

Achieving & Maintaining Compliance with Drinking Water Regulations

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OVERVIEW



- Analysis of Drinking Water Compliance
- Small System Compliance Challenges
- EPA Actions to Achieve and Maintain Compliance

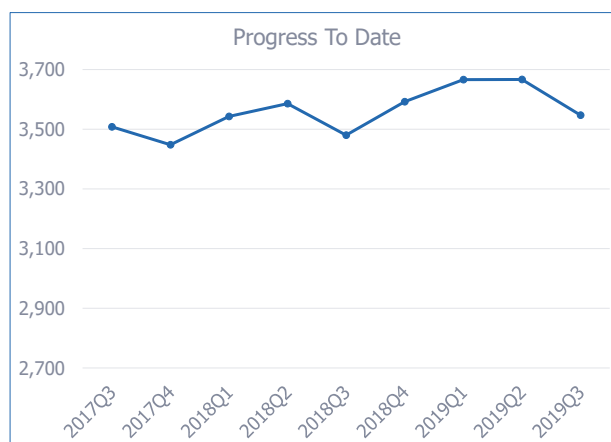
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Analysis of Drinking Water Compliance

Drinking Water Strategic Measure (OW-SM-2)

- Reduce number of community water systems out of compliance with health-based standards by 25% by 2022.
- This is a reduction from the baseline of 3,508 CWSs in violation identified in 2017 to 2,700 in 2022.



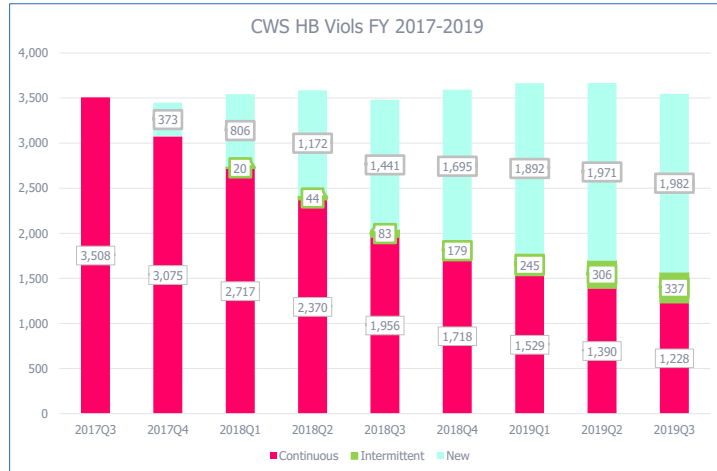
CWSs with Health-Based (HB) Violations - FY2018 to Present



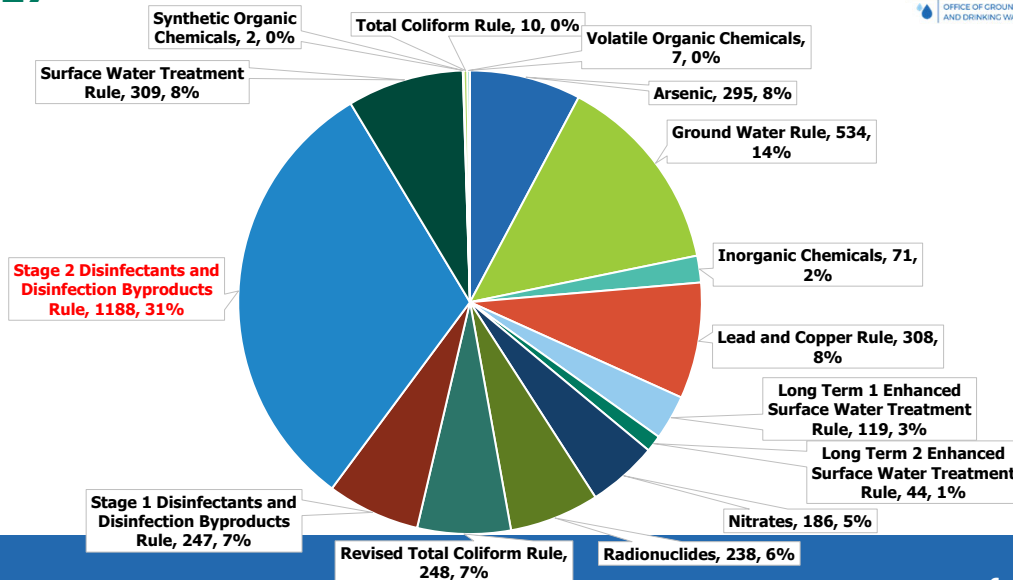
Of the 3,508 systems with HB violations in October 2017:

- 52% (1,812 CWSs) have returned to compliance and stayed in compliance.
- 306 CWSs have returned to compliance for some period and then had a subsequent violation.

