

Oklahoma Department of Environmental Quality

# 2026 Operator Renewal Training



## Agenda

Time	Topic	Presenter
<b>8:30-8:55</b>	Drinking Water State Revolving Fund (DWSRF)	
<b>8:55-9:20</b>	Capacity Development	
<b>9:20-9:30</b>	Break	
<b>9:30-9:55</b>	Lead/Copper	
<b>9:55- 10:20</b>	Sanitary Survey Preparation	
<b>10:20-10:30</b>	Break	
<b>10:30- 10:55</b>	AWOP	
<b>10:55-11:20</b>	PFAS Monitoring	
<b>11:20-11:30</b>	Break	
<b>11:30-11:55</b>	Source Water Protection	
<b>11:55- 12:20</b>	PFAS Treatment	
<b>12:20-12:30</b>	Operator Certification Paperwork/ Survey	

To reach the Department of Environmental Quality DWSRF Website:

[Oklahoma Environmental Quality Drinking Water State Revolving Program](http://www.deq.ok.gov/owrb/drinking-water-state-revolving-program/)



If you want to ensure your project is eligible for DWSRF, please review EPAs eligibility handbook:



## Step-by Step Application Process

Submit ALL DEQ documents through the nFORMs portal, found here:



### 1. Start-up Phase:

*Contract with Engineering firm.*

*Submit "Request for Placement" letter*

*System will be ranked by DEQ*

*DEQ will send confirmation letter*

### 3. Contracts Phase

*Pre-Bid meeting*

*Advertising and accepting bids*

*Approved at OWRB Board/binding*

*Commitment signed, rate set, loan closed*

*Award of construction contracts*

### 2. Planning Phase:

a) Environmental Review

b) Capacity Development Review

c) Engineering Planning and Design

d) Construction Permit

e) *Financial Application* (submit to OWRB, not DEQ)

### 4. Pre-Construction

Pre-Construction Meeting

### 5. CONSTRUCTION

*Applicant Resident Inspection*

*Monthly Meetings and Site Visits*

To locate Financial Application:



### Other helpful links:

*Loan and Grant Resource Guide for Additional Funding needs:*



<https://oklahoma.gov/owrb/financing.html>

*To Find information on Lead Service Inventory procedures:*



<https://www.deq.ok.gov/lead-service-line-inventory/>

## PFAS Compliance

**“Forever Chemicals”**- Strong bonds resist breaking down in environment, causing a buildup ecologically and in our bodies.

**Health Effects:** Increased risk of cancer, reproductive issues, high cholesterol, immune system suppression, hormone interference.

All **Community (C)** and **Non-Transient Non-Community (NTNC)** systems will be required to monitor for PFAS

### Initial Monitoring: Complete by April 25, 2027

Surface Water: 4 Quarterly samples

Groundwater >10,000: 4 Quarterly samples

If your system participated in UCMR5 then some or all of your initial monitoring may be completed.

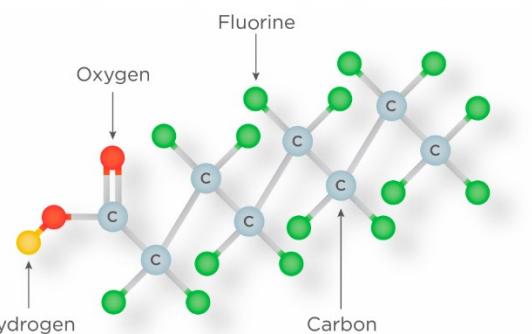
Groundwater <10,000: 2 Samples in same year, 5-7 months apart

Compliance with MCLs and Hazard Index: April 2029

Chemical	Maximum Contaminant Level Goal (MCLG)	Maximum Contaminant Level (MCL)
PFOA	0	4.0 ppt
PFOS	0	4.0 ppt

**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 maximum level allowed of a contaminant in water which is delivered to any user of a public water system.



