U.S. Department of the Interior
Bureau of Indian Education

CLEAN WATER ACT AND SAFE DRINKING WATER ACT REQUIREMENTS

OBJECTIVE

To gain an understanding of how to properly manage Clean Water Act (CWA) and Safe Drinking Water Act (SDWA) requirements in accordance with applicable laws and regulations.

MEETING TIPS FOR ONLINE TRAINING

- 1). Place yourself on “Mute” to prevent background noise.
- 2). Use the “Chat with all” feature to ask questions.
  - Note: All participants will be able to see your comments or questions.
- 3). Every participant will receive a certificate of completion.

BIE BRANCH OF ENVIRONMENTAL MANAGEMENT (BIE BEM) WHO WE ARE…

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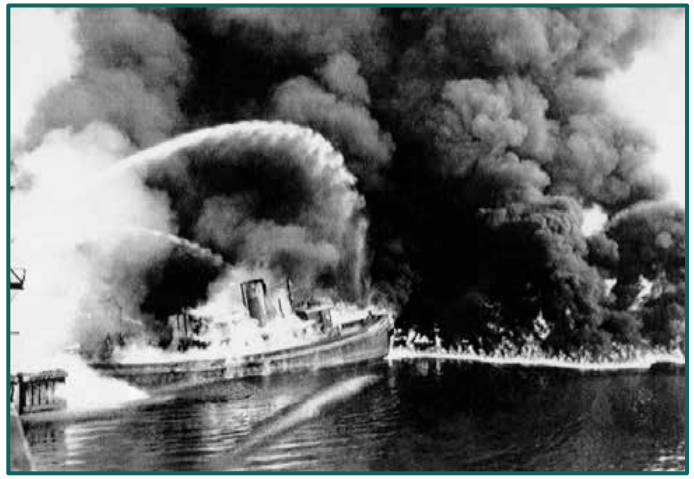
AGENDA

- Water Regulation History
- Clean Water Act and Safe Drinking Water Act Overview
- Drinking Water
  - Public Water Systems
  - Drinking Water Standards
- SDWA Requirements
  - Monitoring
  - Certified Operators
  - Consumer Confidence Reports (CCRs)
- CWA Requirements – Wastewater
  - Lagoon Management
  - Operators
  - Septic Systems

https://www.epa.gov/aboutepa/using-epa-seal-and-logo

WATER REGULATION HISTORY



cleveland.com

- **Post WWII**
  - ↑ Industry ↑ Water Pollution
- **Cuyahoga River**
  - Oil-polluted water caused major fires in 1952 and 1969
  - One of the most polluted rivers in the United States

→ Clean Water Act

WATER REGULATION HISTORY

1948

Federal Water Pollution Control Act

- First water pollution rules

1972

Clean Water Act (CWA)

- Regulates discharges and sets water quality standards

1974

Safe Drinking Water Act (SDWA)

- Drinking water quality and supply

TREATMENT AS A STATE

Note

Some tribes have their own environmental protection agency and have adopted Treatment as a State.

Some have more stringent water quality standards than U.S. Environmental Protection Agency (U.S. EPA) or states.

Be certain of who regulates your systems and what their unique requirements are for your systems.

This training primarily focuses on U.S. EPA requirements.

KEY PROVISIONS AND AMENDMENTS

CLEAN WATER ACT (CWA)

1. Water Quality Act of 1987:
   - ❖ Established the Nonpoint Source Management Program to address pollution from diffuse sources such as agricultural runoff and urban stormwater.
   - ❖ Expanded funding for wastewater treatment infrastructure through the Clean Water State Revolving Fund (CWSRF).

2. Water Infrastructure Improvements for the Nation (WIIN) Act of 2016:
   - ❖ Authorized funding for the Drinking Water State Revolving Fund (DWSRF) to assist states in financing infrastructure projects to improve drinking water quality.

CLEAN WATER ACT (CWA)

3. Great Lakes Restoration Initiative:
   - Established in 2010, the initiative provides funding for projects to address pollution, invasive species, and habitat degradation in the Great Lakes region.
   - Aims to protect and restore the ecological health of the Great Lakes, which serve as a vital source of drinking water for millions of people.

4. Water Infrastructure Finance and Innovation Act (WIFIA):
   - Enacted in 2014 and expanded in subsequent years, WIFIA provides low-interest loans for large-scale water infrastructure projects, including wastewater treatment facilities and drinking water systems.
   - Designed to leverage federal funds to attract additional investment from the private sector and state and local governments.

SAFE DRINKING WATER ACT(SDWA)

1. Safe Drinking Water Act Amendments of 1996:
   - Established the Drinking Water State Revolving Fund (DWSRF) to provide financial assistance to public water systems for infrastructure improvements and compliance with drinking water regulations.
   - Required the U.S. EPA to develop and update a list of unregulated contaminants for monitoring and research, known as the Unregulated Contaminant Monitoring Rule (UCMR).
     - Currently in UCMR-5

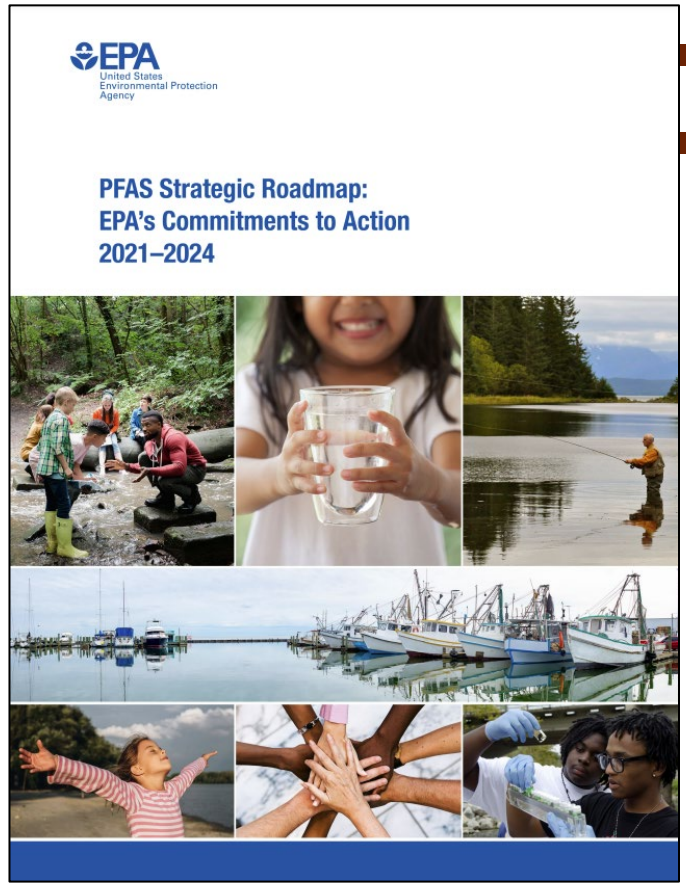
https://apexpros.com/plumbing/water-line-repair/

SAFE DRINKING WATER ACT(SDWA)

2. Lead and Copper Rule Revisions:
   - In response to concerns about lead contamination in drinking water, the U.S. EPA has periodically revised the Lead and Copper Rule to strengthen monitoring requirements, corrosion control measures, and public notification procedures.
   - Recent revisions focus on reducing lead exposure in schools and childcare facilities and improving lead sampling protocols.
     - Lead Service Line (LSL) identification and inventory (October 16, 2024)
       - BIE Water System Assessments are identifying LSL at BIE schools and providing information to assist schools with the reporting process
     - Future LSL removal

