WASHINGTON STATE DEPARTMENT OF HEALTH

# Capacity Development Program Implementation

# 2022 Annual Report

Washington State Department of HEALTH

**DOH 331-733 October 2023**

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**NOTE/ACKNOWLEDGEMENTS**

The Safe Drinking Water Act requires states to report on their Capacity Development Program implementation annually. Information in this report addresses the U.S. Environmental Protection Agency's criteria for assessing state implementation of the Capacity Development Program.

STATE OF WASHINGTON
DEPARTMENT OF HEALTH
OFFICE OF DRINKING WATER
*PO Box 47822 • Olympia, Washington 98504-7822*
Tel: (360) 236-3100 • Fax: (360) 236-2253 • *711 Washington Relay Service*

October 20, 2023

Ricardi Duvil, Ph.D., P.E.
Drinking Water Unit, Region 10
1200 Sixth Avenue
Seattle, Washington 98101

Dear Mr. Duvil:

The Office of Drinking Water at the Washington Department of Health respectfully submits this letter and accompanying report as Washington's annual report for capacity development activities during 2022. This report has been prepared to provide information on our capacity development program activities for new public water systems and for existing public water systems.

This reporting year has been both challenging and rewarding in several ways.

- We completed updating our state's Capacity Development Strategy.
- We continued to utilize some of the successful processes of communication and training that we developed during the pandemic.
- We helped struggling small water systems reach milestones towards long-term stable success.
- We continued to have struggles with being short-staffed in some programs but less so than the year before due to successful recruitments.
- We developed a successful partnership with the University of Washington's Evans School of Public Policy and Governance. Their students assisted us with a study on water affordability in Washington State.

We look forward to continuing to find improvements and efficiencies in our work to assist water systems with their technical, managerial, and financial capacity. Our continued commitment is to support public water systems to maintain the equitable provision of safe and reliable drinking water for residents of Washington.

Please see the attached report for more information and details. If you have questions, please contact Brad Burnham, Policy and Planning Section Manager, at brad.burnham@doh.wa.gov.

Sincerely,

Kay Rottell for Holly Myers
Director, Office of Drinking Water

Enclosures

cc: Rick Green, EPA Region 10
Brad Burnham, Office of Drinking Water
Mike Means, Office of Drinking Water

# Introduction

This report describes the Office of Drinking Water's (ODW's) capacity development program implementation during the 2022 calendar year for new and existing drinking water systems using the U.S. Environmental Protection Agency's (EPA's) reporting criteria. It highlights program improvements during the past year and describes our progress and next steps.

We updated and submitted our capacity development strategy in December 2022, which describes how we help systems acquire and maintain technical, managerial, and financial capabilities to ensure protection of public health. The new capacity development strategy was approved by EPA February 1, 2023. We identify the areas of greatest need and focus technical assistance and training efforts toward those areas. Additionally, we undertake many other activities that help water systems remain in compliance, which are outlined in this report.

We regulate public water systems under state law and a formal primacy agreement with EPA. This agreement delegates authority to the state to implement the Safe Drinking Water Act (SDWA). In 1974, the SDWA established national drinking water standards aimed at preventing waterborne illness. In 1996, SDWA amendments required each state to develop and carry out a capacity development strategy to:

1. Ensure all newly created systems meet technical, managerial, and financial capacity.
2. Establish a long-term strategy to assist existing systems in acquiring and maintaining technical, managerial, and financial capacity.
3. Ensure all water systems funded through the State Revolving Fund demonstrate technical, managerial, and financial capacity.

As we continue to implement our capacity development strategy, most of the water systems in Washington State remain in compliance with federal health-based regulations. Our success resulted in our state having a low number of water systems with health-based violations. While we acknowledge we still have health-based violation reporting issues, both our capacity development strategy and compliance and enforcement strategy prioritize providing technical assistance to these systems. This report summarizes the year's activities implementing our strategy.

# EPA Reporting Criteria

The following information addresses the status of new and existing system capacity development strategies Washington developed, adopted, and implemented to ensure newly proposed water systems and existing water systems have the technical, financial, and managerial capacity to achieve and maintain compliance with federal regulations.

## A. New Systems Program Annual Reporting Criteria

1. ***Has the State's legal authority (statutes/regulations) to implement the New Systems Program changed within the previous reporting year? If so, please explain and identify how this has affected or impacted the implementation of the New Systems Program (additional documentation, such as an Attorney General (AG) statement or a statement from a delegated department attorney, may be required.) If not, no additional information on legal authority is necessary.***

   No.

2. ***Have there been any modifications to the State's control points? If SO, describe the modifications and any impacts these modifications have had on implementation of the New Systems program. If not, no additional information on control points is necessary.***

   There have been no modifications to the state's control points. Washington State addresses new system capacity in two ways.

   a. New water systems must demonstrate capacity through a water system planning review and approval processes. The principal goal of water system planning is to identify current demands and future needs and apply available resources most efficiently in order to provide high quality service at the lowest cost while protecting the community's health. Planning is a cornerstone of water system capacity. Water systems with strong technical, managerial, and financial capacity are well-positioned to provide efficient, high-quality service now and into the future.
   b. New water systems must also have engineering reports and construction documents reviewed and approved by our regional engineering staff prior to construction. Our review focuses on risk reduction and public health protection. In reviewing engineering documents, we intend to ensure compliance with regulatory standards. We also strive to share our collective experience to promote construction and operation of appropriate, safe, reliable, and sustainable public water supply systems. Our goal is to help the design engineer and water system owner build a project that will be safe and reliable now and into the future. We do this by asking questions, exploring risk versus available resources in the design phase, and helping water system owners and design

engineers identify potential consequences of operational failure (e.g., contamination leading to illness, effects of health advisories, permit restriction, or legal liability).

