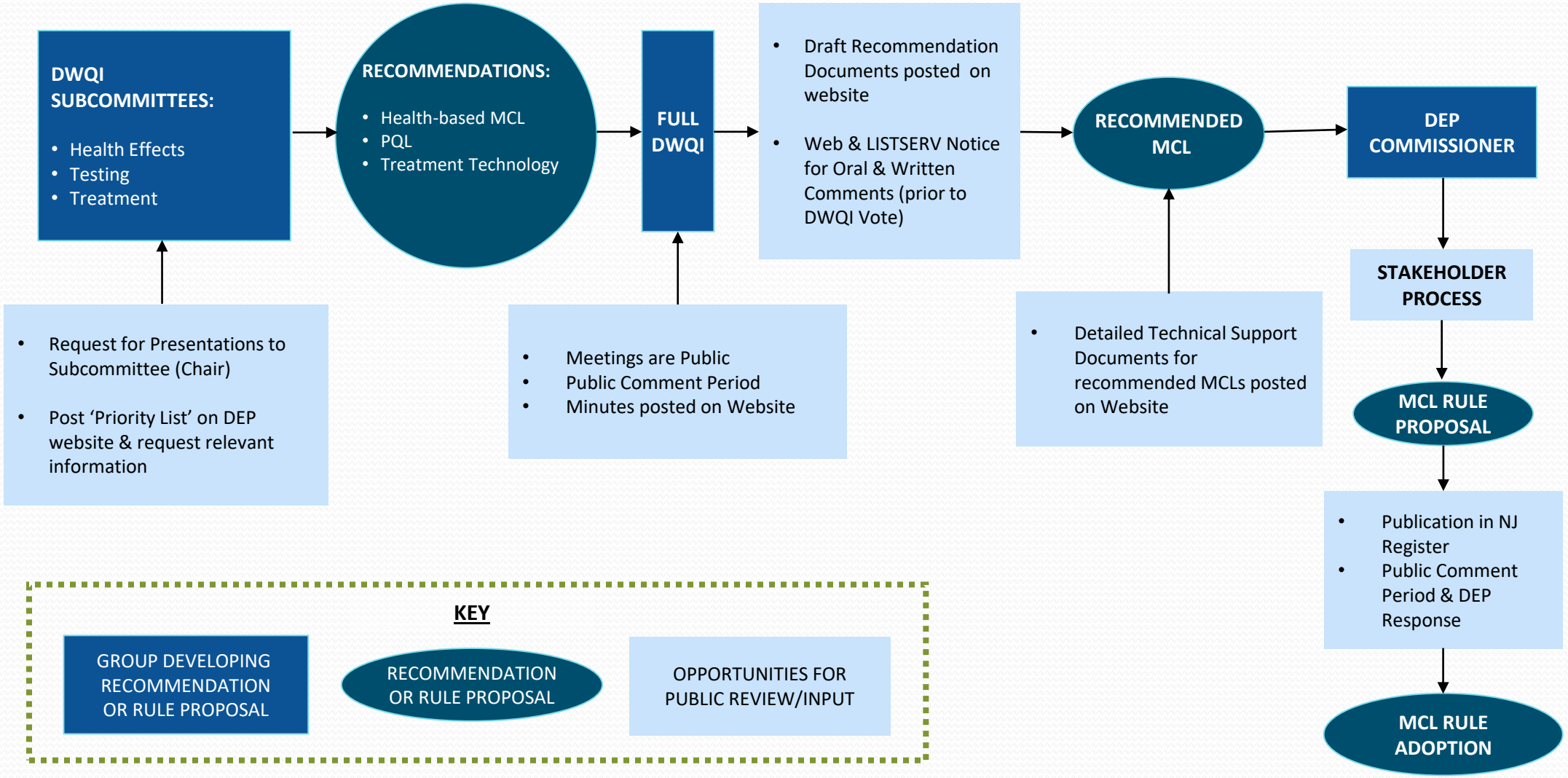
MCL DEVELOPMENT

NJ Safe Drinking Water Act N.J.A.C. 7:10
Private Well Testing Act N.J.A.C. 7:9E

Kristin Tedesco
Bureau of Safe Drinking Water
Division of Water Supply & Geoscience
March 12, 2019

