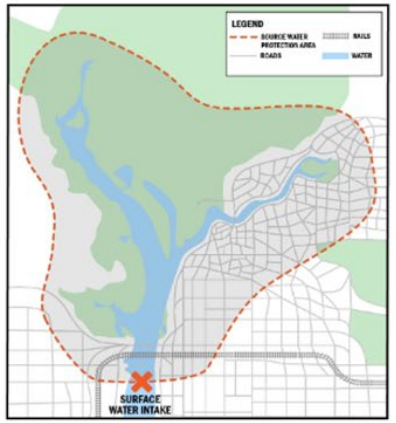
Both pathogens and chemicals threaten drinking water sources.

Any pollution activity within the watershed has the potential to impact water quality at a surface water intake

There are both short term and long-term strategies that can be used to protect ground water sources.

1999 Source Water Assessment Program Plan

- Ranked susceptibility to the following contaminant categories:
  - Nutrients (nitrates only)
  - Pathogens
  - Pesticides
  - Volatile organic compounds
  - Inorganics
  - Radionuclides/radon
  - Disinfection byproduct precursors



Delineate the Source Water Protection Area

Inventory Potential Sources of Contamination

Prioritize Risks to Drinking Water

Source: https://www.epa.gov/sourcewaterprotection/assess-plan-and-protect-source-water

- Rated high, medium, or low risk of exceeding half the Maximum Contaminant Level
- Included recommended actions for communities

North Brunswick Water Department

Source Water Assessment Summary

A State Review of Potential Contamination Sources Near Your Drinking Water

The Department of Environmental Protection (DEP) has conducted an assessment of the water sources that supply each public water system in the state, including yours. The goal of this assessment was to measure each system's susceptibility to contamination, not actual (if any) contamination measured in a water supply system.

The assessment of your water system, the *North Brunswick Water Department*, involved:

- Identifying the area (known as the source water assessment area) that supplies water to your public drinking water sy
- Inventorying any significant potential sources of contamination in the area; and
- Analyzing how susceptible the drinking water source is to the potential sources of contamination.

DEP evaluated the susceptibility of all public water systems to eight categories of contaminants. These contamin categories are explained, along with a summary of the results for your water system, on page 3. Page 4 contains water system's source water assessment area.

A public water system's susceptibility rating (L for low, M for medium or H for high) is a combination of two factors. H, M, a are based on the potential for a contaminant to be at or above 50% of the Drinking Water Standard or MCL (H), between 1 the standard (M) and less than 10% of the standard (L).

- How "sensitive" the water supply is to contamination. For example, a shallow well or surface water source, like a rese more exposed to contamination from the surface or above ground than a very deep well.
- How frequently a contaminant is used or exists near the source. This is known as "intensity of use." For example, the activities (such as industry or agriculture) surrounding the source.

The susceptibility rating does not tell you if the water source is actually contaminated. The Consumer Confidence Report a issued by your water utility contains important information on the results of your drinking water quality tests, as required by Safe Drinking Water Act.

Where does drinking water come from?

There are two basic sources of drinking water: ground water and surface water.

This system purchases water from the following water system(s) (if applicable): MILLTOWN WATER DEPARTMENT,NEW BRUNSWICK WATER DEPARTMENT,SOUTH BRUNSWICK TWP WATER DIVISION

Susceptibility Ratings for North Brunswick Water Department Sources

The table below illustrates the susceptibility ratings for the seven contaminant categories (and radon) for each source in the system. The table provides the number of wells and intakes that rated high (H), medium (M), or low (L) for each contaminant category. For susceptibility ratings of purchased water, refer to the specific water system's source water assessment report.

The seven contaminant categories are defined at the bottom of this page. DEP considered all surface water highly susceptible to pathogens, therefore all intakes received a high rating for the pathogen category. For the purpose of Source Water Assessment Program, radionuclides are more of a concern for ground water than surface water. As a result, surface water intakes' susceptibility to radionuclides was not determined and they all received a low rating.