During our work, ODW staff may identify an existing Group A water system that was not previously regulated under our Group A public water system regulations. This typically occurs when Group B systems add additional unapproved connections to their water system, or the populations served by the Group B systems increase to serve 25 or more people a day for more than 60 days a year due to changes of use or increases in the number people per household. These newly identified systems are more likely to be out of compliance and result in a score of 11 or more on EPA's Enforcement Targeting Tool (ETT). We support these systems in multiple ways.

- State regulations require all new water systems with 10 or more residential connections to meet all design and approval requirements under our Group A regulations, including the water system planning and design requirements. This helps ensure TMF capacity if the system is serving 25 or more people a day in the future. The average persons per household in Washington State is 2.55; it is assumed that water systems with 10 more connections will routinely serve 25 people a day at some future date.
- Sanitary surveys are scheduled for newly identified existing Group A water systems in the next survey year to identify any technical, managerial, and financial capacity deficiencies and to provide any needed technical assistance. At this time, the office may issue a directive detailing information that must be submitted or completed to obtain compliance with our regulations.
- The newly identified existing water system's operating permit is Blue, indicating the water system has more connections than the system was approved for, or ODW staff has not verified the capacity of the water systems.
- The newly identified system, may be required at the department's discretion to provide at a minimum for approval:
    - A water system planning document.
    - As-builts or recording drawings.
    - Water quality analysis.

### 3. *List new systems (PWSID & Name) in the State within the past three years and indicate whether those systems have been on any of the annual* Significant Non-Compliers *(SNC) lists (as generated annually by EPA 's Office of Enforcement and Compliance Assurance).*

We use EPA's ETT Tracker, which shows ETT trends over consecutive quarters. We appreciate the tool's ability to show trends and filter in various ways, including "by new system." We used the ETT Tracker to identify if new systems have compliance issues and determine whether they appeared as priority systems on any previous ETT lists.

During the last three years, we added twenty-five new systems to the state's inventory. These systems included seventeen community water systems and eight nontransient

noncommunity water systems. There were only two of the community systems that scored eleven or more on the Enforcement Targeting Tool (ETT) list (See table 1 below).

## Table 1

| | Community Water Systems | Nontransient Noncommunity Systems | Total |
|---|---|---|---|
| **New in 2020-2022** | 17 | 8 | 25 |
| **On ETT list with score ≥ 11** | 2 | 0 | 2 |

List of new systems.

- New Community Water Systems with Enforcement Targeting Tool (ETT) scores greater than or equal to 11.
  1. AC6814, Dakota Heights Water System.
  2. 24042C, Chico Heights Community.

- New Community Water Systems **not** with ETT scores greater than or equal to 11.
  1. AC551, Allyn Carey.
  2. 32074, BADGER CANYON RANCHETTES #2.
  3. AD8829, Beacon Hill East.
  4. 06581L, Cascade View Estates #4.
  5. AE123, Clouse Water System.
  6. AC131, Desert Hills.
  7. AB3256, Game Farm Estates Water System.
  8. AE050, Grandview Condominiums.
  9. AD532E, Koontz Ranch Water System.
  10. AE120, OPR H2A.
  11. AD362M, Palomino Fields.
  12. 55476W, Polnell Landing Water Assoc.
  13. AD413A, Stevens RV Park & Moorage.
  14. AD861F, Tulip Meadows.
  15. 615, West Deer Lake #1.

- New Nontransient Noncommunity Systems **not** with ETT score of greater than or equal to 11.
  1. AD699N, Columbia Pulp I.
  2. AE124, Knife River Public Water Supply.
  3. AD578G, Labbeemint Water System.
  4. 6230, Lewis County Shop/Ethel.
  5. AD854K, Old Dominion.
  6. AD049E, Port of Mattawa—ND Parks 2 & 4.
  7. AE047, PSE Whitehorn.
  8. AD826D, Unit 60B.

# B. Existing System Strategy

1. ***In referencing the State's approved existing systems strategy, which programs, tools, and/or activities were used, and how did each assist existing PWS 's in acquiring and maintaining TMF capacity? Discuss the target audience these activities have been directed towards.***

   In 2023, EPA approved our updated capacity development strategy. Next year's report will reflect our new and updated efforts. This year's report still reflects our work as it aligned with our previous strategy. That strategy outlines multiple approaches we used for the 4,159 federally regulated public water systems in Washington. In addition to the federally regulated water systems, Washington State regulates about 13,515 small water systems that do not meet the federal government's criteria for a public water system. We call these water systems Group B systems. Although they are not subject to federal regulations, they are subject to Washington State Board of Health rules, which focus on initial water quality and water system design.

   ODW implements its capacity development program using a variety of resources and tools including, but not limited to, department capacity development activities and third-party technical assistance as outlined in our approved 2000 Capacity Development Strategy. Table 2, next page, lists the capacity development activities and how each relates to capacity and the TMF capacity they can address. We will further discuss and describe how these activities have been used to assist water systems in acquiring and maintaining TMF capacity over the last year.