## Lead and Copper

Direct all Lead and Copper correspondence to: DWLC@deq.ok.gov

### Initial Lead Service Line Inventory

- Submit the initial LSLI if you have not done so already
- Distribute the Service Line Material Notification to any consumer served by a LSL, GRR or Unknown material service line
- LSLI and notification templates can be found at <https://oklahoma.gov/deq/divisions/water-quality/public-water-supply/compliance-monitoring/lead-service-line-inventory.html>

### Lead and Copper monitoring periods

- June 1<sup>st</sup>- September 30<sup>th</sup> for yearly or 3-year schedules
- January 1<sup>st</sup>- June 30<sup>th</sup> and July 1<sup>st</sup>- December 31<sup>st</sup> for 6-month schedules
- Any samples collected outside of the monitoring period will not be counted towards compliance
- If sampling is not completed, it will result in a violation, and you will return to 6-month monitoring also known as standard monitoring

### Tier 1 Notification of Lead ALE based on the 90<sup>th</sup> percentile

- Notification to all consumers within 24 hours after the determination of a Lead Action Level Exceedance based on the 90<sup>th</sup> percentile

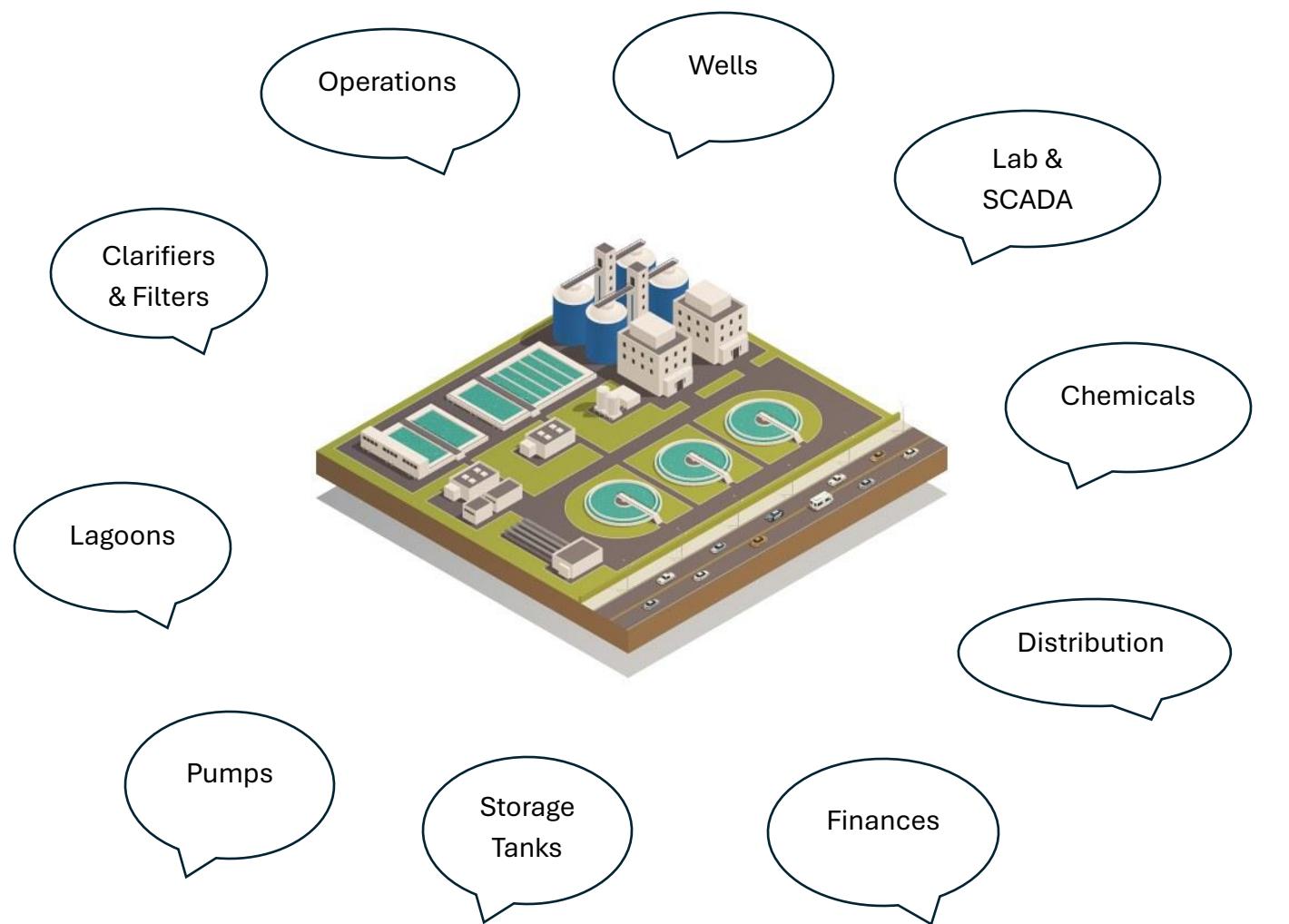
### Health Effects of Lead

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney, or nervous system problems.