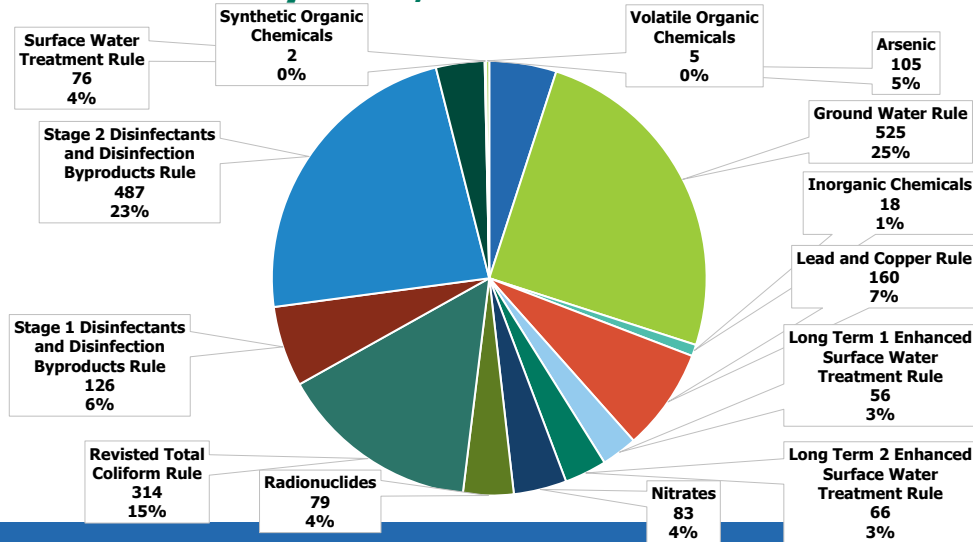
In this same time period, 1,971 CWSs not on the original list have had a health-based violation



CWS with Health Based Violations by Rule FY 2017



CWS with New Health-Based Violations by Rule, FY 2019



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Small System Compliance Challenges

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The Vast Majority of CWSs with Health-Based Violations Are Small



Population Category	Number of Community Water Systems	Population Served by CWS	CWSs w/ HB Violation	% CWSs w/ HB Violation by System Size
<=500	27,315	4,604,140	2,007	7.35%
501-3,300	13,395	19,259,892	982	7.33%
3,301-10,000	5,015	29,510,309	328	6.54%
10,001-100,000	3,907	112,415,092	203	5.20%
>100,000	441	144,247,550	27	6.12%
Grand Total	50,073	310,036,983	3,547	7.10%

Table summarizes data from October 2019.

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Very Small Systems Also Have More Trouble Returning to Compliance



Population Category	Number of Community Water Systems	GWR Violations	RTCR Violations
<=500	27,315 (55%)	463 (67%)	112 (61%)
501-3,300	13,395 (27%)	181 (26%)	52 (28%)
3,301-10,000	5,015 (10%)	43 (6%)	13 (7%)
10,001-100,000	3,907 (8%)	3 (0%)	6 (3%)
>100,000	441 (1%)	0 (0%)	1 (1%)
Grand Total	50,073	690	184

Table summarizes data from Oct 2019; violations of the Ground Water Rule and Revised Total Coliform Rule that are unresolved after more than 6 months. A CWS may have more than one violation.

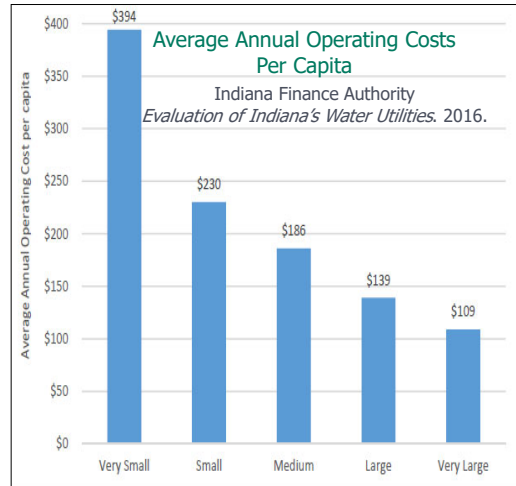
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Small Systems Can Face Unique Challenges