# Table 2: Capacity Development Activities

| Activity | How this relates to capacity | Type of Capacity *Assessed or developed* | | |
|---|---|---|---|---|
| | | T | M | F |
| **Sanitary Survey's** | Department staff members conduct sanitary surveys to assess the condition of facilities, operations, and general management. The department also contracts with third parties to conduct surveys. | X | X | X |
| **Operator Certification** | Department staff members administer a regulatory program for the certification of water system operators. | X | X | |
| **Construction Document Review** | Department staff members review and approve construction documents for new facilities and treatment to ensure compliance with drinking water regulations and design standards. | X | X | |
| **Water System Plan (WSP) Review** | Department staff members review and approve WSP's to assess major components of capacity. | X | X | X |
| **Small Water System Management Program Review** | Department staff members review, approve, and document completion of SWSMP's to assess major components of capacity. | X | X | X |
| **Satellite Management Agency Plan Reviews (SMP's)** | Department staff members review, approve, and monitor SMP's to assess specific regulatory requirements in order to receive and maintain approval as a satellite management agency. | X | X | X |
| **Data Input and Management** | Department staff members measure capacity program performance by entering, storing, and managing water system data. | X | X | X |
| **Communications and Outreach** | Department staff members developed and implemented a communication and outreach strategy to educate the drinking water community on regulations and water system requirements including capacity. | X | X | X |
| **Telephone Technical Assistance** | Department staff members provide technical assistance to water systems and the public daily by way of telephone. | X | X | X |
| **Enforcement/Compliance** | Department staff members apply enforcement in a prioritized and strategic manner to ensure water systems comply with state and federal drinking water regulations. | X | X | X |
| **Performance Reporting** | Department staff members generate performance reports for reporting to the governor and EPA. | X | X | X |
| **Set Aside Project Development** | Department staff members continually develop set aside funded projects aimed at capacity development. | X | X | X |
| **SRF Loan Administration** | Department staff members administer an SRF Loan Program to enhance the capacity of water systems. | X | X | X |
| **Water Quality Monitoring Oversight and Assistance** | Department staff members monitor system water quality monitoring efforts and help complete sampling. | X | X | |
| **Training** | Department staff members provide training in drinking water regulations and programs. | X | X | X |

## Comprehensive Water System Planning

All public water systems are required to plan. In 2022, we completed reviews for new and updated water system planning documents for 86 water systems.

Large water systems with 1,000 or more connections, all new community water systems, and expanding community water systems are required to create and submit a water system plan (WSP) for review and approval. All other systems create a small water system management plan (SWSMP). New noncommunity water systems and waters systems interested in being eligible for DWSRF infrastructure loan are required to submit their SWSMP for approval. Staff members review SWSMPs during the sanitary survey. We developed a *Water System Planning Guidebook* 331-068 to help water system governing bodies, managers, and operators. We detail key technical, managerial, and financial elements important to crafting a good plan. These key elements range from asset and financial management to source water protection, and we provide many tips to support all parties involved in developing a quality plan.

Our regional office planners work with systems to ensure an appropriate level of planning meets each system's needs, so that each system gets the most out of its planning process. The planners provide education in primarily managerial and financial capacity areas. They provide resources and assistance in many ways, including by phone, email, in-person meetings, and at conferences. Planners lead and facilitate meetings on a wide variety of topics, such as asset management, budgeting, funding, governance, rates, resiliency and preparedness, source water protection, regional collaboration and consolidation, receivership, and water use efficiency. Our technical assistance contract with Rural Community Assistance Corporation (RCAC) provides support for smaller water systems that may need additional assistance.

We look at the WSP as the foundation, whereby the water system takes a comprehensive look at its needs and statutory requirements and charts a plan of action for meeting those needs and requirements. Water systems must have current and approved WSP or SWSMP to apply for DWSRF funds. We use the planning documents as a means of ensuring water systems work to build capacity according to the expectations of the 1996 amendments to the federal SDWA.

Asset management is a core foundation of ensuring long-term capacity for public water systems in the water system planning process. Our new strategy clarifies and expands on how asset management pertains to our planning process. We incorporated asset management concepts into our planning guidance documents including the *Water System Planning Guidebook* 331-068. In addition, we created a training program to teach small and medium systems how to incorporate asset management into their current operations and planning programs.

## Operator Certification

Our certified waterworks operators represent the foundation on which we build our state's economic, social, and environmental vitality. An aging infrastructure, increased water system demands, declining aquifers, workforce challenges, advancing technologies, and inadequate funding make the job of the certified operator more challenging and important than ever. The Operator Certification and Training (OC&T) Section leads our office to:

- Receive, process, and assist candidates with waterworks certification exam applications.
- Track, assist, and enforce annual certification renewal and tri-annual continuing education requirements.
- Receive, process, assist, and provide practical exams for Backflow Assembly Tester candidates.
- Review training for relevancy toward operator continuing education requirements.
- Evaluate, provide, track, and enforce temporary certifications.
- Identify, assist, and enforce water system operator requirements.
- Work with data management staff to ensure certified operator information remains relevant and easily accessible.
- Provide technical assistance on water system operational issues.
- Receive, investigate, and prosecute complaints against operators.
- Work with our external partners through our Operator Certification Advisory Committee and Training and Technical Assistance Providers Group.
- Provide innovation in workforce development, succession planning, inter- and intra-agency coordination, rule and policy revision, and maintaining a national perspective.

Workforce development continues to be one of our greatest issues now that more operators are retiring or leaving the business. For example, the last year of the professional growth cycle for BAT was 2022 and 356 BAT did not meet their professional growth requirement and another 64 did not renew their certifications for 2023.

Please see the Waterworks Operator Certification Program Annual Report to EPA for more information. Contact Bill Bernier, Operator Certification and Training Section Manager, at 360-236-3562 or william.bernier@doh.wa.gov if you have any questions.

## Sanitary Surveys (Inspections)

State Department of Health (DOH) regional engineers and staff usually survey larger water systems and systems with treatment to reduce a primary contaminant. Local health jurisdiction (LHJ) staff survey the state's numerous small public water systems. LHJ staff conduct more than half of the hundreds of (and sometimes more than 1,000) sanitary surveys performed each year. Without our local health partners, we could not successfully meet our responsibilities to complete effective sanitary surveys within mandated timeframes. Training our local staff and supporting them with contracts to conduct surveys helps ensure local capacity to respond to drinking water emergencies.

As shown in Table 3, we completed 942 sanitary surveys in 2022 with support of our partners. We continue to address the backlog of sanitary surveys from the COVID-19 pandemic. Next year, 2023, we hope to complete nearly all assigned sanitary surveys within the calendar year.