### Lead Testing in Schools and Childcare Facilities

- Free lead testing program and remediation funding available [LWSC@deq.ok.gov](mailto:LWSC@deq.ok.gov)

# Sanitary Survey Preparation



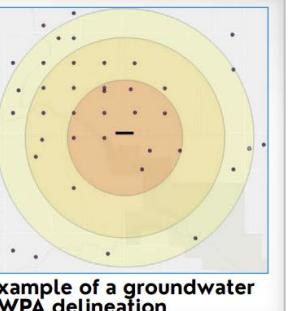
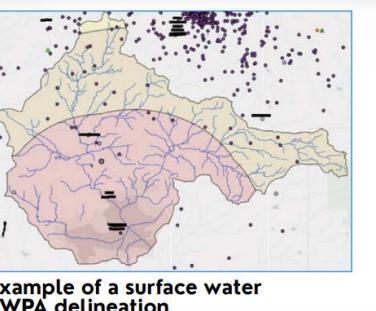
# Source Water Protection (SWP) Program

Proactive protection of drinking water sources. It is imperative that we protect the **quality** and **quantity** of these sources to ensure the continued safe use of these waters for drinking.

This is a **NO COST** program for any Oklahoma Public Water Supply, and it was recently **revamped in 2025**. This program will help you to identify your utility's **Source Water Protection Areas (SWPAs)** as well as **Potential Sources of Contamination (PSOCs)** located within those areas.

## Components of a SWP Assessment

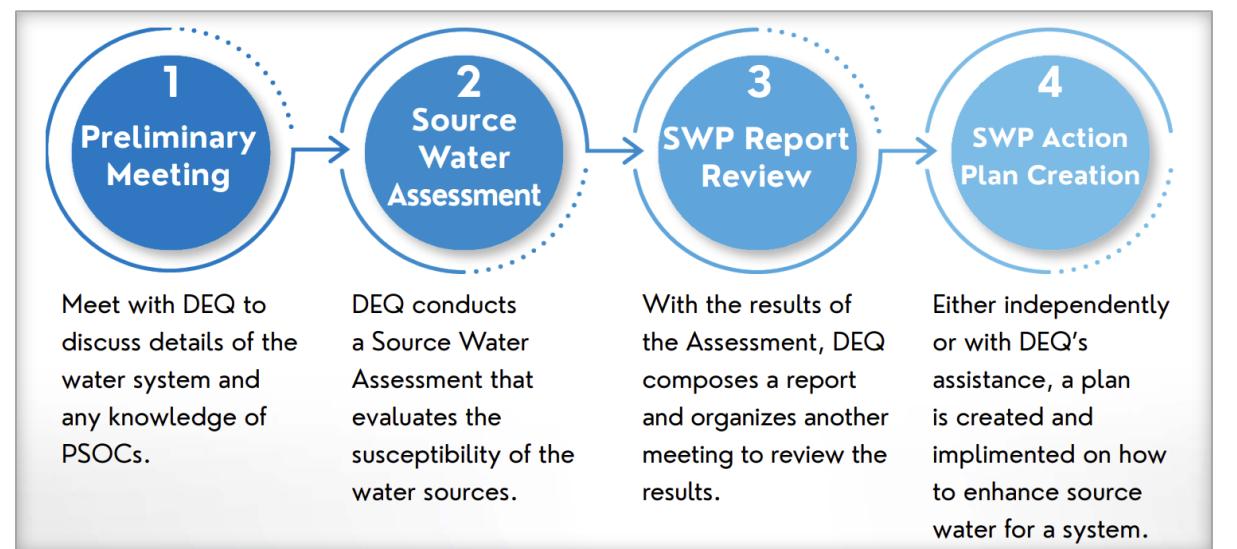
- Delineation** of your SWPAs.
- Inventory** of the PSOCs and land use within the SWPAs.
- Determination** of the system's Susceptibility to contamination from the inventoried sources.