PUBLIC PARTICIPATION IN MCL DEVELOPMENT PROCESS



New Jersey Rule Process

- Stakeholder process
- Draft rule proposal
- Proposal published in NJ Register
- Public hearings and comment period
- Adoption within one year
- Effective date noted upon publication

NJ STANDARDS IN DEVELOPMENT

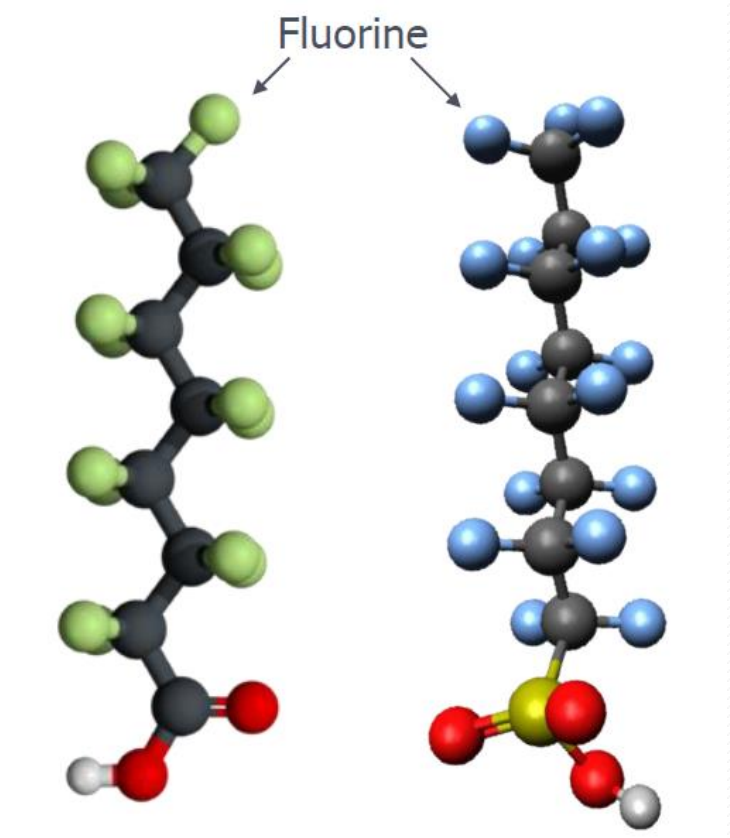
CONTAMINANT	STAGE IN PROCESS
PFNA 1,2,3 - TCP	MCL of 13 ppt adopted and effective September 4, 2019
PFOA	DWQI recommended MCL of 14 ppt; Anticipated Spring 2019 Proposal
PFOS	DWQI recommended MCL of 13 ppt; Anticipated Spring 2019 Proposal
1,4 dioxane	Under Review by DWQI

History

- A NJ MCL for PFNA of 13 ppt was adopted on September 4, 2018
  - Monitoring started in 1st quarter 2019 for community water systems <= 10,000 & non-transient non-community water systems.
  - Monitoring starting in 1st quarter 2020 for community systems >10,000 and all surface water systems.
- Stakeholder meetings:
  - PFOA only; December 19, 2017
  - PFOA/PFOS; January 18, 2019
  - Discussed implementation of MCL for PFOA/PFOS and establishment of monitoring requirements for PWTA

PFOA/PFOS

- EPA Method 537 used to test for PFNA, PFOA and PFOS
- Water systems reporting data for PFNA are encouraged to also report data for PFOA and PFOS
- If MCLs are adopted in the future, results submitted may be evaluated as “grandfathered data” and used to reduce monitoring frequency.

