Annual State Capacity Development Program Implementation Report

SFY 2022

Oregon Health Authority
Public Health Division
Center for Health Protection
Drinking Water Services

September 30, 2022

SFY 2022 Reporting Period: July 1, 2021–June 30, 2022

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 change has affected 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 about legal authority is necessary.***

   Oregon's legal authority to implement the New Systems Program has not changed.

2. ***Have the state's control points ever been modified? 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.***

   The state's control points have not been modified.

3. ***List new systems (PWS ID and name) established in the state within the past three years and indicate whether those systems have been on the enforcement targeting tool (ETT) list during their first three years of operation.***

   Three new public water systems (Community [C] or Non-Transient Non-Community [NTNC]) were added to Oregon's public water system inventory during the reporting period. Table 1 lists these new systems.

Table 1: C and NTNC public water systems established during SFY 2022

PWS ID	PWS name	System type	Activity status	Activity date	Activity reason
OR41 95675	BEAR VALLEY ACURA	NTNC	A	02/10/2022	Existing well separated from PWS 94693 as of 02/10/2022
OR41 95644	COLUMBIA AIRGAS	NTNC	IA	01/26/2022	New system added in plan review 6/3/2021, not currently active
OR41 01555	SUNRIDGE ESTATES UPPER	C	A	04/07/2022	Activated as new PWS on 4/7/2022 when 05567 split into two systems.

Oregon uses a violation system score list (i.e., ETT) to monitor system compliance. Of the 16 active C and NTNC water systems added to Oregon's inventory during the last three reporting periods, there are zero systems with a score of 11 or higher during the first three years of operation. Table 2 lists the ETT history for these 16 systems.

Table 2: ETT history for C and NTNC active public water systems established during SFYs 2020, 2021 and 2022

PWS ID	PWS Name	Type	ETT
OR41 95621	ARBOR SCHOOL - WEST	NTNC	No
OR41 95675	BEAR VALLEY ACURA	NTNC	No
OR41 01539	CANYON RIDGE	C	No
OR41 01547	CHARLOTTE ANN WATER DISTRICT	C	No
OR41 95664	COLUMBIA AIRGAS	NTNC	No
OR41 95630	COLUMBIA HELICOPTERS	NTNC	No
OR41 01549	ELK CITY WATER DISTRICT	C	No
OR41 95602	GP ENERGY	NTNC	No
OR41 95613	HILLSBORO LANDFILL	NTNC	No
OR41 01542	LAKE OSWEGO - TIGARD WATER SUPPLY	C	No
OR41 95645	MCLANE INDUSTRIAL PARK	NTNC	No
OR41 06281	ROGUE SPRING	C	No
OR41 01543	ROXY ANN HEIGHTS HOA	C	No
OR41 01555	SUNRIDGE ESTATES UPPER	C	No
OR41 95627	TC CHEVY	NTNC	No
OR41 01548	WEST GREGORY MHP SOUTH	C	No

B. Existing Systems Strategy

1. Regarding the state's approved Existing Systems Strategy, which programs, tools, and/or activities were used, and how did each assist existing public water systems in acquiring and maintaining technical, managerial, and financial capacity? Discuss the target audience for these activities.

Oregon continues to work diligently at implementing its capacity development strategy while improving and revising the strategy to include asset management implementation. One of the major keys to success has been the integration of capacity-building elements into day-to-day Drinking Water Services (DWS) activities.

As discussed in detail below, Oregon's capacity development strategy focuses on four areas: capacity assessment, information and communication services, training, and outreach.

Focus Area 1: Capacity Assessment

Program Description and Narrative

Oregon staff assess water system capacity on water systems applying for funding through the Drinking Water State Revolving Fund (DWSRF) and on new water systems during the initial plan review process.