SAFE DRINKING WATER ACT (SDWA)

3. Per-and Polyfluoroalkyl Substances (PFAS) Action Plan:
   - In 2019, the U.S. EPA released a comprehensive action plan to address per- and polyfluoroalkyl substances (PFAS) contamination in drinking water.
   - The plan includes monitoring and research initiatives, regulatory actions to set MCLs for PFAS compounds, and efforts to support communities affected by PFAS contamination.
4. Emerging Contaminants Program:
   - The SDWA authorizes the U.S. EPA to evaluate and regulate emerging contaminants, including pharmaceuticals, personal care products, and industrial chemicals, through the Unregulated Contaminant Monitoring Rule (UCMR) and other regulatory mechanisms.
   - Continual research and monitoring efforts aim to identify and address new contaminants of concern to protect public health.



https://www.epa.gov/system/files/documents/2023-12/epas-pfas-strategic-roadmap-dec-2023508v2.pdf

SAFE DRINKING WATER ACT - DRINKING WATER

SAFE DRINKING WATER ACT (SDWA)

- Enacted by the United States Congress in 1974
- Main purpose is to ensure the safety of the nation's drinking water supply
- Establishes standards and regulations for drinking water quality, including setting maximum contaminant levels (MCLs) for various contaminants that may be present in drinking water
- Requires regular monitoring, testing, and reporting by public water systems (PWS) to ensure compliance with these standards and to protect public health

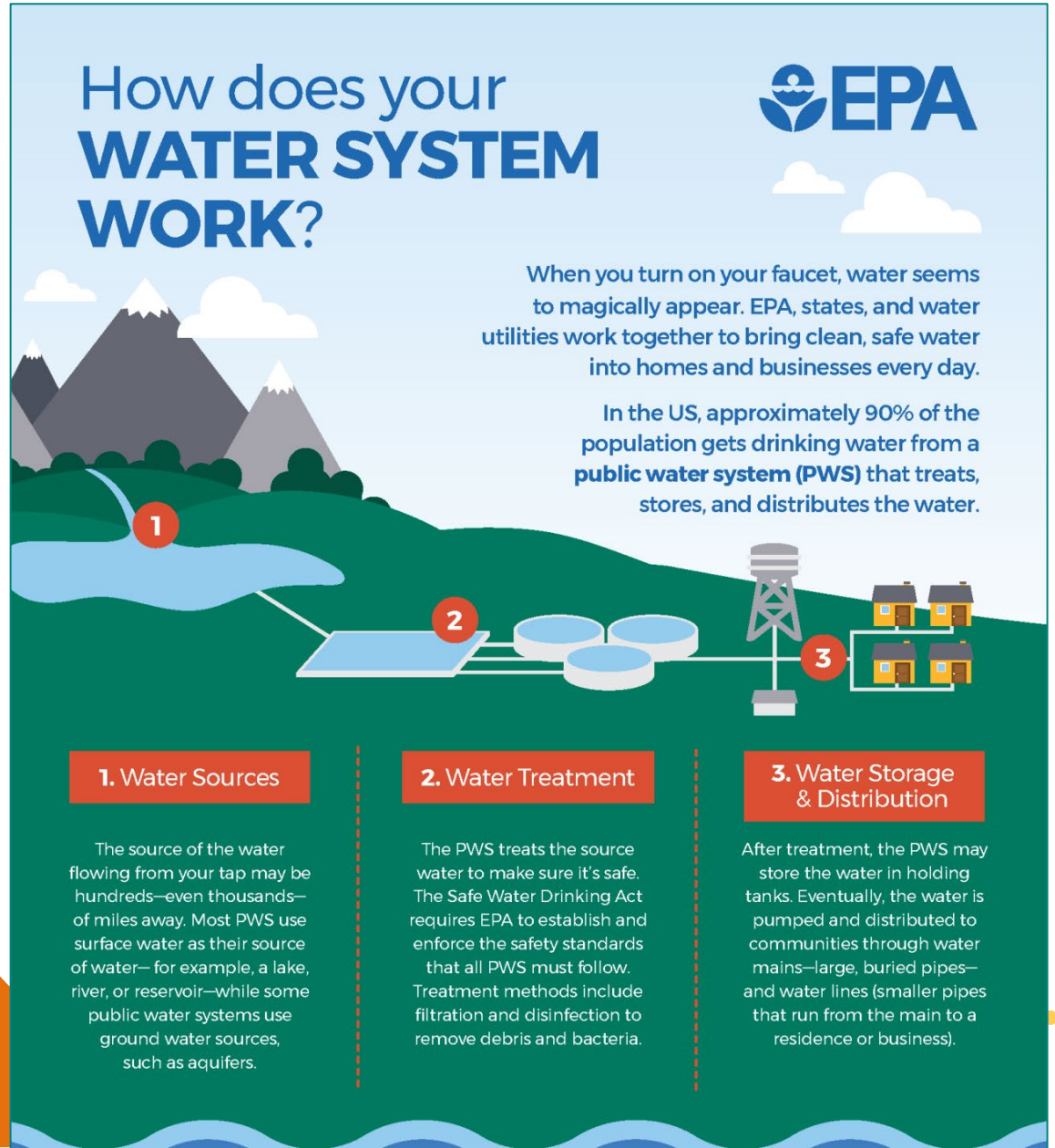
SAFE DRINKING WATER ACT (SDWA) REQUIREMENTS

The SDWA:

- ❖ Establishes national primary drinking water regulations
- ❖ Sets maximum contaminant levels (MCLs) for various contaminants
- ❖ Requires regular monitoring and reporting by public water systems

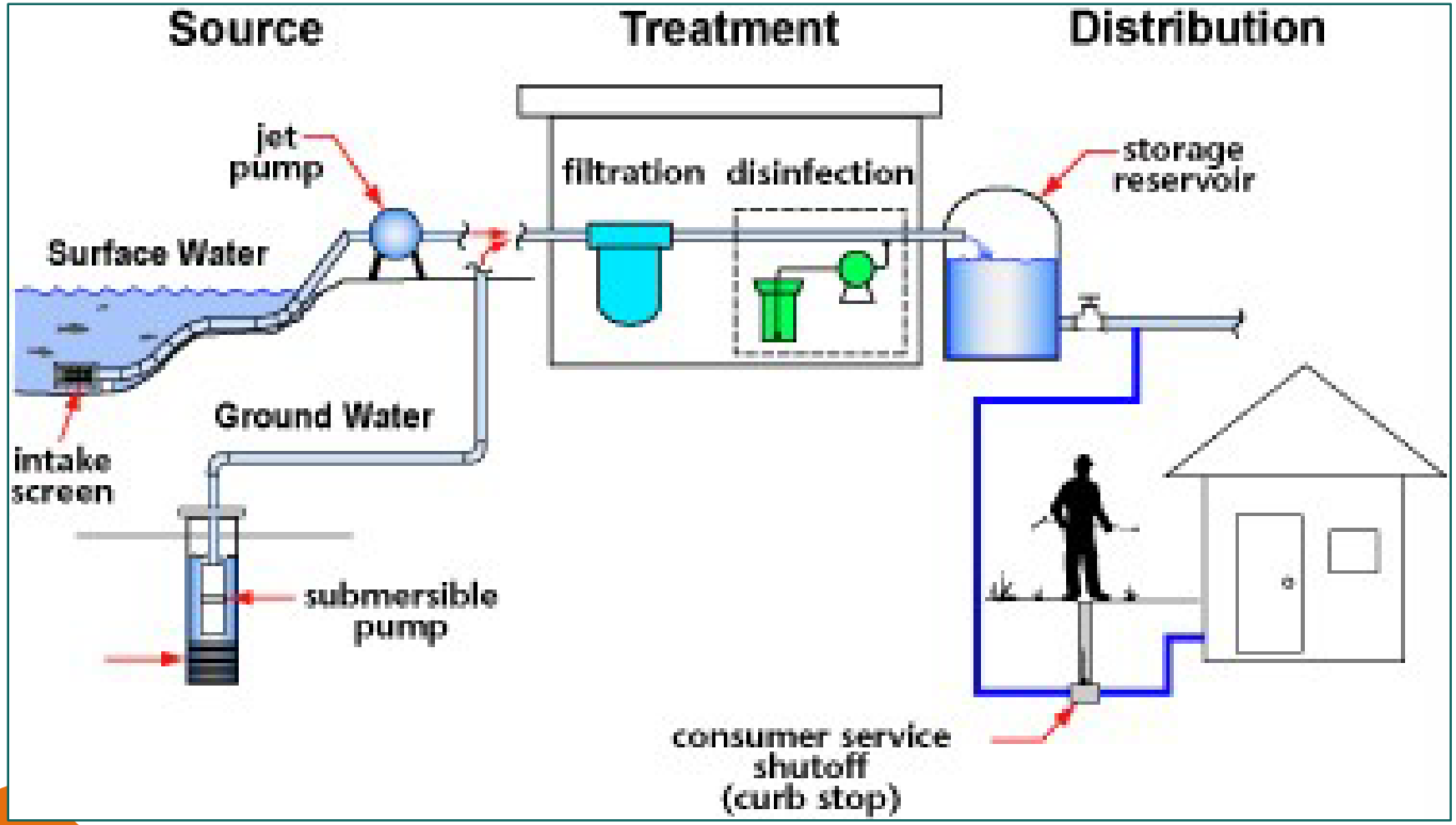
https://www.fmglaw.com/business-litigation/epa-announces-final-national-primary-drinking-water-regulation-for-pfas/