PSOCs are categorized into two groups; Point sources and Non-point sources.

- Point sources** of pollution are individual identifiable sources that are easy to point to.
  - Ex.: Petroleum Storage Tanks, UIC Wells, Landfills, Airports, Superfund Sites, etc.
- Non-point sources** of pollution do not originate from one single source. This pollution usually occurs when precipitation or snowmelt moves across the land and carries contaminants.
  - Ex. contaminants: Fertilizers, herbicides, oil & grease, bacteria, nutrients, sediment, etc.

## The Oklahoma SWP Program Process



Sign up for an assessment on the SWP Program page of the DEQ Website



Explore various SWP related layers on the Source Water Collaborative's Web App



# DEQ Capacity Development

## Capacity Development assists PWS with:

Capacity Development Assessment	A comprehensive questionnaire designed to help identify how a public water system can benefit from free available technical, managerial, and financial assistance.	
Water Loss Audit	A free AWWA M36 software that quantifies real and apparent water losses, and the cost associated with those losses.	
Asset Management Plan	An MS Excel-based tool that allows systems to inventory their assets and assess their criticality. This tool also factors in the replacement costs for assets in the event of failure, aiding systems in budgeting effectively.	
Emergency Response Plan	A customizable template designed to assist any water system in preparing for potential emergency situations.	
Source Water Protection Plan	Public water systems may receive a free Source Water Assessment that will help to inform the development of a SWP action plan. There is a template and assistance available for the creation of the action plan.	
Other Technical, Managerial, and Financial Templates	<ul style="list-style-type: none"><li>Operations &amp; Maintenance Plan</li><li>Strategic Growth Plan</li><li>Cybersecurity Plan</li><li>Financial Management Plan</li></ul>	<ul style="list-style-type: none"><li>Personnel Policy</li><li>Accounts Receivable and Payable Policies</li><li>Records/Reporting Policy</li><li>AND MANY MORE</li></ul>

For DEQ Cap Dev Questions or Requests

Email: [DEQ.CapDev@deq.ok.gov](mailto:DEQ.CapDev@deq.ok.gov)



Lisa Stewart-Manager  
Jamie Henson-PWS Newsletter  
Cady Belsky-Source Water Protection  
Katelynn McLaughlin-Lead Testing in Schools  
Holly Cannon-Lead Testing in Schools  
Kamren Lambdin-PFAS



## Area Wide Optimization Program

Oklahoma's Area Wide Optimization Program (AWOP) is a national program sponsored by the Environmental Protection Agency. This program focuses on optimizing water systems by utilizing the existing staff and facilities to increase public health protection.

### **What areas can AWOP assist with?**

- Disinfection Byproducts (DBPs)
- Turbidity
- Chlorine Residual
- Corrosion Control
- Treatment Techniques and Data Integrity
- Distribution Systems and Storage Tank Integrity
- Manganese Control
- Nitrification
- Harmful Algal Blooms (HABs)