For DWSRF applicants, Oregon staff perform the technical and managerial assessments, while Business Oregon (BizOR) performs a concurrent financial capacity assessment. During this process, DWS and BizOR cooperatively identify systems with capacity-related deficiencies and work with those systems to develop necessary capacity. Most deficiencies are easily corrected prior to final loan disbursement. More severe issues require correction before initiating the loan. This cooperative program has allowed water systems to make necessary capital improvements while improving overall capacity.

New public water systems are assessed during the initial plan review and approval process. All public water systems must comply with applicable requirements before serving drinking water to the public. Areas of evaluation are plan review, construction, master plan/feasibility study, operator certification, managerial processes, ownership, water management and conservation, rate structure, and financial planning. All capacity deficiencies are documented, and corrective action is required. Requirements vary based on public water system type.

The target audience of the capacity assessment program is water system management and operators.

Activities During This Reporting Period

- Oregon conducted twelve DWSRF capacity assessments during the reporting period. The Oregon DWS Technical Services Unit provides a capacity assessment for each water system receiving a DWSRF loan so that any needed capacity improvements can be written into the loan contract.

- An internal process review determined that the capacity assessment form for new water systems should be revised. The review also noted that new water systems not requiring plan review are not marked for the capacity assessment process. A work group has been created to address these two issues. The revised procedures will be implemented in the coming year.

Focus Area 2: Information and Communication Services

Program Description and Narrative

Oregon continually strives to better communicate with water system operators and managers and provide the essential information water systems need to maintain compliance. Oregon DWS continues to accomplish this in the following ways:

Oregon DWS Website

Oregon uses its website to provide water-system-specific information, including public access to the state Safe Drinking Water Information System (SDWIS) database Drinking Water Data Online. In addition to information on compliance-related monitoring and reporting, the DWS website provides many educational and resource materials, including technical-assistance handouts, public water system map, health-effects factsheets, training guides, and contacts for outside technical-assistance providers.

The DWS website also includes a capacity development-specific webpage that provides technical, managerial and financial capacity-related tools and resources for water system managers and operators. The Financial Capacity webpage includes links to two series of financial capacity handouts: budgeting and planning. The webpage also includes comprehensive resources in the areas of budgeting, rate setting, capital improvement planning, and asset management. Posted reports are made available to the public on this webpage.

To support continuing education for water system personnel, the DWS website includes a Training Opportunities webpage. This webpage provides a one-stop-shopping site for water system operators and managers where they can view free upcoming training

classes and webinars. Links to other training providers are also posted on this webpage.

DWS Newsletter—ePipeline
DWS continues to issue the ePipeline newsletter three times per year, which provides information regarding upcoming rules and deadlines, as well as operations and maintenance issues. DWS also conducts special mailings to inform drinking water systems about new rules and upcoming regulatory deadlines.

The target audience for these efforts includes system managers, operators, and the general public.

Activities During This Reporting Period

- The DWS website and Capacity Development webpage were continually updated with current tools and resources, news and hot topics.
- A Managerial Capacity webpage was created and added to the Capacity Development webpage.
- The Training Opportunities webpage was continually updated with current free trainings.
- Oregon DWS used the government email delivery system (GovDelivery) to send capacity development information via the ePipeline newsletter to all email-capable public water systems. Oregon DWS has email addresses for 2,797 systems out of 3,322 active systems, so 84% of Oregon's public water systems can receive email communications.

Focus Area 3: Training

Program Description and Narrative

Training opportunities are available on all levels for water system operators and managers. The following training courses are provided by Oregon DWS on a recurring basis:

Basics for Small Water Systems Training Course. Oregon provides training and assistance to small water systems to support their efforts to comply with small water system operator certification requirements. Oregon DWS contracts with an outside training provider. This free class covers the basics of water system operation and maintenance, water testing and other regulations, waterborne disease, water treatment for small systems, and recordkeeping. Small water system operators are required to attend one of these training classes (or an equivalent online version) every three years to maintain eligibility for DRC duties and responsibilities. The course is offered 20 times per year at numerous locations throughout the state. More than 500 people per year take the course. During the COVID pandemic this course was also provided virtually through webinar. Based on overwhelming popular support we intend to continue offering the virtual class on a quarterly basis.