WATER SYSTEMS



https://www.epa.gov/ground-water-and-drinking-water/infographic-how-does-your-water-system-work

WATER TREATMENT SYSTEM



https://www.researchgate.net/figure/Flow-diagram-of-Water-distribution-system_fig1_315825129

A simplified water treatment system

WATER SYSTEMS

How do I know my water is safe?

America's drinking water is among the safest in the world. If you have questions about your drinking water, customers can contact their local water supplier to get a Consumer Confidence Report (CCR). The CCR lists the levels of contaminants that have been detected in the water, including those identified by EPA, and whether the PWS meets state and EPA drinking water standards.

Types of Public Water Systems

There are more than 151,000 PWS in the US, and they fall into three different categories:

Community Water Systems (CWS)

Provide water to the same population year-round. Most people—more than 300 million—in the US get their water from a CWS.

Non-transient Non-community Water Systems (NTNC)

Provide water to the same people at least six months a year, but not all year. For example, NTNCs may serve schools or businesses that have their own water systems.

Transient Non-community Water Systems (TNC)

Provide water to areas where people don't stay for very long—for example, campgrounds.

For more information, visit: **epa.gov/safewater**

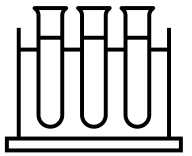
https://www.epa.gov/ground-water-and-drinking-water/infographic-how-does-your-water-system-work

TYPES OF PUBLIC WATER SYSTEMS (PWS)

Community Water System (CWS)	Same population year-round
Non-Transient Non-Community Water Systems (NTNCWS)	Same people for 6 months
Transient Non-Community Water Systems (TNCWS)	Different people for short lengths of time

NATIONAL PRIMARY DRINKING WATER REGULATIONS (NPDWR)

- NPDWRs set legally enforceable standards for contaminants in drinking water to protect public health (40 CFR 141).
- PWS must sample for and potentially treat for these contaminants.
- These regulations aim to prevent waterborne diseases and adverse health effects caused by exposure to harmful substances in drinking water.



MAXIMUM CONTAMINANT LEVELS (MCL)

- Maximum allowable concentrations of specific contaminants in drinking water, as determined by the U.S. EPA for over 90 contaminants, including:
  - Inorganic Contaminants (Arsenic, Lead)
  - Organic Contaminants (Pesticides, Solvents)
  - Radiological Contaminants (Radium, Uranium)
  - Disinfection By Products (Chlorite, Haloacetic acids)
  - Microbial Contaminants (bacteria, viruses e.g. *Cryptosporidium*)
  - **On April 10, 2024, EPA announced the final National Primary Drinking Water Regulation (NPDWR) for six PFAS.**
- These levels represent the highest concentrations of contaminants that are considered safe for consumption over a lifetime of exposure.

NATIONAL PRIMARY DRINKING WATER REGULATIONS (NPDWR)

- These regulations aim to prevent waterborne diseases and adverse health effects caused by exposure to harmful substances in drinking water.
- NPDWRs set legally enforceable standards for contaminants in drinking water to protect public health (40 CFR 141).
  - Maximum Contaminant Level Goal (MCLG)
    - The level of a contaminant in drinking water below which there is no known or expected *risk to health*. MCLGs allow for a margin of safety and are *non-enforceable* public health goals.
  - Maximum Contaminant Level (MCL)
    - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.

NATIONAL SECONDARY DRINKING WATER STANDARDS (NSDWS)

- These standards are established as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor.
- NSDWSs set non-mandatory water quality standards for 15 contaminants (40 CFR 141).
  - Secondary Maximum Contaminant Level (SMCL)
    - The level of a contaminant in drinking water below which there is no known or expected *risk to health*. MCLGs allow for a margin of safety and are *non-enforceable* public health goals.
    - These contaminants are *not considered to present a risk* to human health at the SMCL.

SDWA REGULATORY REQUIREMENTS

MONITORING REQUIREMENTS

- Public water systems must conduct regular monitoring of their drinking water sources, treatment processes, and distribution systems to assess water quality and compliance with regulatory standards.
  - *Monitoring schedule* provided by U.S. EPA or local environmental regulatory agency and can also vary by public water system.
  - Also conduct sampling in accordance with the current *Unregulated Contaminant Monitoring Rule (UCMR)*

https://www.wuft.org/news-from-our-partners/2024-04-11/how-new-federal-regulations-on-forever-chemicals-in-drinking-water-impact-floridians

MONITORING SCHEDULE

- Provided by U.S. EPA or local environmental regulatory agency and can also vary by public water system
- Conduct sampling in accordance with Monitoring Schedule
- Maintain documentation of sampling and results, including chain of custody forms

FLORIDA DEPARTMENT OF
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Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

2021 Chemical Monitoring for Community Systems

Belleair Water Plant PWS-ID No. 6520135

MONITORING & REPORTS		DUE	COMMENTS
Microbiological ("Bacteriological")		Monthly	Six Distribution samples per month. Disinfectant residuals must be reported.
Nitrate and Nitrite		2021	Sample at each POE every year. *
Primary Inorganics		2023	Sample at each POE every three years.
Secondaries		2023	Sample at each POE every three years.
Radiologicals	Gross Alpha	2026	Sample at each POE every three, six or nine years.
	Uranium	2029	Sample at each POE every three, six or nine years.
	Radium-226	2026	Sample at each POE every three, six or nine years.
	Radium-228	2026	Sample at each POE every three, six or nine years.
Volatile Organic Contaminants (VOCs)		2023	Sample at each POE every three years.
Synthetic Organic Contaminants (SOCs)		2 Quarters in 2023	Sample at each POE every three years, or submit SOC reduced monitoring waiver, if applicable. Use Form 62-560.545(2), F.A.C.
Stage II Disinfection Byproducts (DBPs) *Total Trihalomethanes & Haloacetic Acids (5)*		Quarterly 2021	Sample according to approved Stage 2 D/DBPR Monitoring Plan.
Asbestos		2029	Certification or results due every nine years. Use Form 62-555.900(10), F.A.C.
Lead & Copper		June – Sept 2023	Sample from sites approved on the Lead and Copper Sampling Plan every three years.
Consumer Confidence Report (CCR) & CCR Certification of Delivery		July 1, 2021	CCR must be delivered by July 1, 2021. The CCR Certification of Delivery must be submitted to the Department by August 10, 2021. Use Form 62-555.900(alternate 19), F.A.C.

