

# Area Wide Optimization Program (AWOP)

COMPLIANCE ASSISTANCE THROUGH OPTIMIZATION

## For more information:

<http://www.asdwa.org/>  
AWOP

-or-

<http://water.epa.gov/infrastructure/drinkingwater/pws/optimization>

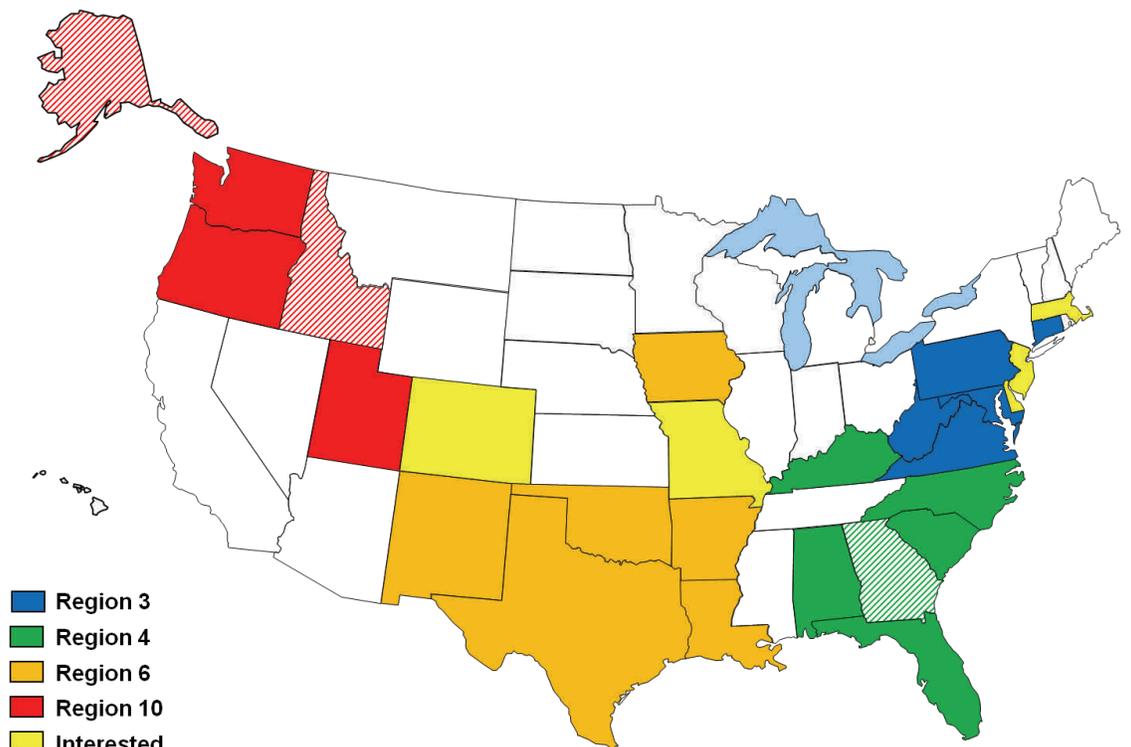
## Or contact:

U.S. EPA  
Technical Support Center  
26 W. MLK Drive  
Cincinnati, OH 45268

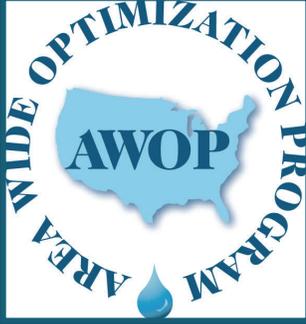
Rick Lieberman

## AWOP Objective & Approach:

- The primary goal is to maximize public health protection through optimization of existing water treatment and distribution facilities (i.e., without major capital improvements).
- The program promotes optimization water quality and monitoring goals that exceed regulatory requirements; these provide increased public health protection, a “compliance insurance policy” for water systems and a proactive compliance approach for State Drinking Water Programs.
- Originally focused on microbial (turbidity) water quality in surface water treatment plants, the program has expanded to include approaches to control disinfection byproducts and maintain distribution system water quality, in both surface and ground water systems.
- The program is managed by the OGWDW-SRMD’s Technical Support Center in Cincinnati, with support from four EPA Regions and ASDWA; AWOP is implemented by over 20 states.



Hatched pattern indicates states that have temporarily suspended their AWOP or selectively participate in AWOP



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## AWOP Implementation:

- AWOP provides a framework to successfully incorporate optimization efforts in the day-to-day operation of the Drinking Water Program; “AWOP-thinking” enhances the implementation of related program activities (i.e., Sanitary Surveys, Capacity Development, Compliance/Technical Assistance Activities, Operator Training).
- Optimization efforts are often directed towards small- to medium-sized water systems, teaching problem solving skills to water system operators, while enhancing the skills of the compliance assistance staff who work with these systems. AWOP training:
  - Enhances operators’ skills by promoting data-based decision making and prioritization skills and fostering a peer network for water operations professionals.
  - Enhances state staff by providing a deeper understanding of water quality and treatment while building relationships with the regulated community.
- Allows individual states to focus on their own AWOP activities to address their particular needs, while being part of the National AWOP that fosters teamwork and networking in a supportive environment.
  - For example, Region 10 AWOP states are piloting AWOP concepts with slow sand filtration systems and systems challenged with arsenic.
- Recent AWOP activities have helped states identify and address data inconsistencies and data integrity issues (i.e., data reporting, instrument calibration, disinfection calculations, etc.). These findings are being incorporated by AWOP states in routine inspections and surveys to enhance public health protection.

## Basis for Success:

There are three key components of AWOP that participating States implement uniquely (but with common elements).

*Enhanced surveillance of public water system (PWS) performance:*

- States determine the status (relative needs) of their surface water systems based on drinking water quality and anticipated public health risk; this helps target limited resources and ensures compliance assistance is provided to systems most in need.
- States document drinking water quality before and after facilitating each water system through technical assistance to assess the impact of the activity.

*Strategically targeted technical assistance and training activities:*

- Targeted activities are designed to address root-causes of PWS performance problems.
- Training is intended to transfer water treatment skills to water system operators to foster sustained improvements in water quality.

*Collaboration among a network of participating States* who continually pursue activities to sustain and enhance their optimization programs, enhance the capabilities of State staff and integrate optimization concepts into other State drinking water programs.

- For example, many States have enhanced their existing sanitary survey protocols to include drinking water quality data, which increases awareness of the PWS performance. Some States have reported significant State-wide performance improvements due to this modified approach.