## Table 3: Sanitary surveys completed in 2022

| Region/Surveyor | CWS | NTNC | TNC | Totals |
|---|---|---|---|---|
| ERO DOH Surveyors | 127 | 16 | 28 | 171 |
| ERO LHJ/3rd Party Surveyors | 47 | 17 | 95 | 159 |
| NWRO DOH Surveyors | 134 | 6 | 44 | 184 |
| NWRO LHJ/3rd Party Surveyors | 82 | 4 | 38 | 124 |
| SWRO DOH Surveyors | 85 | 11 | 26 | 122 |
| SWRO LHJ/3rd Party Surveyors | 112 | 6 | 64 | 182 |
| **Totals** | **587** | **60** | **295** | **942** |

When we find defects or problems, we explain how to correct them. We classify findings from a sanitary survey in accordance with our *Sanitary Survey Field Guide* 331-486.

- *Significant Deficiencies* includes, but is not limited to, defects in design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system that the state determines to be causing, or have potential for causing, the introduction of contamination into the water delivered to consumers (40 CFR 141.403(a)(4)). If left unaddressed, a significant deficiency directly creates a significant public health risk.
- *Significant Finding* includes:
    - A lack of access or information, which interferes with the surveyor's assessment into whether a Significant Deficiency actually exists; or
    - A defect or problem, which, if left unaddressed, indirectly creates a significant risk to the physical safety, security, or reliability of the public drinking water supply.
- *Observation* includes a finding in which a regulator requirement is not met, and the problem or defect is not otherwise identified as a significant deficiency or significant finding.
- *Recommendation* includes any other item the surveyor deems appropriate. This may include items such as development of a flushing plan to installing dedicated sampling stations.

We set compliance deadlines and follow up to make sure systems address both significant deficiencies and significant findings. The sanitary surveyor may also refer water systems to other programs. Staff may use referrals when identifying sanitary survey issues that require additional training and follow-up from ODW staff. In 2022, out of the 942 sanitary surveys conducted, 567 water systems had at least one sanitary survey finding. See Table 4 for sanitary survey finding classifications during the year.

## Table 4: Sanitary Survey Findings

| Finding Classifications | Totals |
|---|---|
| Significant Deficiencies | 478 |
| Significant Findings | 465 |
| Observations | 723 |
| Recommendations | 578 |
| Referrals | 37 |
| **Totals** | **2,281** |

## Construction Document Review

Water system staff must submit project reports and construction documents for review and approval prior to installation or construction of any new water system, water system extension, or improvement. We may require the submittal of a project report for the purpose of resolving a system operational problem. Exceptions to this requirement are:

- Installation of valves, fittings, meters, and approved backflow prevention assemblies.
- Installation of fire hydrants.
- Repair of a system component or replacement with a component of a similar capacity and material in accordance with the original construction specifications of the approved design. For the purposes of replacing existing pipe, similar capacity includes one standard pipe size larger.
- Maintenance or painting of surfaces not contacting potable water.

Staff reviewed and approved 309 engineering documents in 2022. Our review focused on risk reduction and public health protection. In reviewing engineering documents, we intend to ensure compliance with regulatory standards. We also strive to share our collective experience to promote construction and operation of appropriate, safe, reliable, and sustainable public water supply systems. Our ultimate goal is to help the design engineer and water system owner build a project that will be safe and reliable now and into the future. We do this by asking questions, exploring risk versus available resources in the design phase, and helping water system owners and design engineers identify potential consequences of operational failure.

## Source Water Protection Program

During the 2022-23 fiscal year, we restored our SWP staffing to its previous level of service and added a new team member for surface water control or “watershed protection” coordination. Both staff were internal hires who we are onboarding, training, and gradually transitioning to their full roles in the SWP team.

For a large part of the year, we had only one staff person so there were fewer contacts, reviews, and trainings or presentations than in a typical year. Staff primarily focused on keeping the grant program running, providing technical assistance, and reviewing critical areas ordinance (CAO)

updates as time allowed. With full staffing, we anticipate growing the program and outreach efforts to outside groups significantly in the coming year and adding value around SWP.

We maintained and revised the Source Water Assessment Program (SWAP) online mapping tool to better focus on SWP data. In an important update, we worked with a public water system to modify the calculated fixed radius for the biggest spatial radius in the state and improved the quality of our data. SWAP is an important part of Washington's approach to educating and informing agencies and the public about SWP. We began the process of converting our web tool to an ArcGIS online platform and created a new internal dashboard dedicated to wildfire tracking and risk assessment to help our regional engineers provide timely resources to water systems in their areas. We continue to explore innovations in spatial tools and make data readily available. The SWAP web tool sees over 600 discrete visits per month, indicating increased traffic over last year as we continue to promote the tool and refer to it.

In addition, we awarded $30,000 for small water systems to conduct hydrogeologic assessments of the groundwater in their area to better prepare for long-term quantity and quality of water at the Holiday Hills Homeowners' Association and the Sravasti Abbey Buddhist Monastery. These small systems will be able to consult a hydrogeologist for the first time to work toward addressing both declining aquifers and bacteria, arsenic, and radionuclide contamination.

Please see the Source Water Protection Program Annual Report to EPA for more information. Contact Nikki Guillot, at 360-236-3114 or nikki.guillot@doh.wa.gov if you have any questions.

## Water Quality Monitoring Oversight and Assistance

Our Water Quality and Data Management staff send monitoring and reporting reminders to water systems prior to missing compliance dates. Our staff send reminders to systems that have not met a monitoring or reporting requirement prior to the compliance date for consumer confidence reports, annual and triennial lead and copper monitoring, and annual nitrate monitoring. These reminders are emailed to the water system primary contact. In 2023, we ensure these reminders are sent to all purveyors of the water system including system owner and operator.

We provide a Water Quality Monitoring Schedule (WQMS) for all community and nontransient noncommunity water systems. The WQMS is available online for water systems and includes when the last sample was collected and the next sample due date for each water quality parameter or suite of chemicals.