*POE = Point of entry to the distribution system. Sample at each POE that is representative of each source after treatment.

https://floridadep.gov/sites/default/files/2021%20Pinellas%20County%20Reminder%20Letters.pdf

ADDITIONAL RULES

- Additional rules may apply to most PWS, and may require additional monitoring:
  - Lead and Copper Rule
  - Arsenic Rule
  - Stage 2 Disinfectants and Disinfection Byproducts Rule
  - Total Coliform Rule

EPA United States Environmental Protection Agency

Lead and Copper Rule:

A Quick Reference Guide for Schools and Child Care Facilities that are Regulated Under the Safe Drinking Water Act

This document is designed for schools and child care facilities that meet the definition of a public water system and therefore must comply with the Lead and Copper Rule (LCR) requirements. The guidance contained in this document does not substitute for EPA's regulations, nor is it a regulation itself. This reference guide provides an overview of the requirements but does not contain all of the details you will find in the LCR. Compliance is based on the actual rule language. States and local governments can impose additional requirements.

OVERVIEW OF THE RULE

Schools and child care facilities that have their own water supply and are considered non-transient, non-community water systems (NTNCWSs) are subject to the Lead and Copper Rule (LCR) requirements.

The LCR was developed to protect public health by minimizing lead and copper levels in drinking water. The most

https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P10058C5.txt

CONSUMER CONFIDENCE REPORT (CCR)

- Must be provided by all Community Water Systems (CWS) annually by 1 July.
- Provides all consumers with information about their local drinking water quality
  - Includes detected contaminants, including those that are above the MCL

Community Water Systems (CWSs)

- A community water system (CWS) is a public water system that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

Non-Transient Non-Community Water Systems (NTNCWSs)

- A non-transient non-community water system (NTNCWS) is a public water system that provides water to a non-residential population for at least six months of the year.

CONSUMER CONFIDENCE REPORT (CCR)

Eight Content Requirements of a CCR

- ***Item 1*: Water System Information** – Name/phone number of a contact person; information on public participation opportunities.
- ***Item 2*: Source(s) of Water**.
- ***Item 3*: Definitions** – Maximum Contaminant Level (MCL); MCL Goal (MCLG); Treatment Technique (TT); Action Level (AL); Maximum Residual Disinfectant Level (MRDL); MRDL Goal (MRDLG).
- ***Item 4*: Detected Contaminants** – A table summarizing reported concentrations and relevant MCLs and MCLGs or MRDLs and MRDLGs; known source of detected contaminants; health effects language.
- ***Item 5*: Information on Monitoring for *Cryptosporidium*, Radon, and Other Contaminants** (if detected).
- ***Item 6*: Compliance with Other Drinking Water Regulations** (any violations and Ground Water Rule [GWR] special notices).
- ***Item 7*: Variances and Exemptions** (if applicable).
- ***Item 8*: Required Educational Information** – Explanation of contaminants in drinking water and bottled water; information to vulnerable populations about *Cryptosporidium*; statements on nitrate, arsenic, and lead.

https://www.epa.gov/sites/default/files/2014-05/documents/guide_qrg_ccr_2011.pdf

CONSUMER CONFIDENCE REPORT (CCR)

Annual Requirements	
CWSs must prepare and distribute a CCR to all billing units or service connections.	► *April 1* - Deadline for CWS that sells water to another CWS to deliver the information necessary for the buyer CWS to prepare their CCR (requirement outlined in 40 CFR 141.152). ► *July 1* - Deadline for annual distribution of CCR to customers and state or local primary agency for report covering January 1 - December 31 of previous calendar year. ► *October 1* - (or 90 days after distribution of CCR to customers, whichever is first) Deadline for annual submission of proof of distribution to state or local primacy agency. ► A CWS serving 100,000 or more persons must also post its current year's report on a publicly accessible site on the Internet. Many systems choose to post their reports at the following EPA Web site http://cfpub.epa.gov/safewater/ccr/index.cfm?action=ccrupdate. ► All CWSs must make copies of the report available on request.

https://www.epa.gov/sites/default/files/2014-05/documents/guide_qrg_ccr_2011.pdf

EXAMPLE CONSUMER CONFIDENCE REPORT (CCR) FROM A CWS

Drinking Water Analysis Table

Regulated Substance Tested and Detected	MCL	MCLG	Amount Detected	Range of Detection	Dates of Sampling (Mo./Yr.)	Does it meet Standards?	Possible Source of Substance
Fluoride, ppm	4	4	0.58	0.56 - 0.61	1/22 -12/22	Yes	Water additive promoting strong teeth
Nitrate, ppm	10	10	0.41	0.39 - 0.42	1/22 -12/22	Yes	Runoff from fertilizer use
Chlorite, ppm	1	0.8	0.14	0.03 - 0.27	1/22 -12/22	Yes	By-product of drinking water disinfection
Turbidity, Maximum NTU	TT = 1 NTU	N/A	0.04	0.02 - 0.15	1/22 -12/22	Yes	Soil runoff
Turbidity, TT %	TT = %<= 0.30 NTU	0	100.0%	N/A	1/22 -12/22	Yes	Soil runoff
Haloacetic Acids (HAA), ppb	60	N/A	43	17.4 - 59.2	1/22 -12/22	Yes	By-product of drinking water disinfection
Total Trihalomethanes (TTHM), ppb	80	N/A	58	32.8 - 75.1	1/22 -12/22	Yes	By-product of drinking water disinfection
Total Organic Carbon, ppm	TT	N/A	1.6	1.3 - 1.8	1/22 -12/22	Yes	Naturally present in the environment
Total Coliform Bacteria Highest Percent (percent of monthly samples positive for bacteria)	<5%	0	0.51%	1* of 197 monthly samples	1/22 -12/22	Yes	Naturally present in the environment

* Site was resampled and no coliform was detected.

CONSUMER CONFIDENCE REPORT (CCR)

- Must be provided by all Community Water Systems (CWS) annually by 1 July.
- Provides all consumers with information about their local drinking water quality
  - Includes detected contaminants, including those that are above the MCL

Community Water Systems (CWSs)

- A community water system (CWS) is a public water system that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

Non-Transient Non-Community Water Systems (NTNCWSs)

- A non-transient non-community water system (NTNCWS) is a public water system that provides water to a non-residential population for at least six months of the year.

CONSUMER CONFIDENCE REPORT (CCR)

Under the Clean Water Act (CWA), the requirement to provide a Consumer Confidence Report (CCR) applies to community water systems (CWSs) and non-transient non-community water systems (NTNCWSs). Here's a recap of the criteria:

Community Water Systems (CWSs):

- A community water system (CWS) is a public water system that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

Non-Transient Non-Community Water Systems (NTNCWSs):

- A non-transient non-community water system (NTNCWS) is a public water system that provides water to a non-residential population for at least six months of the year.