- ❑ **Difficulty in recruiting & retaining operators.**
 - ❑ Systems <3,300 frequently do not have a full-time operator
 - ❑ Tech assistance providers report that operators, once trained, frequently left small systems for higher paying positions at larger systems
- ❑ **Lack of access or knowledge of finance options.**
- ❑ **Diseconomies of scale**
 - ❑ As shown in this chart, fewer households = higher costs per household.
- ❑ **Rate structures that do not cover the current and future costs of providing service.**
- ❑ **Limited financial resources and technical knowledge make it difficult to address issues, such as inadequate or aging infrastructure and limited/poor source water quality/quantity.**



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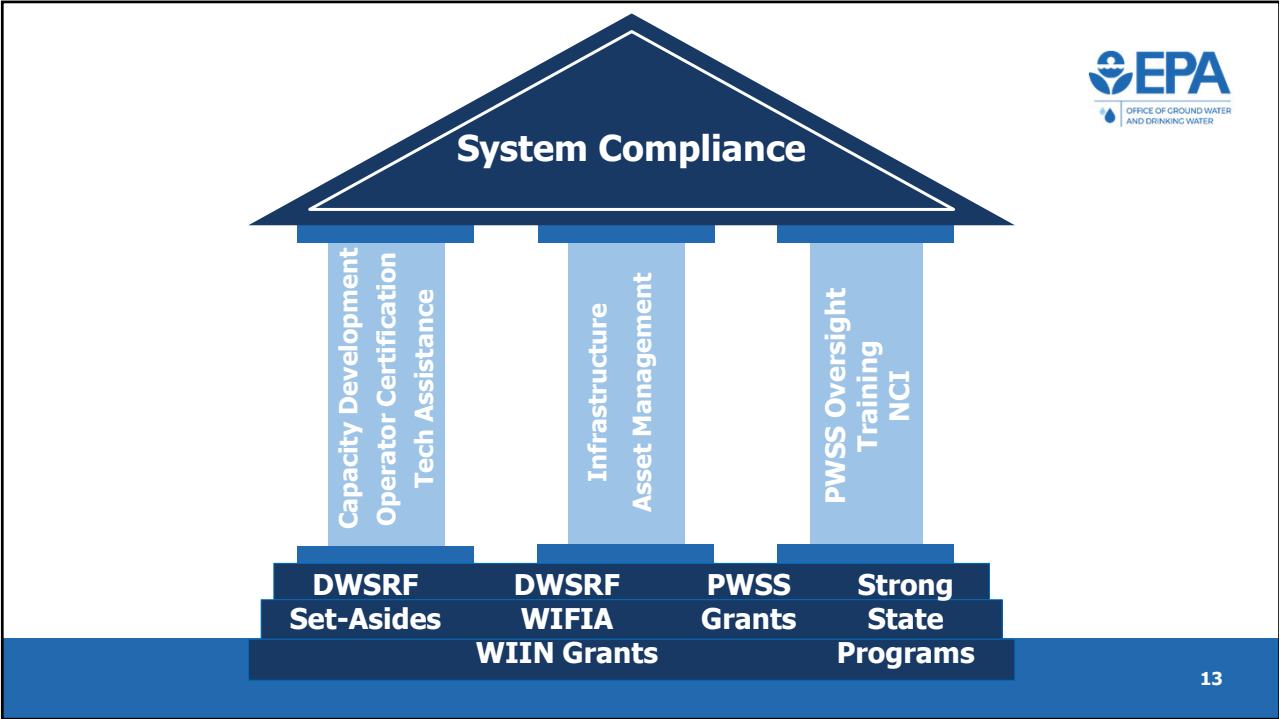
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EPA Actions to Achieve and Maintain Compliance



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EPA Tools for Supporting Small Systems

- State Oversight**
- PWSS Program Support**
 - Training and Technical Assistance
 - Capacity Development
 - EPA-State compliance analyses
- Funding**
 - DWSRF
 - WIIN Grants
- FY20 Actions**
 - Groundwater Rule
 - NCI

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State Oversight



- ❑ **Goal: work cooperatively with the state to identify implementation challenges and gaps and find solutions.**
 - ❑ Regions conduct annual reviews of all state PWSS programs to look at overall health of state program. *Now tracked as Agency measure.*
 - ❑ OW and Regions conduct state file reviews to ensure accurate implementation of specific drinking water rules.
 - ❑ OW develops quarterly data analyses on violations and shares with Regions.
 - ❑ Regional Water Divisions implement health-based action plans to provide state-specific or rule-specific support.