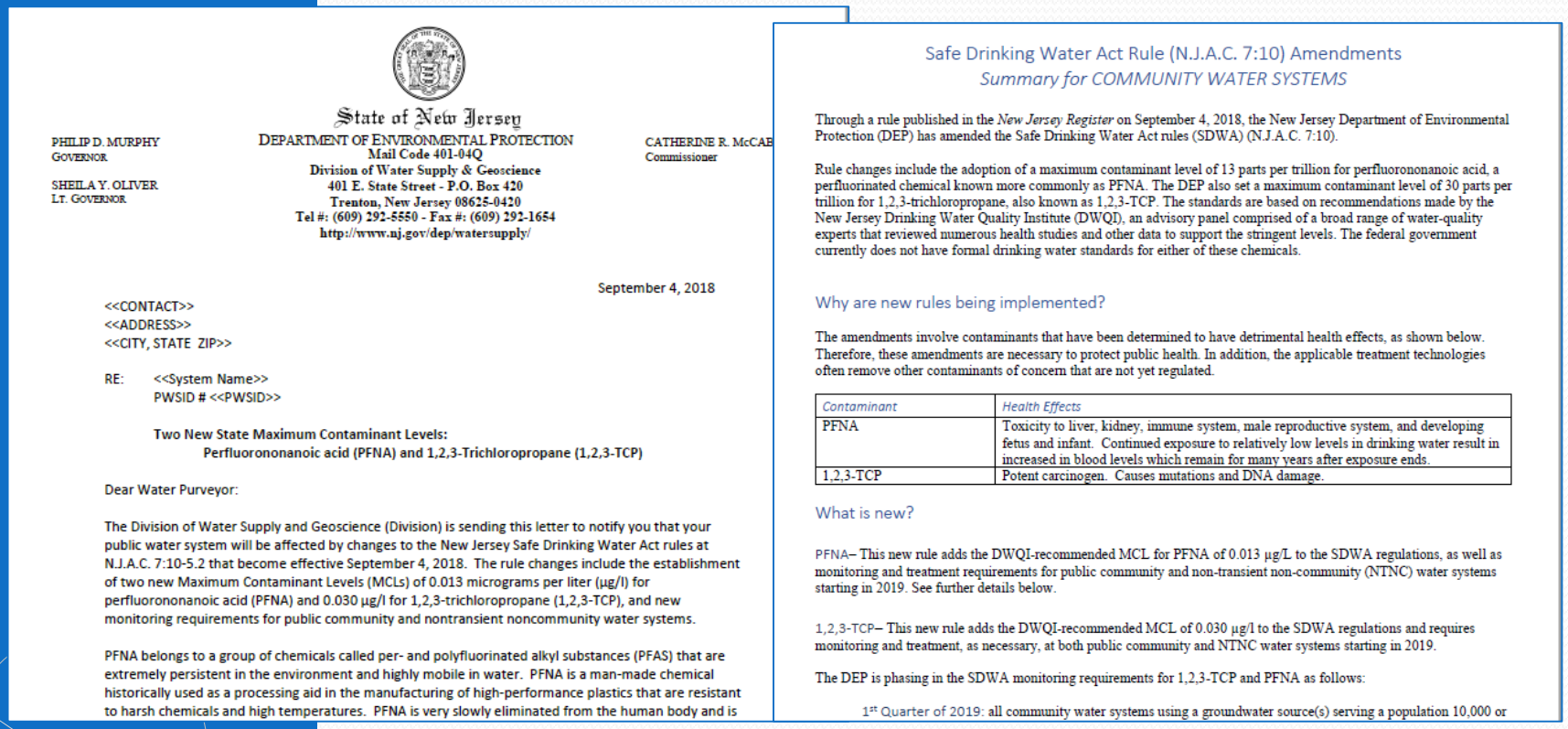


VOC MONITORING FRAMEWORK

- If three consecutive annual samples have no detections system can be placed on triennial monitoring
- Monitoring period in the three year cycle is determined by population and type of water system (N.J.A.C. 7:10-5.2(a)7)

MONITORING SCHEDULES

- Letters have been sent to all water systems confirming monitoring schedules



State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Mail Code 401-04Q
Division of Water Supply & Geoscience
401 E. State Street - P.O. Box 420
Trenton, New Jersey 08625-0420
Tel #: (609) 292-5550 - Fax #: (609) 292-1654
http://www.nj.gov/dep/watersupply/

PHILIP D. MURPHY
GOVERNOR

SHEILA Y. OLIVER
LT. GOVERNOR

CATHERINE R. McCAB
Commissioner

September 4, 2018

<<CONTACT>>
<<ADDRESS>>
<<CITY, STATE ZIP>>

RE: <<System Name>>
PWSID # <<PWSID>>

Two New State Maximum Contaminant Levels:
Perfluorononanoic acid (PFNA) and 1,2,3-Trichloropropane (1,2,3-TCP)