Water quality staff provided individual technical assistance for water systems that have MCL violations, treatment technique violations, treatment technique triggers, and action level exceedances. We work with each water system to develop corrective action plans to determine milestones to address these violations. Systems needing additional support and funding can be referred to third party technical assistance providers to meet capacity development needs.

We track, store, and share public water system data with systems and the public on our Drinking Water System Data webpage. We provide customers with information about their water system, including water quality history, operating permit, and compliance status.

In 2022, we got approval from the agency to begin transition to Safe Drinking Water Information System (SDWIS) database through contracted services and migration assessments. We submitted our request for implementation assistance to EPA. Data mapping for the transition started in the spring of 2023. The goal is to have long-term sustainable data management and tools for supporting public water systems and their customers as well as reporting information to EPA.

## Communications and Outreach

Our main ODW website, together with annual consumer confidence reports, keep customers informed about the overall performance of their water system. We continue to offer over 400 publications to provide technical assistance and information to water systems and their customers. Publications are reviewed by staff annually to ensure they are up to date, still relevant, and provide accurate information. ODW's 2022–2024 operational plan includes a goal to improve language access of our resources for non-English speaking residents. In 2022 we focused on translating our public notification documents into the top-five languages spoken in Washington. Our goal is to increase the percentage of publications for the general public translated into Spanish by 25 percent and the top-five languages by 10 percent.

Our publications provide a range of technical assistance to support water system capacity development. Our publications database includes fact sheets on sampling guidance, templates to develop sampling plans, cross-connection control program templates, draft public notifications, and tech tips on how to correct deficiencies identified in a sanitary survey. In 2022, we developed 22 new publications and updated or revised 35 publications. Table 5 lists some of the new or revised publications and the TMF capacity they address.

## Table 5: Publications

| Publication Name | Summary of publication | Type of Capacity Developed | | |
|---|---|---|---|---|
| | | T | M | F |
| ***Group A-Transient Non-Community Water System Design Guidelines 331-676*** | Explains how to design Group A-TNC water systems. Also helps you prepare a complete Group A-TNC Design Workbook 331-677, which you must submit for approval before starting construction of your new or expanding Group A-TNC water system. | X | | |
| ***Group A-TNC Water System Design Workbook 331-677*** | Completing this workbook satisfies project report, design, and source approval requirements for new or expanding Group A-TNC water system (WAC 246-290-110, 120, and 130, respectively). | X | | |
| ***Chemical Monitoring Violation Notice to Water System Users 331-691*** | Universal Chemical Monitoring Violation Form. Also available in Spanish, Russian, Tagalog or Marshallese, Ukrainian, and Vietnamese. | X | X | |
| ***How to Complete a Coliform Lab Slip 331-247*** | Three pages explain the correct way to fill out the lab slip water systems submit with coliform samples. | X | | |
| ***Satellite Management Agency Contact Information Form 331-590*** | Form to provide information about the owner, administrative contact, and certified operators at a satellite management agency. | X | X | X |
| ***DWSRF Infrastructure Bill Funding 331-685*** | The DWSRF Program finances drinking water projects and activities to protect public health and achieve or maintain compliance with the SDWA. | | | X |
| ***Groundwater Rule: Source Water Sample Taps 331-436*** | Explain how water systems can meet new monitoring requirements by properly installing sample taps. | X | | |
| ***Calculate Liquid Chemical Dose from Calibration Cylinder Drawdown 331-592*** | Poster that helps water system operators calculate liquid chemical dose by using a calibration column, stopwatch, and a calculator. | X | | |

## Security and Emergency Response Program

We work with water systems and others to plan, prevent, and prepare to respond to security breaches and emergencies. We coordinate with our Executive Office of Resiliency and Health Security (ORHS), which is the central location for information gathering, analysis, and response coordination during an emergency. Our LHJs represent us at local Emergency Operation Centers (EOCs) during emergencies.

Last year, the manager of our state's mutual aid network, Washington Water/Wastewater Agency Resource Network (WAWARN) announced they were retiring, and the organization would need a new manager. ODW worked with the retiring manager and professional associations to find a new manager, which is Olympic College. WAWARN has at least 190 members and is coordinated by water systems within the network. The WAWARN website provides information for members and nonmembers.

We continue to contribute to the response for the chlorine supply chain shortages that began in 2021 and carried into 2022. Multiple manufacturing and processing plants across the country were damaged, including one in Washington State. Staff from our Northwest Regional Office worked on the issue with our state's Emergency Management Department, WAWARN, and water systems, especially some of the larger ones that regularly use large volumes of chlorine. We coordinated some of the efforts to share chlorine supplies between some water systems and we developed guidance for utilities, which we linked with other resources on our Chlorine Supply Interruption webpage.

## Drinking Water State Revolving Fund (DWSRF)

We provide construction loans and financing for improvements to protect public health. DWSRF continues to promote asset management and awards bonus points on construction loan applications if the applicant has:

- Attended asset management training (1 point).
- Developed an asset inventory with expected life assigned (5 points).

DWSRF also offers funding to recipients to develop an asset management program. DWSRF applicants that do not have an existing asset management program must develop an asset inventory, including expected life of assets and replacement costs for each asset. Applicants with an existing asset management program are provided with the ability to improve their asset management program. Up to $40,000 of additional funding will be awarded per jurisdiction for asset management efforts. Additional information about the DWSRF program can be found in the DWSRF annual report.

## Small Communities Initiative

We continue to support the Small Communities Initiative (SCI) through a contract with the Washington State Department of Commerce (Commerce). Since 1999 SCI has been assisting small, rural cities and towns, unincorporated communities and counties, utility districts, and water associations in developing more focused projects, making strategic investments, and identifying and accessing appropriate funding sources. More than 85 communities secured over $271 million in state and federal funding for their respective projects, resulting in safer drinking water, environmental protection, and infrastructure to serve community and economic development activities. The most helpful aspects of the SCI Program as reported by community leaders over the years include assistance with:

- Defining what the problem is, then articulating and prioritizing goals for the community.
- Developing action plans and sticking to them.