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PWSS Program Support: EPA Training and Technical Assistance



Goal: provide ongoing training to state staff and other technical assistance providers to build technical capacity for focused water system assistance.

- ❑ OW hosts monthly webinar series on technical topics for state staff, technical assistance providers, and water system staff.
- ❑ OW provides multiple in-person Sanitary Survey training sessions for state staff to look at water system infrastructure and operations.
- ❑ OW administers national small system training/tech assistance grant (\$15M) to work directly with small water system operators.
- ❑ OW runs the Area-Wide Optimization Program, which works with state technical staff to optimize water system treatment and operations.
- ❑ OW and Regions encourage use of the DWSRF state set-aside for technical assistance to water systems serving 10,000 people or fewer. (approx. \$18.5M taken by states in FY18)

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PWSS Program Support: EPA Efforts to Build Water System Capacity



Goal is to improve overall water system technical, managerial, and financial capacity.

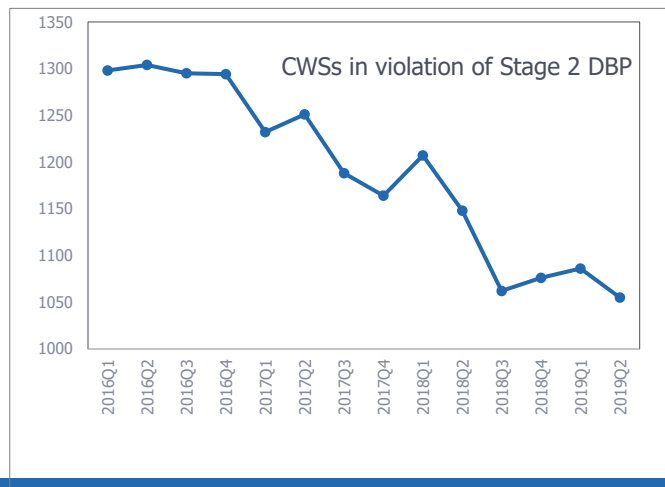
- ❑ OW hosts ongoing EPA-State workgroup to coordinate actions between capacity development, operator certification, DWSRF, and enforcement staff at the state level.
- ❑ OW promotes water system partnerships
 - Water system partnership toolbox developed with stakeholders
- ❑ OW developing Federal water sector workforce action plan, in coordination with other agencies, to address anticipated shortfall of drinking water operators.

PWSS Program Support: EPA/State Compliance Analysis for Stage 2 DBP Implementation



Goal: Review Stage 2 implementation to identify technical problems and improve compliance.

- ❑ Special focus on small consecutive systems.
- ❑ EPA collaborated with five states to issue report on challenges and best practices.
- ❑ Conducting training based on report.
- ❑ Reduction of about 250 HB violations or ~19% reduction for Stage 2 in last three years.
- ❑ In FY'20, providing direct technical assistance in Oklahoma and Kansas



Funding



❑ The Drinking Water State Revolving Fund

- DWSRF has made 14,577 loans totaling \$38.2B in FY18
- One-quarter (172) of CWSs receiving loans in SFY'18 were out of compliance with a health-based SDWA standard in the previous five years. This represented more than \$500M in assistance.
- Approximately 73 percent of the loans provided in SFY'18 were given to water systems serving populations less than 10,000.
- DWSRF program coordinates with USDA-Rural Development to address small systems

❑ WIIN Act Grant

- *Small and Disadvantaged Communities:* Over \$40M to states to assist small and disadvantaged public water systems that are unable to comply with drinking water regulations under the SDWA.
- The types of robust projects or activities the grants are targeting for funding in these communities include:
 - Assistance with meeting household water quality testing, including testing for unregulated water contaminants.
 - Assistance to public water systems with managerial, technical, or financial capacity activities to implement better SDWA compliance processes.
 - Infrastructure improvements such as lead service line replacement, plant upgrades, and other projects and activities to support SDWA compliance.