Dear Water Purveyor:

The Division of Water Supply and Geoscience (Division) is sending this letter to notify you that your public water system will be affected by changes to the New Jersey Safe Drinking Water Act rules at N.J.A.C. 7:10-5.2 that become effective September 4, 2018. The rule changes include the establishment of two new Maximum Contaminant Levels (MCLs) of 0.013 micrograms per liter (µg/l) for perfluorononanoic acid (PFNA) and 0.030 µg/l for 1,2,3-trichloropropane (1,2,3-TCP), and new monitoring requirements for public community and nontransient noncommunity water systems.

PFNA belongs to a group of chemicals called per- and polyfluorinated alkyl substances (PFAS) that are extremely persistent in the environment and highly mobile in water. PFNA is a man-made chemical historically used as a processing aid in the manufacturing of high-performance plastics that are resistant to harsh chemicals and high temperatures. PFNA is very slowly eliminated from the human body and is

Safe Drinking Water Act Rule (N.J.A.C. 7:10) Amendments
Summary for COMMUNITY WATER SYSTEMS

Through a rule published in the *New Jersey Register* on September 4, 2018, the New Jersey Department of Environmental Protection (DEP) has amended the Safe Drinking Water Act rules (SDWA) (N.J.A.C. 7:10).

Rule changes include the adoption of a maximum contaminant level of 13 parts per trillion for perfluorononanoic acid, a perfluorinated chemical known more commonly as PFNA. The DEP also set a maximum contaminant level of 30 parts per trillion for 1,2,3-trichloropropane, also known as 1,2,3-TCP. The standards are based on recommendations made by the New Jersey Drinking Water Quality Institute (DWQI), an advisory panel comprised of a broad range of water-quality experts that reviewed numerous health studies and other data to support the stringent levels. The federal government currently does not have formal drinking water standards for either of these chemicals.

Why are new rules being implemented?

The amendments involve contaminants that have been determined to have detrimental health effects, as shown below. Therefore, these amendments are necessary to protect public health. In addition, the applicable treatment technologies often remove other contaminants of concern that are not yet regulated.

Contaminant	*Health Effects*
PFNA	Toxicity to liver, kidney, immune system, male reproductive system, and developing fetus and infant. Continued exposure to relatively low levels in drinking water result in increased in blood levels which remain for many years after exposure ends.
1,2,3-TCP	Potent carcinogen. Causes mutations and DNA damage.

What is new?

PFNA– This new rule adds the DWQI-recommended MCL for PFNA of 0.013 µg/L to the SDWA regulations, as well as monitoring and treatment requirements for public community and non-transient non-community (NTNC) water systems starting in 2019. See further details below.

1,2,3-TCP– This new rule adds the DWQI-recommended MCL of 0.030 µg/l to the SDWA regulations and requires monitoring and treatment, as necessary, at both public community and NTNC water systems starting in 2019.

The DEP is phasing in the SDWA monitoring requirements for 1,2,3-TCP and PFNA as follows:

1st Quarter of 2019: all community water systems using a groundwater source(s) serving a population 10,000 or

- 100% bulk purchase systems received initial letter but no monitoring schedule letter

