

PFAS Litigation and Regulatory Developments Conference

HOW TO ADDRESS THE REMOVAL OF PFAS IN DRINKING WATER



**Christopher C.
De Carlo, CHMM, LSRP**

Technical Director, Environmental Insurance
The Vertex Companies
Somerset, NJ



CMBG₃ LAW



CURRENT REGULATORY ENVIRONMENT



- Final PFAS National Primary Drinking Water Regulation for per and polyfluorinated substances (PFAS) was issued on April 10, 2024
- Six PFAS are now regulated under the Safe Drinking Water Act (SDWA) and are provided with Maximum Contaminant Levels (MCLs)
 - Perfluorooctanoic acid (PFOA)
 - Perfluorooctane sulfonic acid (PFOS)
 - Perfluorononanoic acid (PFNA)
 - Perfluorohexane sulfonate (PFHxS)
 - Hexafluoropropylene Oxide-Dimer Acid (HFPO-DA)
 - Perfluorobutane sulfonate (PFBS)

How to Address PFAS in Drinking Water



CURRENT REGULATORY ENVIRONMENT

Chemical	Maximum Contaminant Level Goal (MCLG)	Maximum Contaminant Level (MCL)
PFOA	0	4.0 ppt
PFOS	0	4.0 ppt
PFHxS	10 ppt	10 ppt
HFPO-DA (GenX chemicals)	10 ppt	10 ppt
PFNA	10 ppt	10 ppt
Mixture of two or more: PFHxS, PFNA, HFPO-DA, and PFBS	Hazard Index of 1	Hazard Index of 1

*Compliance is determined by running annual averages at the sampling point

How to Address PFAS in Drinking Water

RULE IMPLEMENTATION



- Applies to Public Water Systems (PWS) Only – Under the Rule a PWS must:
 - Conduct initial and ongoing compliance monitoring for the regulated PFAS
 - Implement solutions to reduce regulated PFAS in their drinking water if levels exceed the MCLs
 - Inform the public of the levels of regulated PFAS measured in their drinking water and if an MCL is exceeded

How to Address PFAS in Drinking Water



RULE IMPLEMENTATION

- April 10, 2027
 - Initial Monitoring Must be Complete by PWS
- April 10, 2029
 - Initial Monitoring Results Must be Included In Consumer Confidence Reports (CCRs)
 - Regular Monitoring for Compliance Must Begin
 - PWS Must Provide Public Notifications for Monitoring and Testing Violations