Surface Water Treatment Training Courses. Three training classes have been developed and are taught by DWS staff at various locations around the state. Course titles include *Essentials of Surface Water Treatment*, *Conventional and Direct Filtration*, and *Slow Sand Filtration*. To comply with COVID-19 safety guidelines, the *Essentials of Surface Water Treatment* course has been recorded and is available on the DWS Training Opportunities webpage.

All training is targeted, convenient and cost effective. Training guides, manuals and factsheets are continually identified, developed and made available. Training on capacity development and optimization for surface water systems is provided in coordination with the Area-Wide Optimization Program.

Activities During This Reporting Period

- DWS cohosted *Managing Your Water System Into the Future* training with the Environmental Finance Center at UNC-Chapel Hill. A free in-person class was held at the Roseburg Public Library, a site specifically chosen to facilitate attendance by underrepresented public water systems.

- The *Basics for Small Water Systems* Training Course was held regularly as noted above.

- The following surface water treatment virtual trainings allowed Oregon operators to receive up to 6 contact hours of continuing education equivalent to 0.6 CEUs:

    - Two trainings of the *Essentials of Surface Water Treatment* (Part 1 held on May 24 and again on June 1 and Part 2 held on May 25 and again on June 2, 2022). Sixteen operators participated.

    - One 6-hour *Slow Sand Filtration* training was given (Part 1 held on June 1 and Part 2 held on June 2, 2022). Seven operators participated.

    - One 6-hour *Conventional and Direct Filtration* training was given (Part 1 held on June 29 and Part 2 held on June 30, 2022). Four operators participated.

Focus Area 4: Outreach

Outreach activities are performed daily through a variety of programs carried out by DWS. The target audience for the following outreach programs includes water system managers and operators.

<u>The Drinking Water State Revolving Fund Program (DWSRF)</u>

Program Description and Narrative

Oregon continues to have notable success with the DWSRF and associated outreach activities. DWSRF funds are very beneficial because they provide a funding mechanism for water systems that otherwise might be unable to afford needed modifications, upgrades and replacements of existing drinking water system infrastructure needed to maintain compliance with the Safe Drinking Water Act. Oregon's outreach activities to promote this program are accomplished through a variety of methods, including industry presentations, one-stop meetings, ePipeline articles, postcard mailings and GovDelivery bulletins, routine updates to the DWSRF webpage, use of the circuit rider program to provide assistance to water systems in completing funding program letters of interest, dissemination of the DWSRF program brochure during routine water

system encounters, and DWSRF program signage at construction sites.

Activities During This Reporting Period

- Much of the program's focus has shifted from the (base) DWSRF to the new, highly sought-after Bipartisan Infrastructure Law (BIL) funding. BIL was signed into law on November 15, 2021. Oregon DWS and BizOR staff and management have devoted substantial resources to BIL's developmental stages, which are ongoing. While BIL funding is available as supplemental, LSLR, and EC for grant years 2022–2026, Oregon's DWSRF program has initially focused mainly on the supplemental funding because project demands for these new funds far outweigh the supply. DWS anticipates that EC funding will be applied for soon, once specific projects have been identified. LSLR funding is unknown at this time, but DWS anticipates that once the LSL inventory list has been completed, DWS will know whether it has eligible projects worth pursuing LSLR funding for.

- COVID-19 restrictions limited the promotion of the DWSRF program to water systems throughout Oregon. Rather than offering several in-person presentations, as in years past, Oregon DWS relied more on word-of-mouth marketing through DWS regional staff and partner agencies, website updates, GovDelivery bulletins, and ePipeline newsletter articles.

- DWSRF partners at BizOR held six one-stop meetings for communities interested in pursuing financial assistance to address water/wastewater improvements. The DWSRF is one of many financing programs promoted at these meetings.