- Convening and facilitating meetings, focusing on priorities.
- Creating an environment in which everyone can participate in the discussion.
- Helping understand and complete regulatory and funding program requirements and processes.
- Introducing/connecting local elected officials and staff with appropriate agency staff and creating networking opportunities.
- Helping put a "face" on government.

We funded .9 FTE for SCI and this year SCI worked closely with 12 water systems to provide technical expertise necessary to apply for or obtain funding and manage the infrastructure project. These water systems often have nearly unsurmountable challenges and would likely be ineligible for financial programs without the assistance of SCI. Direct technical assistance provided by SCI includes identifying appropriate funds for water system projects, creating and implementing action plans with communities, assisting with applying for funding, aiding in procurement, and meeting other funding requirements, contract management, and facilitating and documenting meetings.

## Rural Community Assistance Corporation

We use part of our set-asides in an agreement with the Rural Community Assistance Corporation (RCAC) to provide technical assistance to small communities across the state. RCAC assists systems with financial and managerial capacity building projects, such as rate studies, board training, and WSP and SWSMP development.

In 2022, RCAC held 31 training events for Washington water systems using GoTo Training, with 339 attendees. So far in 2023, RCAC has held 21 training events for Washington water systems using GoTo Training, with 698 attendees. Washington Certification Systems allotted 0.3 CEUs for each training course.

## Training

We provide training to complement the work of our technical assistance providers. This includes one-on-one training for water systems, speaking at conferences and public meetings, offering regulatory insight at various venues, and facilitating comprehensive performance evaluations and performance-based training. Examples from our Northwest Office include training on PFAS at a regional meeting of water systems in Pierce County and informative presentations at conferences during the year, such as the Infrastructure Assistance Coordinating Council's conference and the American Water Works Association Pacific Northwest Section's conference.

## Area-Wide Optimization Program (AWOP)

As a participant in EPA's Area Wide Optimization Program (AWOP), our vision is to protect public health by assuring that surface water treatment facilities are properly designed, constructed, staffed, operated, and maintained. The training, tools, and networking we receive through AWOP participation has yielded enormous benefits to our staff, utility operators, and drinking water consumers. The 2022 workshops focused on removal of organics to reduce disinfection by-products

provided our staff with practical tools and hands-on experience. Our staff have used this information to support small water systems struggling with disinfection by-product compliance.

Each year we recognize water utilities that meet voluntary turbidity goals based on national goals established by AWOP. Low turbidity means better water treatment and better public health protection. We review turbidity data submitted by all 56 rapid rate treatment plants and present bronze, silver, gold, and platinum certificates or plaques to systems the first time they meet the turbidity goals for three, five, ten, fifteen and twenty consecutive years. Based on plant performance from 2001 to 2022, we have given 113 awards and recognized 40 individual systems.

We don't limit AWOP workshops to surface water topics. The 2022 manganese optimization workshop gave us tools for measuring manganese, understanding its health significance, and optimizing manganese treatment. As a result, we are considering changes to our approach to regulating secondary contaminants.

## Prioritized Compliance Strategy

Our compliance strategy ensures that compliance efforts address the highest public health risks first. We notify water systems when they violate a regulation and inform them of actions to correct the violation and return to compliance. We provide training and outreach to help systems find appropriate solutions, which often include strengthening aspects of their managerial capacity. While we can use formal enforcement tools for systems that are unwilling or unable to work with us to return to compliance, we also use our formal enforcement tools, such as our formal compliance agreement, to help support water systems regain compliance while meeting a series of milestones spelled out in the agreement. Many of these milestones include developing TMF capacity such as completing planning documents and hiring a certified operator.

When water systems are unable or unwilling to comply with our regulations, we support the water system in restructuring (either voluntarily or by court ordered receivership) or consolidation. Small water systems struggle financially because there are fewer households to pay for the overall cost of maintaining and improving their water system. These costs include the capital financing to periodically replace physical assets such as wells, pumps, distribution mains, and reservoirs when they reach the end of their useful life. In addition, maintenance, monitoring, and personnel costs also tend to be much higher per household for small systems.

As a result of these challenges, DOH works to support the consolidation of small water systems in urban and peri-urban areas with larger water systems that have great technical, managerial, and financial capacity to sustain the safe and reliable provision of drinking water. At the same time, consolidation is not a feasible option for many small and more rural water systems. In rural areas, restructuring the water system into different ownership is another option. Public and private entities that own multiple water systems can improve the individual water systems TMF capacity by increasing the economy of scale to these water systems.

The Consolidation Feasibility Study Grant provides funding to community water systems to study the feasibility of owning, maintaining, or serving smaller, struggling water systems serving ten thousand and fewer people. DWSRF implemented a cycle for the Consolidation Feasibility Study Grant Program

that closed June 30, 2022. This means that $400,000 in funding was made available from the DWSRF fee account and the maximum grant amount was increased to $50,000. DWSRF received seventeen applications totaling over $800,000.

2. *Based on the existing system strategy, how has the State continued to identify systems in need of capacity development assistance?*

We use annual operating permit color, compliance data, sanitary surveys, and planning documents to identify systems that need capacity development assistance. We continue to work with our regional offices to identify systems that need technical, managerial, and financial assistance through sanitary surveys, special purpose investigations, routine contact, and emergency response work. We target assistance to these systems through our technical assistance providers and regional office and headquarters staff. We are researching the ability of our available data management systems to track system capacity.

## Annual Operating Permits

Every year, DOH issues all Group A public water systems an operating permit after they pay their annual fee statement. We provide a color-coded permit to each water system. We outline the criteria for each color on our Enforcing Drinking Water Regulations webpage. The colors indicate how well the system is meeting the requirements of its operating permit. It also is a way for us to share water system performance information with customers, lenders, local permitters, and other partners. Table 3 below provides information on the permit color of public water systems for the last three years, including 2022. We use this information in part to help select which water systems we offer technical assistance to from third party providers like RCAC.