CERTIFIED PWS OPERATOR

- Required for all PWS
- Certification Levels
  - Level 1 – Entry-level positions
  - Level 2 – Mid-level positions
  - Level 3 – Senior-level positions
- Must be renewed every three (3) years
- May need Distribution and Treatment Certifications
- Also requires continuing education to maintain

Microsoft Stock Images

CERTIFIED PWS OPERATOR

Level 1 **operators typically oversee smaller water systems or serve in entry-level positions within larger systems.**

- Responsibilities may include routine monitoring of water quality, conducting basic water treatment processes, and performing operational tasks under supervision.
- Level 1 operators generally require less experience and may work under the guidance of higher-level operators or supervisors.
- Certification exams for Level 1 operators assess foundational knowledge of water system operations, regulatory requirements, and safety practices.

CERTIFIED PWS OPERATOR

Level 2 **Mid-level position manages larger water systems or holds more advanced roles within smaller systems.**

- Responsibilities may include overseeing water treatment processes, conducting complex water quality analyses, and ensuring compliance with regulatory standards.
- Requires advanced knowledge of water treatment technologies, regulatory requirements, and emergency response procedures.
- May supervise Level 1 operators or other staff members and contribute to system management and decision-making.

CERTIFIED PWS OPERATOR

Level 3 **Senior-level position with extensive experience managing complex water systems and overseeing operational activities.**

- **Responsibilities may include strategic planning, system optimization, and ensuring regulatory compliance at the highest level.**
- **Requires in-depth knowledge of water treatment principles, advanced problem-solving skills, and strong leadership abilities.**
- **Often responsible for training and mentoring junior operators, coordinating with regulatory agencies, and representing the water system in stakeholder interactions.**

WHO CERTIFIES OPERATORS?

- Certification for water system operators can be obtained through various certifying agencies, including state regulatory agencies, tribal authorities, the U.S. Environmental Protection Agency (EPA), and other approved providers.

- Summary of State Operator Certification Programs for CWSs, NTNCWS (see https://www.epa.gov/dwcapacity/operator-certification-program-management)

HOW TO GET CERTIFIED

Certification for operating public water systems, including non-transient non-community water systems (NTNCWSs) such as those serving schools, typically involves training and obtaining certification through state regulatory agencies or accredited training providers.

1. Training Requirements:

   - State regulatory agencies establish training requirements for individuals responsible for operating and managing public water systems, including NTNCWSs.

   - Training programs cover topics such as water treatment, distribution system operation, water quality testing, regulatory compliance, and emergency response procedures.

HOW TO GET CERTIFIED

2. Certification Exams:

- After completing the required training, individuals may need to pass certification exams administered by state regulatory agencies or approved testing organizations.

- Certification exams assess the applicant's knowledge of water system operations, regulatory requirements, and best management practices for ensuring water quality and compliance with the CWA.

HOW TO GET CERTIFIED

3. State Certification Programs:

- Each state has its own certification program for water system operators, overseen by the state environmental or health department.

HOW TO GET CERTIFIED

4. State Certification Programs:

- State certification programs may offer different levels of certification based on the size and complexity of the water system, with corresponding training and exam requirements.

HOW TO GET CERTIFIED

5. Continuing Education:

- Certified water system operators are typically required to complete continuing education or training hours to maintain their certification.

- Continuing education programs cover updates to regulations, advances in technology, emerging contaminants, and other relevant topics to ensure operators stay current in their knowledge and skills.

HOW TO GET CERTIFIED

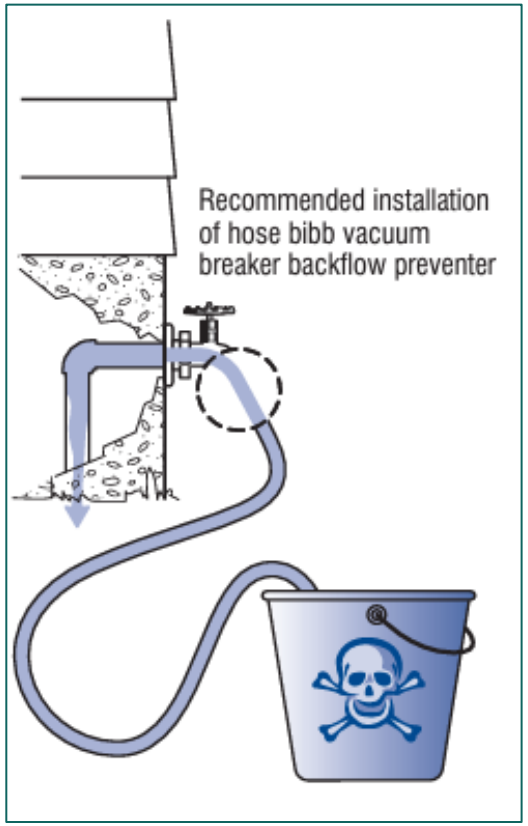
6. Resources for School Staff:

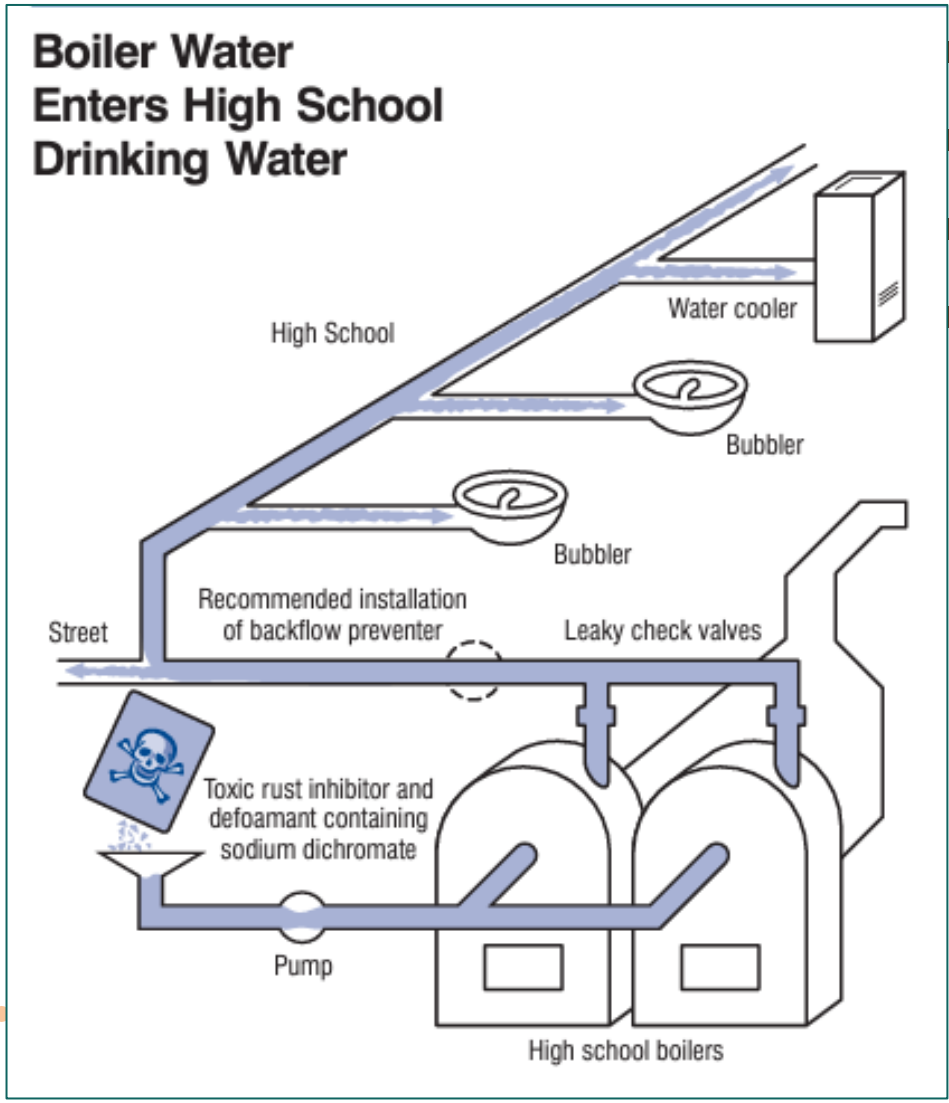
- School staff responsible for operating or managing NTNCWSs can inquire with their state environmental or health department about certification requirements and available training programs.