- DWSRF program staff contributed four articles to the ePipeline newsletter, including a summary of what the program can offer to eligible PWSs throughout Oregon. DWS also sent GovDelivery bulletins to promote the DWSRF Intended Use Plan. These notifications went to all interested parties and eligible PWSs, partners, engineering firms and tribes. The DWSRF program has contributed to several GovDelivery announcements over the reporting period and they each were delivered to over 6,000 interested parties. DWS will continue to use the GovDelivery

system as a major communication tool to enhance program awareness and effectiveness.

- Routine updates to the DWSRF webpage are ongoing. A few examples are the semiannual and annual updates to Project Priority Lists for public comment periods, the annual updates to the DWSRF Annual Report and IUP, and the creation of the new BIL program webpage.

Technical Service Providers

Program Description and Narrative

To further enhance Oregon DWS's ability to assist water systems with identified problems and to develop capacity, the Technical Assistance DWSRF set-aside is used to contract with outside technical service providers. Through Oregon's DWSRF, contracts have been established with drinking water circuit riders to provide short-term (typically 10 hours or fewer) on-site technical and engineering assistance for community water systems serving populations under 10,000, as well as nonprofit transient and non-transient water systems. For these systems, services are free.

Beginning with the 2022–2027 circuit rider contract, Oregon will also use state general funds to provide technical assistance to water systems that are not eligible for traditional circuit rider assistance, excepting only federally owned water systems. As above, these services are intended to provide short-term technical and engineering assistance (typically 10 hours or fewer) and are provided free of charge.

On-Site Technical Assistance: The contractor receives requests for assistance directly from the water system, as well as requests initiated by state and county staff. Contractors perform quick response, one-on-one technical assistance that aids in solving short-term operational problems, assists with compliance-related issues, and provides technical, managerial and planning information to system operators and administrators. Services are generally restricted to 10 hours or fewer per system without prior approval from DWS management.

DWSRF Program Assistance: The contractor also assists systems seeking DWSRF financing by providing pre-engineering design reports to initiate the loan process and helping systems complete the DWSRF loan application form.

The objective of the technical-assistance strategy is to expand services available to small water systems and identify and solve specific and immediate water system operational and/or management problems through timely expert help. Additionally, outreach activities can, in certain circumstances, include sample collection assistance for *Cryptosporidium* and microscopic particulate analysis (MPA) monitoring requirements as outlined below.

> *Cryptosporidium* and Microscopic Particulate Analysis (MPA) Monitoring: The Long Term 2 Enhanced Surface Water Treatment Rule (LT2) applies to all public water systems that use surface water or groundwater under the direct influence of surface water (GWUDI). The purpose of the rule is to ensure adequate treatment of surface water sources with higher levels of *Cryptosporidium*. EPA allows for the payment of the costs of LT2 monitoring for *Cryptosporidium* through the DWSRF set-asides. Surface water systems exceeding the *E. coli* triggers are referred to the technical-assistance circuit rider for assistance in determining the bin class under LT2. A part of this determination is *Cryptosporidium* sampling. Similarly, groundwater systems identified as at risk for GWUDI are targeted for MPA sampling. DWS staff may refer water systems to the circuit rider for assistance in determining GWUDI, which entails sampling by the circuit rider for determination of GWUDI or non-GWUDI status.

Activities During This Reporting Period

According to invoices paid, the circuit rider completed 94 discrete technical-assistance contacts during this reporting period: 42 for surface water systems and 52 for groundwater water systems. The expenses totaled $139,534.00 and were paid with funds from the DWSRF Technical Assistance set-aside. These services included zero *Cryptosporidium* sample collection assistance activities for surface water systems and seven MPA sample collection assistance activities for groundwater systems.