We maintain a Water Systems Operating Under a Red Permit webpage with information about water systems currently with red operating permits. A Red operating permit category indicates that the water system is inadequate. We also share on the webpage that a Red operating permit could result in the water system having difficulty with building permits, on-site sewage disposal permits, food service permits, liquor licenses, and other permits or licenses being denied for properties connected to or intending to connect to the water system. In addition, lending institutions may choose not to finance loans associated with these properties.

Water system with red, blue, and yellow permits are offered additional technical assistance and are a high priority for our capacity development program.

### Table 6: Water System Permit Color Summary by Year

| | Permit Color | | | |
|---|---|---|---|---|
| Year | Green | Yellow | Blue | Red |
| 2020 | 3106 | 16 | 915 | 14 |
| 2021 | 3132 | 18 | 921 | 26 |
| 2022 | 3150 | 17 | 954 | 25 |

## Compliance Data

Systems with health-based violation, other MCL violations, and PFAS state action level exceedance are notified of these violations and provide information on how to return to compliance. Our staff work closely with these systems to determine any capacity development needs. Many small water systems do not have the TMF capacity to deal with new challenges and emergencies.

Our regional office staff work one-on-one with these systems to support these systems return to compliance. This may include providing on-site hands of training to new surface water treatment plant operators with support from Evergreen Rural Water of Washington (ERWOW) circuit riders to community meetings to help communities and their customers work together to find solutions. Our planners work with homeowner association boards to help them understand the issues at hand and how to discuss it with their neighbors.

When systems need additional support to become eligible for DWSRF loans, we may offer planning and engineering loans, attend meetings to evaluate consolidation or restructuring, and provide more tailored third-party technical assistance through our technical assistance contracts.

3. ***During the reporting period, if statewide PWS capacity concerns or capacity development needs (TMF) have been identified, what was the State's approach in offering and/or providing assistance?***

## Small System TMF Capacity

We continue to have capacity concerns about our small water systems statewide. These systems are more likely to have water quality and water quality monitoring violations and are less likely to be able to respond to emerging contaminants, climate change, and other emergencies. We continue to provide the following assistance and support to these systems.

- Support during coliform and health advisory situations, including developing action plans with water systems and communicating with labs, LHJs, and the media.
- Technical assistance to small water systems on water quality, source water protection, cross-connection control, and engineering issues.
- Managerial and financial capacity assistance through contracts with RCAC, and SCI.
- Targeted financial technical assistance to improve small systems' financial capacity and position them to apply successfully for funding opportunities.

The greatest challenge we are working to address are the lack of capacity of small systems to be able to provide oversight to an infrastructure project that meets all of the federal crosscutters as well as providing updated information on their water system plan or small water system management program to demonstrate their capacity to maintain the infrastructure and pay back a loan. We are working on going to bid for services to provide contract management oversight, engineering/design support, and water system planning support for these utilities in 2023.

## Aging Infrastructure

The most recent needs assessment highlighted our concern about aging infrastructure and ensuring water systems are funding the right project at the right time. The requirement for all water systems to plan is a tremendous success to help communities understand their TMF needs both now and into the future. Explicitly including asset management enables us to help utilities better understand the limitations of their infrastructure and consider costs of maintenance, repair, and replacement.

Unfortunately, water systems identify are more likely to identify grants as the funding source to address many of the projects listed in their capital improvement plans. While the bipartisan infrastructure law (BIL) has provided an influx of funding to improve the infrastructure in our state, much of this funding will be provided as a loan and not subsidy. We continue to provide technical assistance for rate studies to understand the water system operating costs and needed reserves for future improvements and unexpected emergencies.

In addition to ensuring water systems are charging for the full cost of providing water, we understand that increased costs impact low-income customers who are most vulnerable to rate increases. We continue to provide resources for customer assistance programs on our website.

## Climate Change

Impacts of climate change on our water systems continues to be a water system capacity concern. Drought, flooding, and wildfires threaten water systems every year. This was also highlighted in a new legislative requirement that climate resilience be a part of our water system planning process. Our updated Capacity Development Strategy considers the long-term impact of climate change on utilities.

We continued to provide emergency response support to water systems during emergencies and provide information to water system customers about how to protect themselves during emergencies. We developed a library of emergency response social media posts for flooding, drought, and wildfires so we could quickly post information such as how to properly boil water in an emergency.

## Source Water Protection and Emerging Contaminants

Increase population growth continues to push development into areas where we believed our drinking water sources would be protected. Ensuring source water protection measures are in place are to protect vulnerable drinking water sources is essential. We continue to support source water protection by:

- Reviewing updates to local critical aquifer recharge areas and other local ordinances.
- Providing technical assistance through conference training sessions.
- Providing direct assistance from our source water protection program.
- Updating and developing new source water protection guidance.

Washington regulations required PFAS sampling of all community and nontransient non community water system in January 2023. Voluntary sampling began in 2022. We continue to identify elevated levels of regulated PFAS in groundwater across the state.

In 2022 we developed fact sheets, FAQs, and public notices to support water systems as they communicate about the levels of PFAS in their water systems. In the spring of 2023, we began providing the PFAS Testing Results Dashboard externally on our website. The dashboard shows which water systems have sampled for PFAS the levels detected and if the water system has taken action to reduce PFAS served to their customers. We continue to provide technical assistance to water systems with elevated PFAS to support communications and evaluate mitigation options.

### *4. If the State performed a review of implementation of the existing systems strategy during the previous year, discuss the review and how findings have been or may be addressed.*

During 2022, we successfully completed an update to our capacity development strategy, responding to two decades of changes in the drinking water industry. The document, *Washington's Drinking Water Strategy* 331-703, creates a comprehensive strategic framework for improving drinking water capacity by identifying the processes we use to make statewide and programmatic decisions. These processes mandate the development of statewide goals, planned program activity, measurement of trends, and consultation with affected communities.