- State agencies may provide guidance documents, study materials, and online resources to help individuals prepare for certification exams and fulfill training requirements.

CROSS-CONNECTIONS

- Actual or potential connections between a potable and non-potable water supply
  - Sanitary lines may cross PWS distribution
- Can pose a serious health hazard if not properly controlled

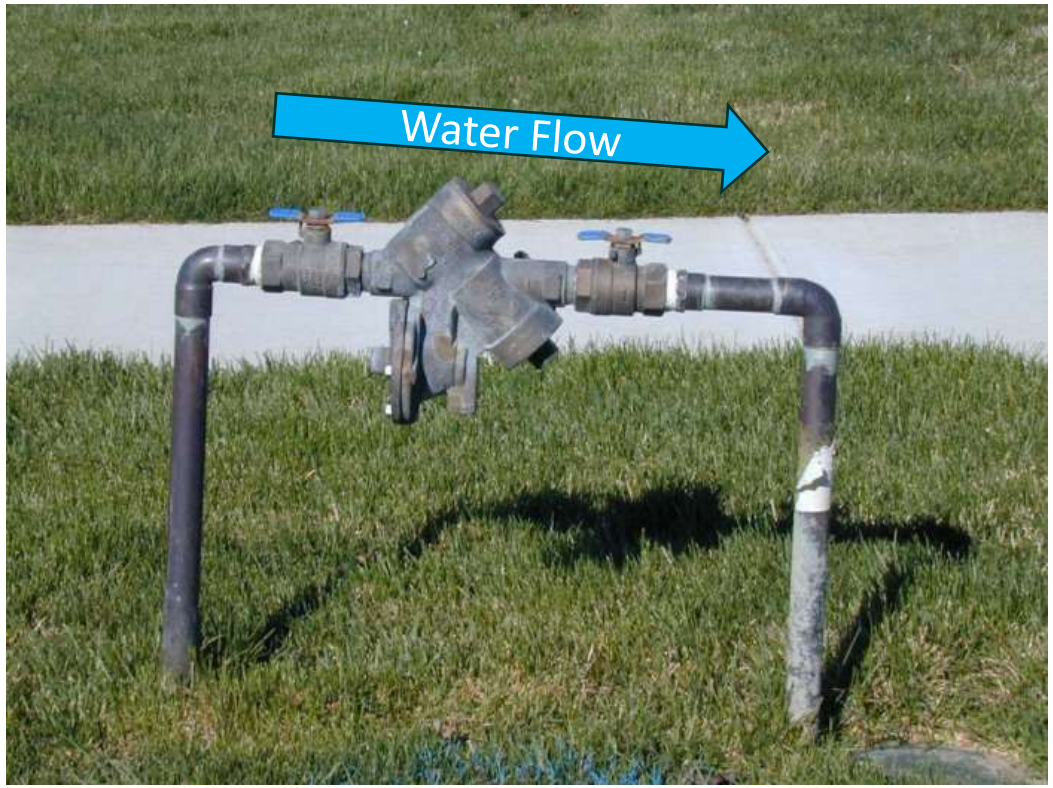




Source: U.S. EPA Cross-Connection Control Manual(2003)

BACKFLOW PREVENTION

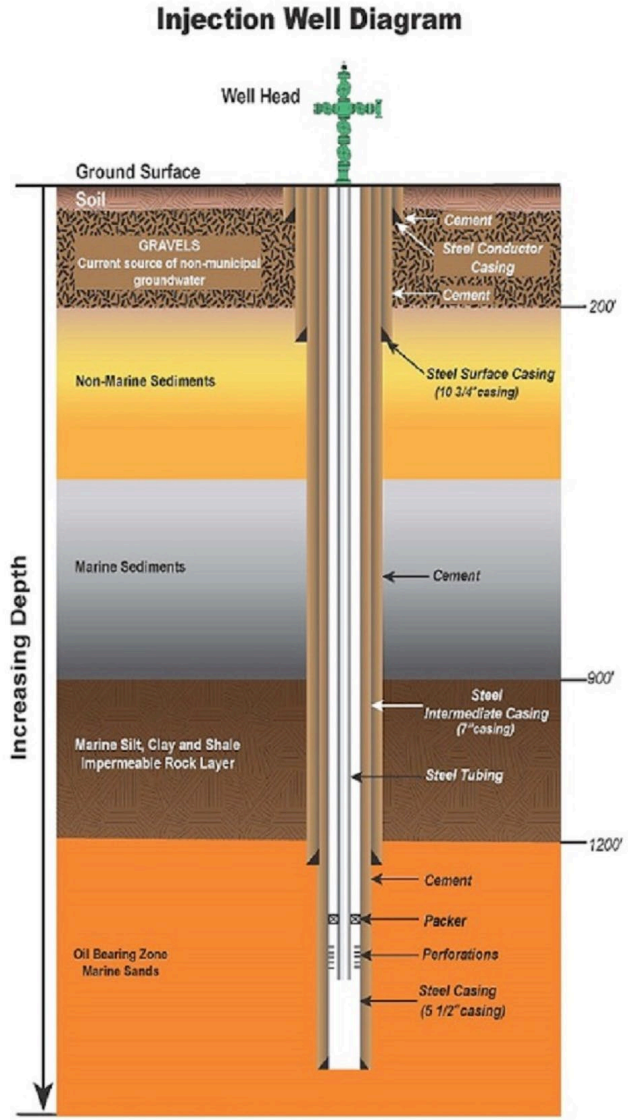
- Prevents mixture of contaminated water with potable water by allowing water to only flow in one direction
- Require periodic testing and maintenance
  - Certified backflow tester is required
  - Operators can complete a one week in person training or the service can be contracted out



https://diy.stackexchange.com/questions/151329/what-type-of-piping-for-reduced-pressure-backflow-preventor-for-irrigation-syste

GROUNDWATER PROTECTION PROGRAMS

- *Underground Injection Control (UIC)*
  - An injection well is used to place fluid underground into porous geologic formations.
  - U.S. EPA regulates the construction, operation, permitting, and closure of injection wells used to place fluids underground for storage or disposal.
    - Also includes septic systems



https://www.conservation.ca.gov/calgem/general_information/Pages/class_injection_wells.aspx

GROUNDWATER PROTECTION PROGRAMS

- *Abandoned wells* must be properly closed and secured to prevent pollution of groundwater
- Better referred to as well destruction or destroyed wells
  - Often requires a permit
  - Wells should either be in use or be destroyed
  - Leaving wells unused can create a conduit for groundwater contamination