MONITORING SCHEDULES

- **Monitoring Schedules are available on Drinking Water Watch**

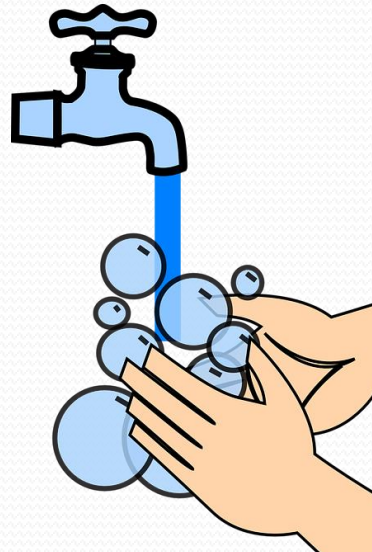
ample Point ID	Analyte Name	Schedule Starts	Sampling Year	Requirements
DS	PH	07/01/2018	2018	20 Sample(s)/Every 6M
001004	1,2,3-TRICHLOROPROPANE	01/01/2020	2020	1 Sample(s)/QT
001004	1,2-DIBROMO-3-CHLOROPROPANE	01/01/2020	2020	1 Sample(s)/QT
001004	CARBON, TOTAL	01/01/2002	2018	1 Sample(s)/Month
001004	ETHYLENE DIBROMIDE	01/01/2020	2020	1 Sample(s)/QT
001004	NITRATE	01/01/2003	2018	1 Sample(s)/YR
001004	PERFLUORONONANOIC ACID (PFNA)	01/01/2020	2020	1 Sample(s)/QT
001004	PH	07/01/2018	2018	1 Sample(s)/Every 2W
001004	TURBIDITY	01/01/2002	2018	1 Sample(s)/Month

Lab MDL Guidelines

- Conduct an MDL study where they need to obtain an MDL of 2 ng/L or less
- Demonstrate they can meet the MRL of 5 or less performing a MRL Confirmation for a MRL of 5 ng/L
- Collect field blanks and analyze if the MRL of the PFNA is over the lab's MRL of 5 ng/L
- Indicate a result is between the MRL and MDL by putting a "J" in the **result comment field** not the sample comment field
- An FAQ document specifically for certified labs is forthcoming

SAMPLING REMINDERS

- Store bottles in “clean” box or cooler
  - (e.g., do not place on seat of car, in clothing pocket, or other temporary storage)
- Wash hands with PFAS-free water and PFAS-free soap/detergent
- Wear clean, disposable nitrile gloves while filling and sealing the sample bottles
- Sample for PFAS and associated blanks first if collecting other samples
- Do not use “blue ice” packs in sample cooler



COMMON PRODUCTS TO AVOID DURING SAMPLING

- Packaged food and fast food
- Blue ice/chemical ice
- Aluminum foil
- Adhesives (e.g., sticky notes, labels, tape)
  - Wash hands after applying labels
- Waterproof paper and notebooks
- Permanent markers
- Cables and coated wires, windshield wipers
- Plumber/thread sealant tape and plumbing paste

- Water or stain resistant clothing, shoes, bags, and upholstery
  - Rain gear
- Flame resistant clothing
- Coated Tyvek® suits

- Recommended to wear clothing that has been washed at least six times
  - No fabric softener

IMPORTANT RESOURCES – TREATMENT FUNDING

- **Spill Funds Claims under the Spill Compensation and Control Act**

  NJDEP Site Remediation Program: https://www.nj.gov/dep/srp/

  Fund Management Section at 609-984-2076 or

  Publicly Funded Response Element at 609-984-3074

- **New Jersey Drinking Water State Revolving Fund**

  Bureau of Safe Drinking Water at (609) 292-5550

IMPORTANT RESOURCES

- EPA Rule Actions: https://www.epa.gov/pfas/epa-actions-address-pfas
- Interstate Technology and Regulatory Committee Factsheets: https://pfas-1.itrcweb.org/fact-sheets/
- Unregulated Contaminant Monitoring Rule: https://www.epa.gov/dwucmr/third-unregulated-contaminant-monitoring-rule

Ground Water Quality Standards Development for PFOA, PFOS

Sandra Cohen, GWQS Rule Manager
Bureau of Environmental Analysis, Restoration and Standards
Division of Water Monitoring and Standards

Ground Water Quality Standards (GWQS) Overview

Designated Use	Criteria

• Class I: Ground Water of Special Ecological Significance
  • Class I-PL (Pinelands Protection Area):
  • Class I-A and Class I-PL (Pinelands Preservation Area):
	• "Background water quality"
	• "Natural quality"

Class II: Ground Water for Potable Water Supply	• Specific • Interim Specific • Interim Generic
Class III: Ground Water for Uses Other Than Potable Water Supply	Site-specific (implementing program)

Class II GWQS (Specific and Interim Specific)