How to Address PFAS in Drinking Water



CONNECT TO AN EXISTING
WATER PROVIDER

FIND A NEW WATER
SOURCE

REMOVAL
TECHNOLOGY

How to Address PFAS in Drinking Water

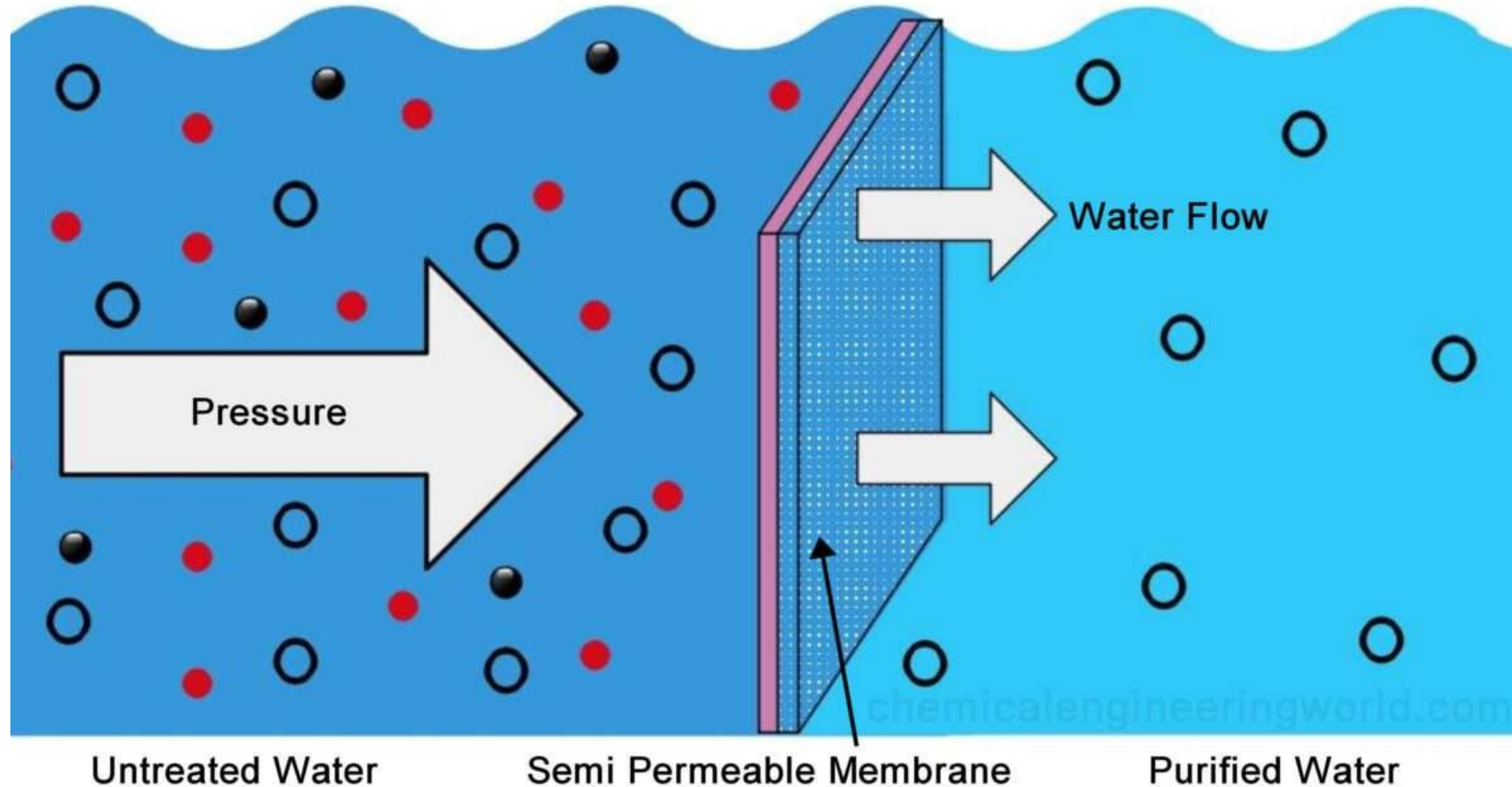


REMOVAL TECHNOLOGIES - ADSORPTION



How to Address PFAS in Drinking Water

REMOVAL TECHNOLOGIES – MECHANICAL REMOVAL



WASTE GENERATION AND DISPOSAL

- PFAS are concentrated with treatment – require disposal
 - Thermal Destruction
 - Solidification and Land Disposal
 - Underground Injection Well



How to Address PFAS in Drinking Water



- Enacted under the Infrastructure Investment and Job Act
- Appropriated funds under SDWA for addressing PFAS in drinking water in small or disadvantaged communities
- \$1B will be made available to eligible water supply systems annually b/t FY2022 through FY2026



Emerging Contaminants Small
or Disadvantaged Communities
(EC-SDC) Grant Program

How to Address PFAS in Drinking Water



- Funding is allocated to states who will then award funds to eligible entities as loans
 - Public or private community water systems
 - Non-profit non-community water systems
- Loan repayments revolve back into the fund for future loans.



Drinking Water State
Revolving Fund Bipartisan
Infrastructure Law Emerging
Contaminants Funding
(DWSRF EC)

How to Address PFAS in Drinking Water



- Funding is allocated to states who will then award funds to eligible entities
- Eligible entities are dependent on the project type and may include municipalities, intermunicipal, interstate or state agencies; non-profit entities; private, for-profit entities; watershed groups; community groups; homeowner's associations; and individuals.



Clean Water State Revolving
Fund Bipartisan Infrastructure
Law Emerging Contaminants
Funding (CWSRF EC)

How to Address PFAS in Drinking Water



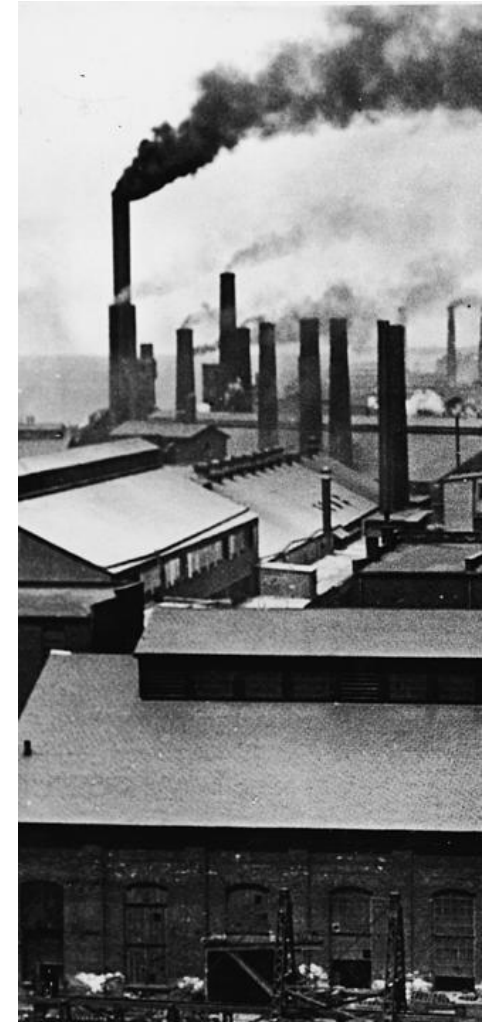
- States have programs to assist single family potable wells
- Insurance policies will fund water treatment when coverage is triggered



How to Address PFAS in Drinking Water



- Site is a clothing manufacturing that applied water/stain resistant coatings to clothing – no emission controls on waste stack due to lack of regulation
- Previous RCRA Corrective Action due to presence of chlorinated VOCs – PFAS were added to sample protocol due to new State regulation
- PFAS identified in on-Site groundwater – State mandated investigation of surrounding potable wells. PFAS identified in wells at concentrations orders of magnitude in excess of the regulatory limit
- IRMs include installation of POET systems on dozens of potable wells – future remediation will likely exceed \$10M



Questions & Discussion



How to Address PFAS in Drinking Water



For More Information

Christopher C. De Carlo
Technical Director
732.284.3036
cdecarlo@vertexeng.com

Tori Spina
732.410.4544
vwardamasky@vertexeng.com