NEW - Project Management – Increasing managerial capacity the free contractor services shall assist water systems identified by DWS by providing project management duties for approved service actions. This service shall consist of, but is not limited to, an initial on-site evaluation, and assessment of project scope and time requirements for the system, which will be presented to DWS in a written report. This review and report activity shall not exceed 10 hours without prior written approval. If the submitted proposal receives approval, the Contractor shall assume the role of project manager for the life of the approved service. DWS will authorize such service in 20-hour increments.

NEW – Asset Management - Contractor shall provide on-site technical assistance, coaching, and guidance to water systems evaluating or implementing an asset management strategy or program. OHA will authorize such services in 15-hour increments.

Capacity Building by DWS Staff

Program Description and Narrative

Integration of capacity-building outreach into day-to-day DWS activities is key to the successful resolution of identified capacity-related deficiencies. Field staff are familiar with available technical-assistance resources and provide direct assistance to water systems during sanitary survey activities, water treatment plant visits, water quality investigations and associated technical consultation and outreach. Staff use a wide variety of tools and resources to help systems address identified capacity deficiencies, including direct technical assistance in person or over the phone; providing handouts, factsheets and training guides; referral to resources on the DWS website; and referral to funding partners and outside technical assistance and training providers. Water systems in violation or with water quality test results indicating a potential public health concern are contacted directly by staff and technical assistance is provided. Water systems needing help to build capacity for emergency response are provided resources and technical assistance to better prepare for continued operation.

Activities During This Reporting Period

DWS staff devoted more than 5,229 hours to technical assistance and outreach activities for water systems to assist them in maintaining compliance with the Safe Drinking Water Act. This is the number of hours billed to the Capacity Development set-aside. Additional outreach is paid from other state and federal funding sources.

Surface Water Treatment Plant Inspections

Program Description and Narrative

DWS staff evaluate surface water treatment plant facilities and operations during each water treatment plant visit and, based on the evaluation, establish a future visit frequency of six months, one year or three years. The systems at highest risk are prioritized for receiving targeted performance improvement assistance to better address capacity issues. This process is an example of how DWS integrates capacity building into existing activities. These inspections provide an opportunity for staff to ask questions and discuss concepts related to optimization of treatment processes, including optimization goals established through Oregon's Area-Wide Optimization Program.

Activities During This Reporting Period

DWS conducted 81 water treatment plant visits during the reporting period.

Area-Wide Optimization Program (AWOP)

Program Description and Narrative

The objective of Oregon's AWOP is to educate water system operators about optimization principles with the goal of improving public health protection. This is accomplished by training water system staff in the basics of water treatment and the multiple barrier concept, providing the opportunity and incentive to learn about and engage in optimizing treatment beyond regulatory standards, and using data to monitor performance and identify areas for improvement.

Activities During This Reporting Period

Because of COVID-19 restrictions and the retirement of one Oregon AWOP team member in July 2021, AWOP activities for the three remaining team members consisted mainly of virtual trainings.

- AWOP staff developed training materials for surveying membrane filtration plants, which incorporated optimization concepts developed as part of the USEPA R10 AWOP. The training was provided to participants of the *18th Annual EPA Drinking Water Workshop* on August 30, 2021. Materials were subsequently used to train Oregon staff.

- AWOP staff developed a recorded PowerPoint presentation on *Distribution System Optimization* that was presented at the Eastern Oregon Operator's Conference on March 30, 2022. This training was later uploaded to Oregon's AWOP Surface Water Treatment website (www.healthoregon.org/swt), within a new section on distribution system optimization.

- Staff completed 86 surface water treatment inspections this reporting year.

Source Water Protection Implementation Project

Program Description and Narrative

Both the Oregon Department of Environmental Quality and DWS continue to provide timely technical assistance to community water systems that will ultimately result in voluntary implementation of source water protection strategies in response to local source water characteristics and vulnerabilities. This capacity development effort uses source water assessment information to communicate source vulnerability risks to water system operators and decision makers with the goal of increasing overall capacity. This effort primarily assists water systems with managing risks and technical resources as they plan for funds for developing or maintaining protection of their drinking water sources.