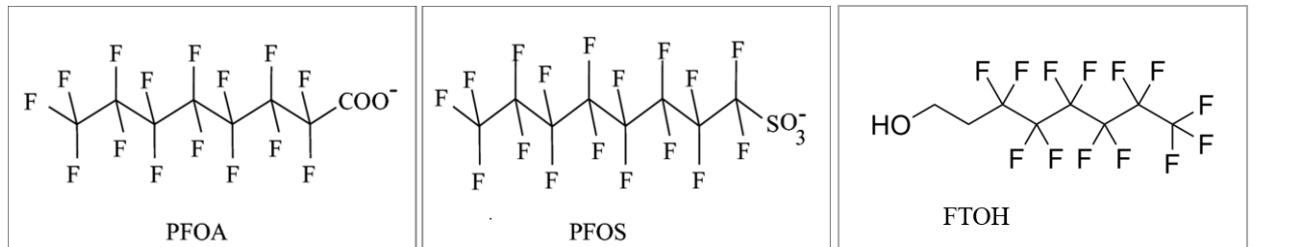
### **3 Team Structure**

AWOP Awards	Workshops	CPE
<p>Public Water Systems strive to meet optimized treatment goals, and receive awards based on their performance. Water Systems are scored on a tier-based system.</p> <p><b>Public Water Systems scores are based on:</b></p> <ul style="list-style-type: none"><li>○ Turbidity, IFE and CFE (If applicable)</li><li>○ Monitoring</li><li>○ Capacity Development</li><li>○ Water Loss Audit</li><li>○ MCL Violations</li><li>○ and more, depending on the type of system.</li></ul> <p><b>Benefits of Participating:</b></p> <ul style="list-style-type: none"><li>○ Priority for water leak detection if warranted by water loss audit</li><li>○ Optimization Certificates</li><li>○ Awards and Recognition!</li></ul> <p><b>Previous year's awards were:</b></p> <ul style="list-style-type: none"><li>○ Customized Plaque</li><li>○ Customized Flag</li><li>○ Customized Trophy</li><li>○ AWOP lapel pins</li><li>○ AWOP vinyl stickers</li></ul>	<p>Workshops offer an in-depth look at water systems, while focusing on a singular topic.</p> <p><b>Previous topics have included:</b></p> <ul style="list-style-type: none"><li>○ DBPs</li><li>○ Manganese</li><li>○ Turbidity</li><li>○ Data Validity</li></ul> <p><i>With more to come!</i></p> <p>Each workshop is a full day's length and requires planning visits; DEQ staff will visit the system and gather informational data ahead of time.</p> <p>Operator Certification Credit is available for Public Water System staff that participate in the workshop.</p>	<p>Comprehensive Performance Evaluations (CPEs) are a week-long voluntary process where DEQ staff analyzes a water system according to AWOP optimization goals. At the end of the week, the system is given a report of "Performance Limiting Factors," that, when addressed, will assist them with improving their optimization.</p> <p><b>Areas evaluated:</b></p> <ul style="list-style-type: none"><li>○ Daily Operations</li><li>○ Treatment Processes &amp; Data Integrity</li><li>○ Administration and Billing</li><li>○ Communication</li><li>○ Design &amp; Maintenance</li><li>○ Distribution System Integrity and Quality Control</li></ul> <p><b>Benefits of Participating:</b></p> <ul style="list-style-type: none"><li>○ Identification of Performance Limiting Factors</li><li>○ In-Depth report on water system data and findings</li><li>○ Recommendations on how to achieve optimization consistently</li><li>○ Increased public health protection</li></ul>

# PFAS Treatment Options

This presentation summarizes AWWA's " Drinking Water Treatment for PFAS Selection Guide."

## Chemical Structures of PFAS



Polymer PFAS are generally considered to be more stable, and pose less of a direct health risk. They are not currently regulated under the proposed PFAS regulations.

Non-polymer PFAS have been shown to have a higher toxicity. Perfluoroalkyl acids (PFAAs) have fully fluorinated carbon chains, such as the regulated PFOA and PFOS. Polyfluoroalkyl substances have carbon chains that are not fully fluorinated, and are considered precursors due to their ability to degrade into PFAAs.

All PFAS are considered "forever chemicals" due to the bond strength between fluorine and carbon.

## Current Treatment Technologies

Current technology is effective at removal of PFAS from drinking water, but limited techniques to destroy PFAS are available. This means most treatments result in concentrated waste streams, with limited ways to handle them.

### Powdered Activated Carbon (PAC)

- Added as a coagulant aid, adsorbs PFAS onto the PAC. Requires high dosing to be effective.
- Long-chain at >80% removal, short-chain at <40% removal

### Granular Activated Carbon

- Can be added as an additional filter process, or added to existing filters.
- Removal shown to range from 66% to 100% removal depending on target PFAS.
- Most studied treatment method to date

### Anion Exchange

- Influent ran through a resin, which captures the negatively charged PFAS
- Best technology for short-chain PFAS removal
- PFAS-specific resins available

### Membrane Filtration (Reverse Osmosis and Nanofiltration)

- Semipermeable membrane is used to retain contaminants within, producing purified permeate
- Consistent removal over the lifespan of membrane
- Membranes capable of > 99% removal, depending on target PFAS