Using this updated approach, ODW will respond to industry-wide challenges, including aging infrastructure, affordability, emerging contaminants, climate change, workforce depletion, and the potential for an increase in recalcitrant purveyors. As we implement the strategy, we will develop new tools to address these challenges, including asset management, pursuing environmental justice, developing peer networks, greater consumer engagement, and increasing equity, diversity, and inclusion.

The strategy will helps us remain innovative, be transparent in our work, improve engagement with our partners and Washington's communities, continually improve, satisfy federal requirements, and convey our commitment to equity and being an anti-racist organization through action.

### *5. Did the State make any modifications to the existing system strategy? If so, describe.*

Yes, we made modifications to the existing system strategy. Last year, we completed a two-year effort to update our Drinking Water Strategy to meet EPA's requirement to submit a capacity development strategy that incorporates asset management. EPA approved the revised strategy in February 2023. The updated strategy is in line with the ODW vision of supporting our communities to address competing water challenges, such as climate change, water resources, aging infrastructure, and economic development. We ensure and promote the value of safe and reliable drinking water to all people of Washington, now and for generations to come.

# Successes and Challenges

## A. Drinking Water State Revolving Fund (DWSRF) Success Stories

One Drinking Water State Revolving Fund (DWSRF) success story is Evergreen Apartments in Lewis County, which served two apartment buildings and five single detached dwellings within the town of Onalaska. Their well was impacted by arsenic above the maximum contaminant level (MCL) with iron and manganese above the secondary MCLs. The source had a history of coliform contamination, but the previous owners removed disinfection. Lewis County Water District 2 serves Onalaska and had planned to serve the apartment complex once the district made improvements to its own water system. In order to facilitate this connection, a new water main was installed in summer of 2022. Lewis County Water District 2 received two grants for a total of $465,500 since the project consolidated a troubled water system. One grant was a federal EPA Small Underserved and Disadvantaged Community grant and the other was a Washington state Drinking Water System Rehabilitation and Consolidation grant. The residents of Evergreen Apartments now receive safe and reliable drinking water from Lewis County Water District 2.

Another DWSRF success story involves Treneer Water Company and Treneer Addition Water Company, both Group B water systems in Yakima County. The distribution systems of both water companies had coliform issues for years. All three wells serving the two systems were decommissioned and a 2,500-foot water main was extended to provide water from Yakima County's Terrace Heights water system in 2022. The county received two grants totaling more than $714,300 since the project consolidated two troubled water systems. One grant was a federal EPA Small Underserved and Disadvantaged Community grant and the other was a Washington state Drinking Water System Rehabilitation and Consolidation grant. The residents of the Treneer area now receive safe and reliable drinking water from Yakima County's Terrace Heights water system.

## B. Assisting Struggling Water Systems

In 2022, two small struggling water systems in Pierce County successfully reached some compliance milestones.

Bethel Green Acres successfully transferred ownership to another utility with a proven record of technical, managerial, and financial capacity. The stewards of the struggling HOA ownership were awarded a DOH Drinking Water Week award.

Lake Bay Marina is a privately held marina that serves water to the public. The marina is in a beautiful, yet depressed area in need of major investment. The marina and water system owner served water from a well that was highly vulnerable to contamination and had both biological and organic chemical risks in the sanitary control area. A changing business climate, a ready purchaser, and ongoing enforcement on the water system owner led to a transfer of ownership to a land stewardship entity. The marina and park are now closed, but with the hope of new investment and revival in the future.

## C. Partnering with University Students to Study Water Affordability in Washington State

In 2022, SWRO staff led an effort to obtain better data about the impacts of affordability in Washington state. Through their coordination efforts ODW partnered with Master's students at the University of Washington, Evans School of Public Policy and Governance to conduct a study to assess drinking water affordability in Washington state. With the help of ODW staff and water utilities, the students developed a survey that was designed to answer two questions.

- What communities in Washington state, if any, face an increased risk of drinking water unaffordability and shut-off frequencies?
- What demographic, geographic, and other factors are associated with drinking water rates and/or drinking water shut offs? (Demographics analyzed included region, service water provider, rural-urban classification, income, age, sex, and race).

To answer these questions, they designed and implemented a survey to public water systems (PWS) in Washington State, specifically asking for 2022 data that included drinking water rate structures, average customer water usage amounts, and shut-off frequencies. The data was used to analyze whether any patterns or correlations exist between key demographic indicators and what individuals across Washington state pay. The analysis focused on four metrics to assess affordability: 1) median household income (MHI), 2) household burden at the twentieth percent of income (HB), 3) minimum wage hours, and 4) income dedicated to water services (IDWS).

The study report was presented to ODW in Spring 2023, and we are evaluating how to incorporate the data into our efforts to address environmental justice and inequity.

## D. Partnership with EPA Compliance Advisor Contractor, Eastern Research Group

ODW staff coordinated with an EPA contractor, Eastern Research Group (ERG), to assist several rural communities in eastern Washington, including Curlew Water and Sewer District and Hunter's Water District. In consultation with ODW, ERG evaluated the water system status, made recommendations for steps to return to compliance, and developed hands-on materials such as operational standard operating procedures, sampling plans, and public outreach materials. The work concluded for Curlew WSD in 2023 with a final report that included a summary of completed improvements and outstanding areas of concern. ERG continues to assist Hunters Water District.

# Next Steps

In 2022, we continued to support water systems to address technical, managerial, and financial capacity for the provision of safe and reliable drinking water for everyone served by public water systems. We began transitioning from our previous capacity development strategy to our approved updated strategy. The updated strategy focuses on the strengths of what we've built and looks to address the increasing challenges utilities face today like aging infrastructure, climate change, and workforce challenges. We look forward to continuing to support water system capacity development at a multitude of levels through the diverse approaches outlined in our updated strategy.


**DOH 331-733 October 2023**

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