EMAP Audit

GROUNDWATER PROTECTION PROGRAMS

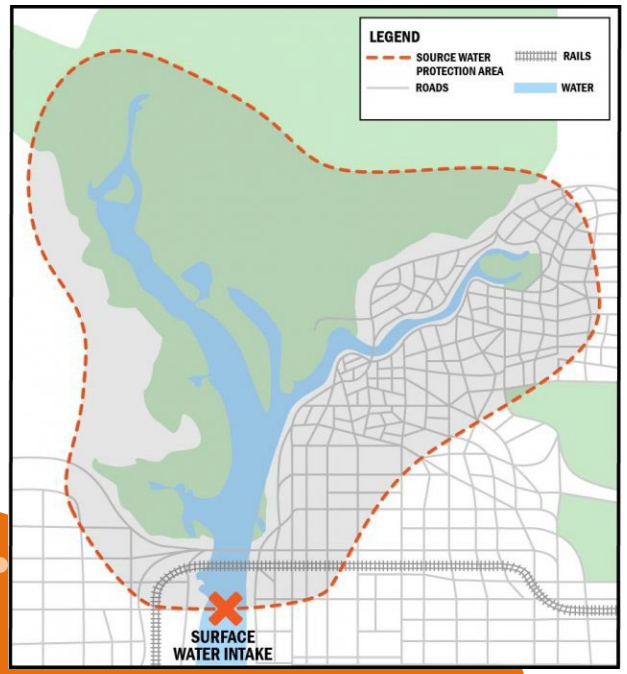
- *Sole Source Aquifer (SSA)*
  - If the aquifer supplies at least 50 percent of the drinking water for its service area
  - There are no reasonably available alternative drinking water sources should the aquifer become contaminated
- U.S. EPA then reviews proposed projects that will both:
  - Be located within the review area
  - Receive federal funding

https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe3135

GROUNDWATER PROTECTION PROGRAMS

- *Source Water Assessment Program*
  - Studies or reports that generate information about potential contaminant sources and the potential for systems to be impacted by these sources.
- Implemented by states by:

Delineating the Source Water Protection Area



Inventorying Potential Sources of Contamination

Prioritizing Risks to Drinking Water

https://www.epa.gov/sourcewaterprotection/source-water-assessments

SDWA RECORD RETENTION REQUIREMENTS

- Current Water Operator Certificates
  - At all times
- Keep for 3 years
  - Public Notifications and Notices of Violation (NOV)
  - Consumer Confidence Report (CCR)
- Keep for 5 years
  - Bacteriological/Coliform and Turbidity analyses
- Keep for 10 years
  - Chemical analyses (Lead/Copper, Nitrates/Nitrites, etc.)
  - Monitoring Schedules
  - Sanitary Surveys, if needed

CLEAN WATER ACT - WASTEWATER

CLEAN WATER ACT(CWA)

- Comprehensive legislation enacted by the United States Congress in 1972
- Primary objective: to restore and maintain the nation's waters' chemical, physical, and biological integrity
- Regulates pollution discharges into surface waters to prevent water pollution and protect aquatic ecosystems
- Establishes regulatory programs such as the National Pollutant Discharge Elimination System (NPDES)
  - Regulates point source pollution
  - Sets water quality standards and guidelines for controlling pollutants

Alex Stephens/U.S. Bureau of Reclamation

ILLICIT DISCHARGES

- Any discharge to the stormwater system that is NOT stormwater
  - e.g., steam condensate, cross-connections with the sanitary sewer, fuel spills, contaminated groundwater infiltration, and improper disposal of hazardous material, such as paint, into the storm sewer system
- Only stormwater goes in the storm drain
  - Leaves, trash, sand, and soil are not allowed
- Unpermitted wastewater discharges are *NOT allowed*

City of Portage, Michigan

https://www.aces.edu/blog/topics/fish-water/how-to-identify-report-water-pollution-from-illicit-discharges/

WASTEWATER MANAGEMENT

- May need permits (e.g., NPDES), especially those that discharge water
  - All lagoons in U.S. EPA Region 8 are required to be permitted
- Facilities with septic systems are required to register with U.S. EPA
- Note: Some wastewater treatment plant discharge may be considered hazardous waste or have negative effects on the wastewater system quality or discharge permit
  - Often overlooked during planning phases

Shutterstock.com

WASTEWATER LAGOON OPERATION & MAINTENANCE

- Inspect frequently
- Document inspections and maintenance
  - An Operations and Maintenance Plan may be required
- Mow/remove vegetation
- Prevent overtopping of lagoons
  - i.e., make sure overflows are not plugged/vegetated before intense rainfall
- Prevent burrowing animals
- Repair erosion and damaged liners
- Ensure adequate security (e.g., signage & fences)

WASTEWATER MANAGEMENT

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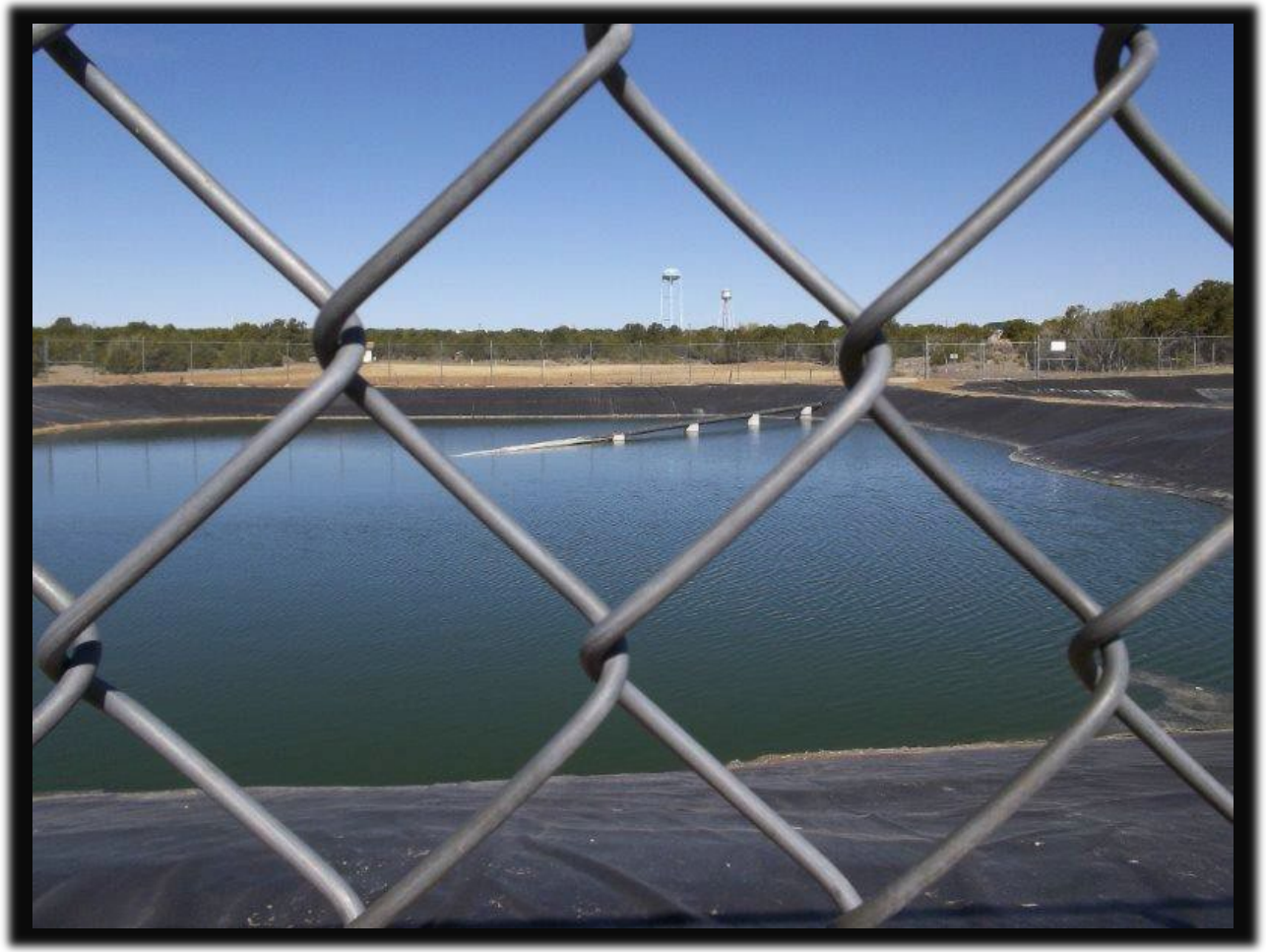
WASTEWATER MANAGEMENT