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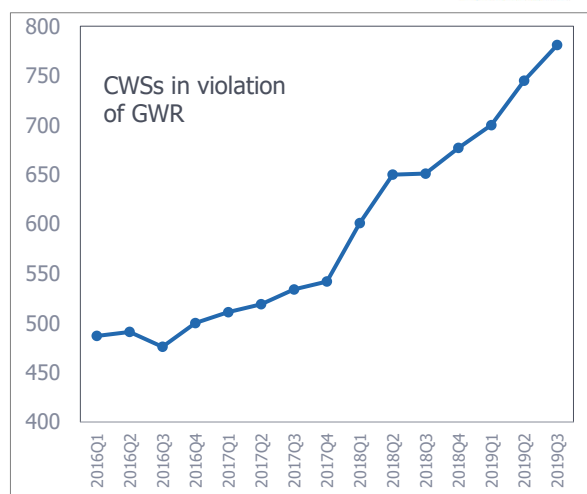
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Current In-Depth Analysis: Ground Water Rule



- ❑ Working with four state partners (AZ, FL, PA, OH) and ASDWA
- ❑ Health-based violations are TT rather than MCL
- ❑ Majority are related to failure to address a significant deficiency within 120 days
- ❑ National data analysis conducted by the EPA indicated that state implementation practices appear to play an important role
- ❑ Plan to complete report by end of Summer 2020



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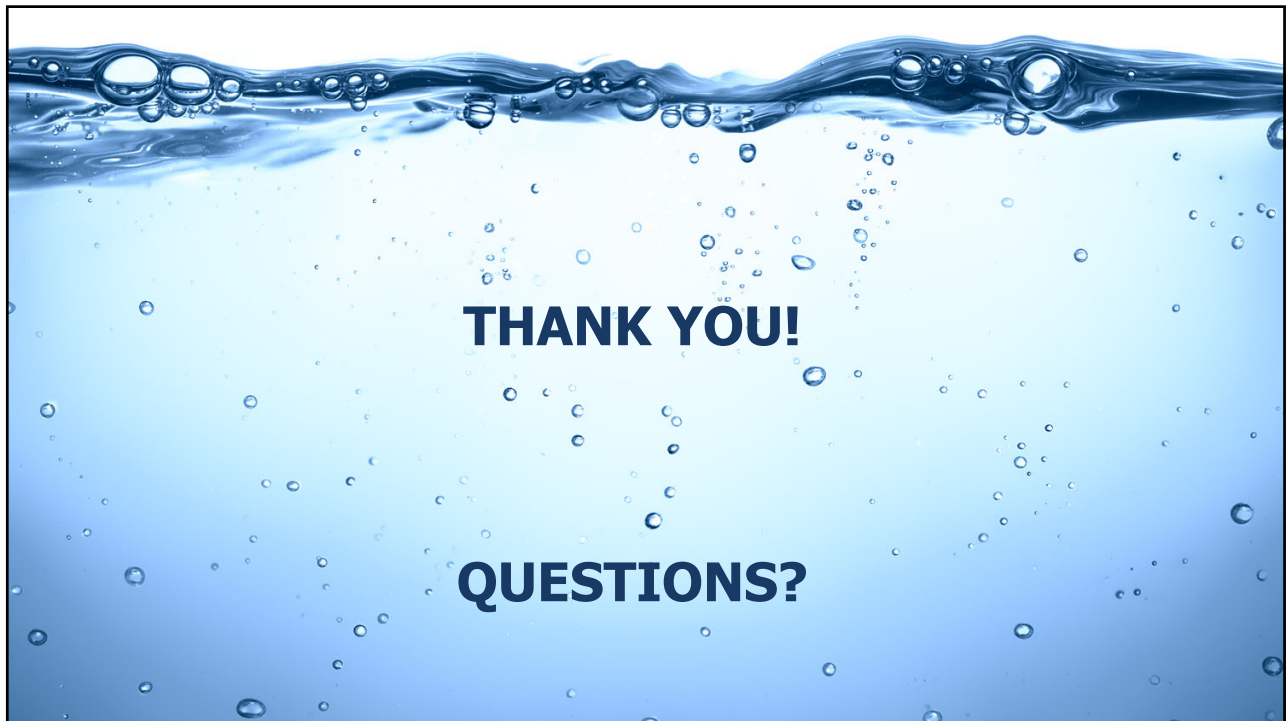
National Compliance Initiative



- ❑ **OECA's National Compliance Initiative developed with OW support.**
 - Supports Agency measure on reducing CWSs in noncompliance.
 - Expands Agency inspection presence in the Regions.
 - Focuses on assessment of larger systems and small systems in persistent noncompliance.
- ❑ **OECA provides quarterly Enforcement Targeting Tool data to Regions for priority water systems in violation.**
- ❑ **The water and enforcement programs joint discussion of quarterly SDWIS data analysis, which identifies trends and systems needing assistance.**
- ❑ **The enforcement program will develop implementation plans under the National Compliance Initiative.**

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