If a system is rated highly susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking water. The rating reflects the potential for contamination of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any contaminants are detected at frequencies and concentrations above allowable levels. As a result of the assessments, DEP may customize (change existing) monitoring schedules based on the susceptibility ratings.

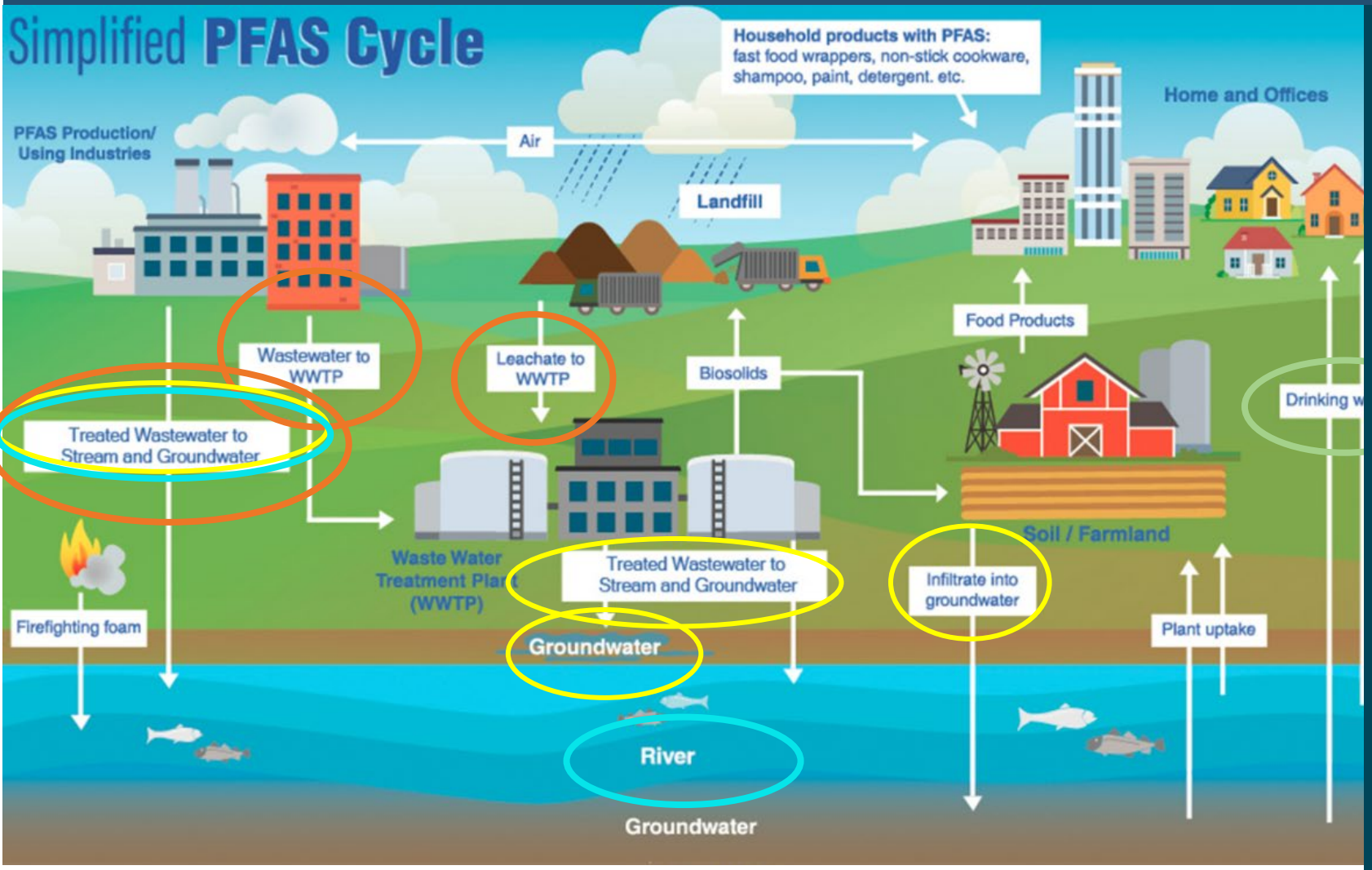
	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radio-nuclides			Radon			Disinfection Byproduct Precursors		
Sources	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L
Wells - 0																								
GUDI - 0																								
Surface water intakes - 1	1			1			1				1		1					1			1	1		