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WASTEWATER MANAGEMENT

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WASTEWATER MANAGEMENT

https://weavers.adu.org.za/phown_vm.php?vm=777

WASTEWATER LAGOON REQUIREMENTS

- ***Permits*** **and a** ***Certified Operator*** **may be required depending on primacy agency**
  - May require analytical monitoring of discharge waters
  - Specific requirements depend on whether your lagoon discharges
  - Check with your primacy agency
- All lagoons in Navajo Nation require
  - A certified operator
  - Construction permit for new systems
  - Operating permit with a fee every three years
  - Operation and Maintenance Plan and system plans/blueprints

SEPTIC SYSTEMS

- Serve >20 people per day
- Typically, *not designed for anything other than wastewater* (no chemicals, oil, hazardous waste, etc.)
- Submit Underground Injection Control (UIC) Inventory Form to U.S. EPA
- Will usually be a Class V injection well (Injection of Non-Hazardous Fluids into or Above Underground Sources of Drinking Water)
- Keep record of Submittal

SEPTIC SYSTEMS

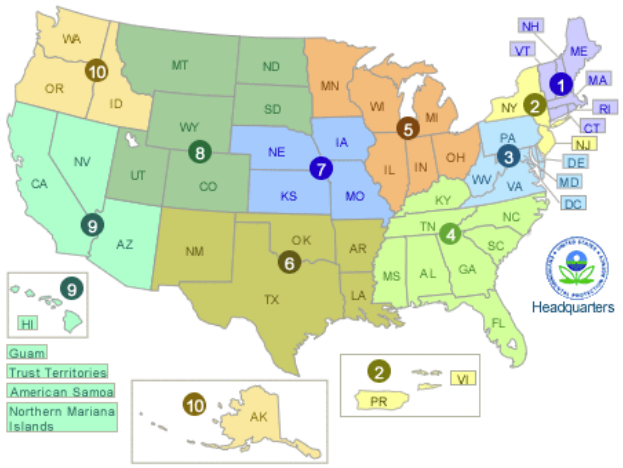
UIC Where You Live

EPA has ten regional offices. Each regional office oversees local state, territory, and tribal UIC activities. Select your state from the menu below, or click on your region to find local UIC information about:

- Public notices
- Permitting and registration
- Tribal concerns
- Regional UIC guidance documents
- Contacts

EPA has ten regional offices, each of which is responsible for several states and territories. To get information about your region, select your state or territory from this list or from the map below.

Alabama GO



Additional Resources

- Injection well types
- Hydraulic fracturing
- Injection well regulations
- Aquifer exemptions
- UIC data reporting information
- UIC Comprehensive Program Evaluations
- UIC online interactive training
- Online EPA reporting form 7520-16 for Class V wells is now available

https://www.epa.gov/uic

COMMON FINDINGS, ENFORCEMENT, AND COMPLIANCE

COMMON FINDINGS-SDWA

Failure to:

- Maintain monitoring schedule
- Sample according to monitoring schedule
- Distribute CCR
- Keep chain of custody records
- Maintain Certified Water Operator
- Screen vents and drains with 24 mesh
- Maintain operator certifications
- Obtain/keep sampling records
- Provide public notification
- Correct Sanitary Survey deficiencies
- Prepare revised Total Coliform sampling site plan
- Ensure proper distance from drinking water wells and wastewater discharge points/leach fields

COMMON FINDINGS - CWA WASTEWATER

Failure to:

- Prevent illicit discharges
- Permit discharging lagoons
- Have a certified wastewater operator
- Conduct monitor
- Permit septic systems
- Prevent discharges of hazardous chemicals, oils, etc. to septic systems

https://www.labordish.com/

U.S. EPA'S ROLE IN ENFORCEMENT

U.S. EPA's enforcement role is essential for ensuring compliance with environmental laws and regulations, protecting human health and the environment, and holding non-compliant entities accountable for their actions.

U.S. EPA plays a crucial role in enforcement under both the Clean Water Act (CWA) and the Safe Drinking Water Act (SDWA) by:

1. Setting Standards and Regulations
2. Issuing Permits
3. Compliance Monitoring
4. Enforcement Actions
5. Collaboration with State Agencies
6. Public Outreach and Education
7. Monitoring and Evaluation

https://micoope.com.gt/?o=cfr-title-parts-300-399-code-of-federal-regulations-nn-g8gdBpSw

U.S.EPA ECHO DATABASE

- Schools can look up their system and find their regional regulators
- Report errors to the BIE Branch of Environmental Management
- Link to ECHO database… https://echo.epa.gov/

PENALTIES FOR NON-COMPLIANCE

- Penalties for non-compliance with environmental regulations serve as deterrents to illegal activities, encourage compliance with regulatory requirements, and ensure accountability for environmental harm.
- Enforcement agencies have discretion in determining appropriate penalties based on the specific circumstances of each case, with the goal of protecting human health and the environment.

https://www.noaa.gov/ocean-and-coasts-education

PENALTIES FOR NON-COMPLIANCE

Penalties for non-compliance with environmental regulations, including those under the Clean Water Act (CWA) and the Safe Drinking Water Act (SDWA), can vary depending on the severity and duration of the violation, the potential harm to human health and the environment, and other factors.

1. Civil Penalties
2. Administrative Orders
3. Injunctive Relief
4. Consent Decrees
5. Criminal Prosecution
6. Cost Recovery
7. Revocation of Permits

As of December 27, 2023, EPA CWA civil penalties are set at a maximum of $66,712 per day for each violation!

RESOURCES

- Summary of the Clean Water Act | US EPA
- Safe Drinking Water Act (SDWA) | US EPA
- National Primary Drinking Water Regulations | US EPA
- Secondary Drinking Water Standards: Guidance for Nuisance Chemicals | US EPA
- Safe Drinking Water Act: Consumer Confidence Reports (CCR) | US EPA
- Lagoon Wastewater Treatment Systems | US EPA

RESOURCES

Consumer Confidence Reports: Required Information

https://www.epa.gov/sites/default/files/documents/CCR_Required_Info_Summary.pdf

Consumer Confidence Report Rule: A Quick Reference Guide

https://www.epa.gov/sites/default/files/2014-05/documents/guide_qrg_ccr_2011.pdf

QUESTIONS?

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Mvto
HiyHiy
LemLmts
Wado
Wopila
DaWaEh
Miigwech
Wawaenon
Pinangigi
Wimblahoho
Quyana
Baasee
Ahéhee
AnaaBasee
HiriweTudahe
Pilamiya
Nya:Weh Aho
Tansi
Thank You