Through the DWSRF loan program, loans (up to $100,000 per water system) and grants (up to $50,000 per water system) are made available annually to water systems for source water protection projects or activities. Each year, DWS awards approximately

$200,000 in grants and loans. Awards fund projects for individual water systems and joint projects involving multiple water systems. Joint projects can be funded with grant money up to $50,000 per each participating water system, thus encouraging water systems to collaborate on source water protection strategies that target regional risks to drinking water quality.

Activities During This Reporting Period

For SFY 2022, DWS received nine applications for drinking water protection projects with a total of $410,300 requested. Six of the applications were from water systems dependent on surface water systems and three applications were from water systems dependent on groundwater for their drinking water source. DWS approved five projects with a funding amount of $235,300. This year DWS pilot tested an increased grant funding amount of $50,000 per water system. All nine applications requested funding amounts greater than our traditional $30,000, with six of the applications requesting the full $50,000 amount for their proposed project. Proposed projects included the following:

- Property appraisal within source area for future purchase for protection purposes
- Sediment-reduction projects involving riparian zone rehabilitation, livestock exclusion fencing, etc.
- Development of management plans including:
    - Drinking water source protection plans
    - Forestry management plans
    - Geographic response plan to mitigate spills, etc.
    - Watershed/groundwater water quality monitoring plans
- Retrofitting older stormwater collection systems with newer designs to remove pollutants
- Public education and outreach efforts
- Updating drinking water source area potential contaminant source inventories
- Stormwater drain system mapping

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

DWS identifies systems in need of capacity development assistance continuously. There are three primary ways that systems are identified:

- Use of a violation system score list (i.e., ETT) to identify systems with compliance issues
- Identifying issues during sanitary surveys and water treatment plant visits
- Noting problems during AWOP activities

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

Water system violations generated monthly by DWS continue to point to water quality monitoring and reporting as a statewide capacity issue. Systems in violation are contacted directly by DWS or county/Department of Agriculture staff, and technical assistance is provided in an effort to resolve identified compliance issues.

Additionally, sanitary surveys conducted within the reporting period continue to identify deficiencies in required water system documentation.

The five deficiencies most frequently identified during sanitary surveys conducted within the last SFY are the following:

- No operations and maintenance manual—*Management and Operations Violations*
- Emergency response plan not completed—*Management and Operations Violations*
- No coliform sampling plan—*Monitoring and Reporting Violations*
- No certified operator at required level—*Operator Certification Violations*
- Annual CCR not submitted (CWS)—*Management and Operations Violations*

To aid in correcting these deficiencies, DWS and county/Department of Agriculture staff provide on-site technical assistance and distribute factsheets describing the correct methodology for completing these required documents. The DWS Data Management, Compliance & Enforcement Unit tracks when corrections are due.

The AWOP standards most often unmet, as identified by surface water treatment plant inspections, are the following:

- Filter profiles not conducted after backwash quarterly
- Inadequate filter to waste piping
- Optimization goals not met after backwash
- Settled water does not meet AWOP standards
- Raw water turbidity is not measured daily
- Written standard operating procedures are not current

DWS staff provide on-site technical assistance and, in many cases, refer these systems to the technical and managerial assistance circuit riders for further assistance.

4. ***If the state reviewed the implementation of the Existing Systems Strategy during the previous year, discuss the review and how findings have been or may be addressed.***

DWS reviewed the implementation of the Existing Systems Strategy during the reporting period and revised the strategy to address new requirements surrounding asset management. As noted in previous annual reports, Oregon strives to identify the highest value activities and focus efforts there accordingly.

5. ***Did the state modify the Existing Systems Strategy? If so, describe.***

DWS did modify the Existing Systems Strategy to include new asset management requirements identified by EPA. With the revised strategy, Oregon anticipates improving asset management implementation. The draft strategy has been approved by stakeholders and will be submitted to EPA in September 2022. The revised strategy will be publicly available at Oregon's dedicated Capacity Development webpage.