- **Pathogens:** Disease-causing organisms such as bacteria and viruses. Common sources are animal and human fecal wastes.
- **Nutrients:** Compounds, minerals and elements that aid growth, that are both naturally occurring and man-made. Examples include

Challenges of Today

- Quality of the Resource
- Aging Infrastructure
- Emerging Contaminants
- Quickly Changing Science
- Need for Technology to Keep up with Quickly Changing Science
- Climate Change
- Increased Public Demand for Information
- Ensuring Coordinated Consistent Public Education/Messaging /Engagement
- Cybersecurity and Bioterrorism
- Workforce Development
- Funding
- True Cost of Water

WRM Wide - Policy Development & Implementation – Standards/Strategies



Developed & Implemented Standards

Ground Water Quality Standards Drinking Water MCLS

- PFNA 0.013 ug/L (2018)
- PFOA 0.014 ug/L (2020)
- PFOS 0.013 ug/L (2020)

Interim Ground Water Quality Standards

- CIPFPECAs 0.002 ug/L (2023)
- Gen X 0.02 ug/L (2023)

Developing Standards

Surface Water Quality Standards

- Anticipated DW SWQS for PFNA, PFOA, PFOS
- Anticipated SWQS criteria based on BAF

Identify/Reduce/Eliminate Strategy

Pretreatment

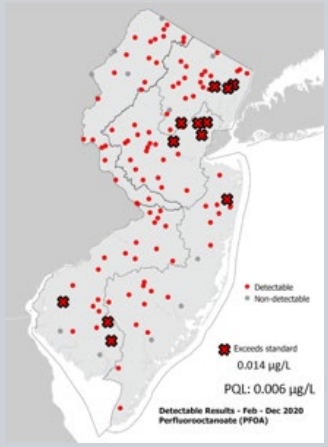
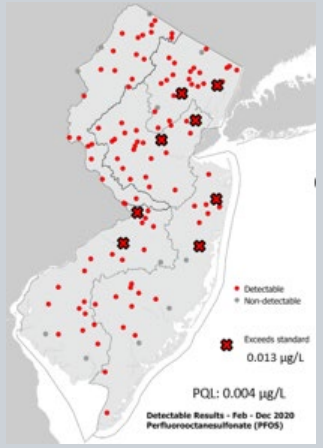
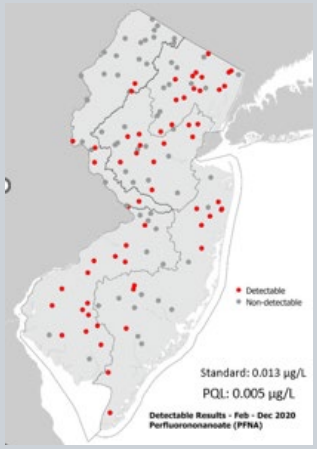
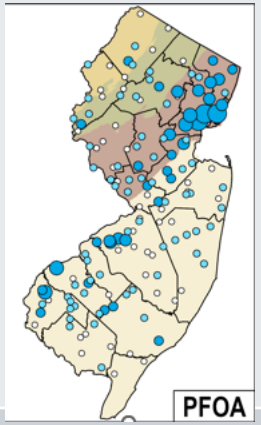
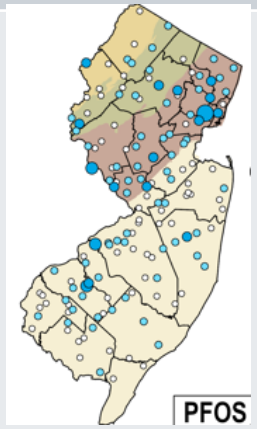
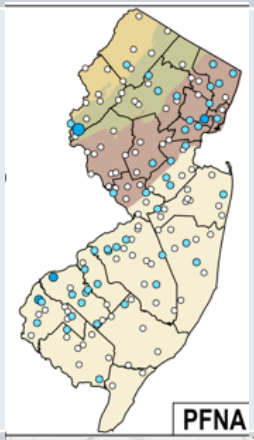
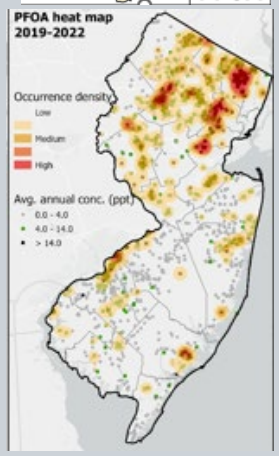
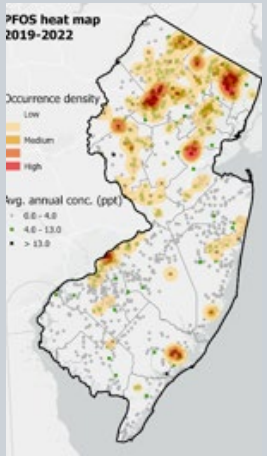
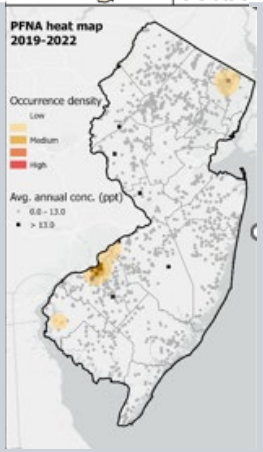
- Industrial facilities discharging wastewater to a POTW
- Industrial facilities regulated by a Delegated Local Agency