- Criterion:
  1. The health-based level for a promulgated MCL; **OR**
  2. Derived from best available toxicological information using formulas for carcinogens or non-carcinogens at N.J.A.C. 7:9C-1.7(c)4
- Practical quantitation level (PQL) = lowest concentration reliably achieved during routine laboratory operations
  - Derived from Method Detection Limit (MDL) data x 5
  - Derived from laboratory performance data that has been evaluated by the Department using Sanders, P. et al. (1996)

Interim Specific GWQS for PFOA, PFOS

- Draft interim specific ground water quality criteria (ISGWQC) and draft interim PQLs (IPQLs) for PFOA and PFOS
  - Published by DSR on **January 17, 2019** along with technical support documents on DSR's website
  - Public comment period closed **2/19/2019**

https://www.nj.gov/dep/dsr/ISGWQC_Public_Comment_PFOS_PFOA.html

Interim Specific GWQS for PFOA, PFOS (cont'd)

- Draft Interim Specific Criteria derived using formula for non-carcinogens; rounded to one significant figure
- Draft Interim PQL derived from laboratory performance data using Sanders, P. et al.; rounded to one significant figure

Constituent	Draft ISGWQC	Draft IPQL
PFOA	0.01 µg/L = 10 ng/L	0.006 µg/L = 6 ng/L
PFOS	0.01 µg/L = 10 ng/L	0.004 µg/L = 4 ng/L

Interim Specific GWQS for PFOA, PFOS (cont'd)

- Interim specific ground water quality standards
  - Higher of interim specific criterion and interim PQL
  - Become established when posted on the DWMS website at **https://www.state.nj.us/dep/wms/bears/gwqs.htm**.
  - Serve as minimum remediation standards
  - Replaced with specific GWQS through rulemaking "as soon as reasonably possible."

PFOA and PFOS Stakeholder Meeting: Maximum Contaminant Levels and Ground Water Quality Standards

Invitation (pdf)
Agenda (pdf)
Presentation (pdf)

https://www.njdepcalendar.com/calendar/events/index.php?com=detail&eID=605

Friday, January 18, 2019
10:00 AM - 03:00 PM

Categories:

Ground Water Quality Standards Transformation

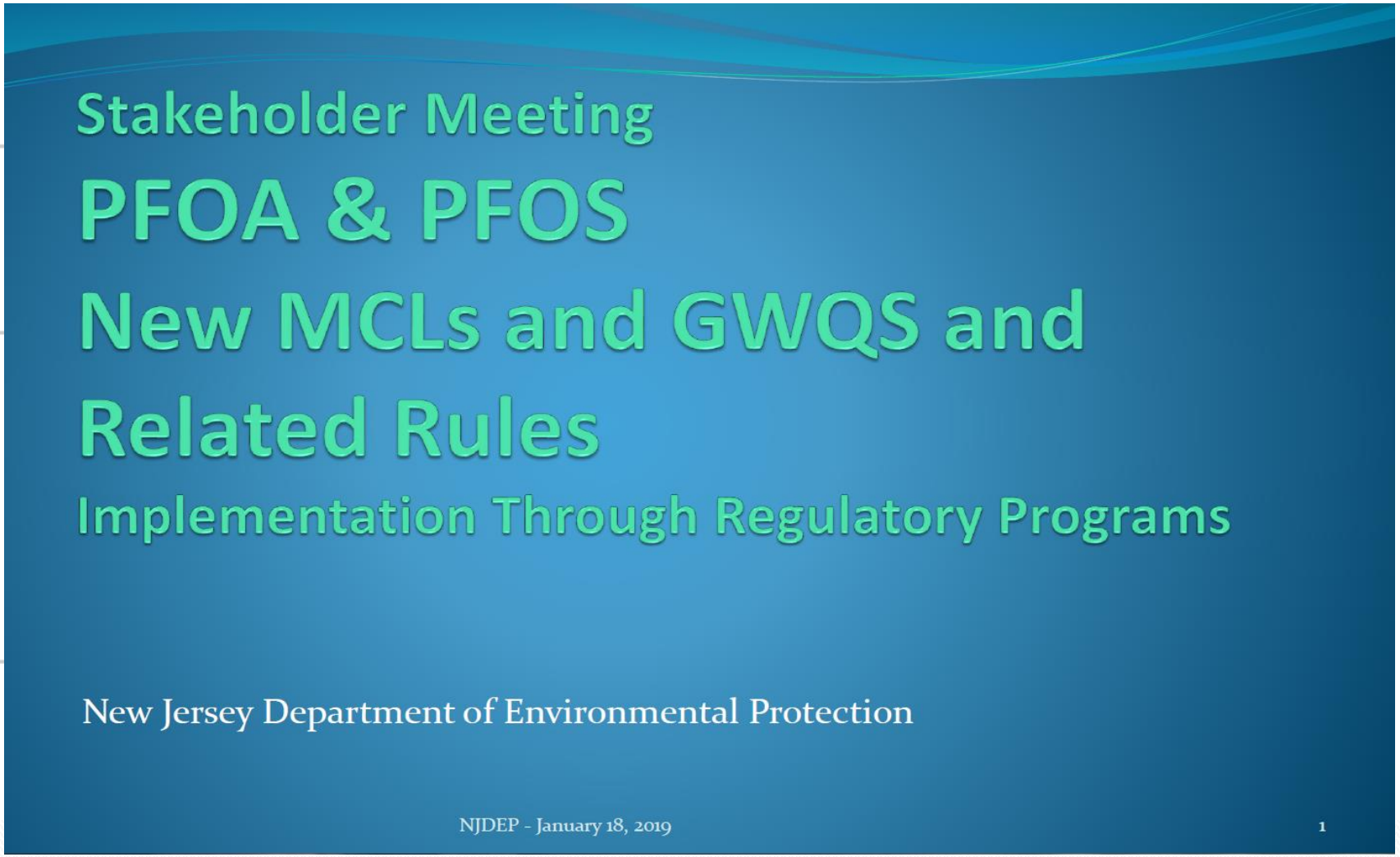
Location:

NJDEP-Public Hearing Room
401 East State St.
Trenton, NJ 08625
USA

Website: Click to Visit

Event Contact Info

Email: watersupply@dep.nj.gov
Phone: 609-292-5550



Specific GWQS for PFOA, PFOS based on DWQI-recommended MCL

- Specific criteria = health-based level of MCL
- PQL = Derived from laboratory performance data using Sanders, P. et al.; rounded to one significant figure
- Specific GWQS = higher of criterion and PQL

Constituent	Criterion	PQL	Constituent Standard
PFOA	0.014 µg/L (14 ng/L)	0.006 µg/L (6 ng/L)	0.014 µg/L (14 ng/L)
PFOS	0.013 µg/L (13 ng/L)	0.004 µg/L (4.2 ng/L)	0.013 µg/L (13 ng/L)

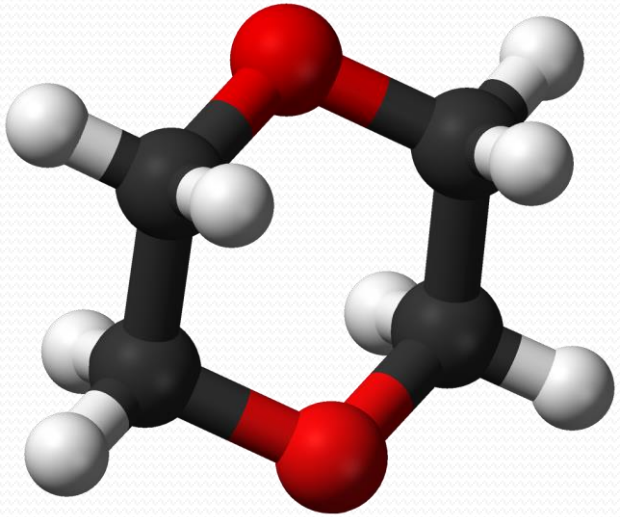
SUMMARY

PFOA and PFOS – Next Steps

1. Consider Stakeholder Feedback
2. Proposal published in NJ Register
3. Public hearings and comment period
4. Adoption within one year
5. Effective date noted upon publication

ADDITIONAL NOTE: 1,4-DIOXANE

- DWQI will review basis of NJDEP GWQS including Health-based Criterion & PQL
- Call for Information – January 20th, 2019
- Evaluate additional information
  - More recent studies
  - Submitted in response to Call for Information
- Need input and data on treatment!



QUESTIONS?

watersupply@dep.nj.gov