Surface Water

- Industrial Facilities discharging treated wastewater directly to Surface Water

NJDEP PFAS Website - https://dep.nj.gov/pfas/

PFAS Monitoring

Contaminant	PFOA	PFOS	PFNA
Surface Water PFAS (at least one) found in over 80% of samples. Exceedances of PFOA and PFOS MCL.			
Ground Water PFAS (at least one) found in 79% of wells sampled			
Public Water Systems 98 PWSs have received at least one PFAS MCL violation.			

Initial Actions Starting to Look To the New Future

- NJ Water Supply Plan
- Source Water Protection
- Various Contaminant Track Downs
- Data Gathering in NJPDES Program
- Public Education Campaign – Our Water's Worth It

OUR WATER'S WORTH IT

Enhanced Source Water Assessment and Protection

EWSS Category 1 Waters

Assessment:

- Consider wider set of water quality characteristics including emerging contaminants
  - Nutrients (including phosphorus)
  - Algae abundance (chlorophyll a, phycocyanin, cell counts)
  - PFAS, HAB Toxins, 1,4 dioxane

Protection:

- Develop Source Water Area Specific Action Plans
- May include recommendations for C1 designation on a case-by-case basis

Enhanced Source Water Assessment and Protection

EWSS Category 1 Waters

Conduct Updated Assessment:

- Evaluating the traditional susceptibility modeling with updated source water areas
- Identify any additional measures of water quality and watershed health that need to be assessed
- Incorporate findings from the Integrated Water Quality Assessment Report
- Assessments that outline priority areas, potential programs for remediation, and C1 recommendations

Develop Updated Plans:

- Developed in collaboration with a technical / citizen advisory committees
- Generate assessments by Water Region (5 areas, follows Integrated Report)
- Opportunities for funding projects using source water grants and loans

Next Steps

- Spring 2024: More focus group sessions to discuss Source Water Assessment Program, Highlands waters, FW1 waters, and a new Exceptional Recreational Significance definition are anticipated.
- Late 2024: General stakeholder meetings for rulemaking (open to public) to be scheduled

OUR WATER'S WORTH IT

Contact the SWQS Team

Bureau of Environmental Analysis, Restoration and Standards

Division of Water Monitoring Standards and Pesticide Control

Division of Water Supply and Geoscience

Water Resource Management

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https://dep.nj.gov/ourwatersworthit