

Drinking Water State Revolving Fund State Fiscal Year 2019

Annual Report

Washington State Department of Health

May 2020



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Introduction

The Department of Health, Office of Drinking Water (ODW) is pleased to present its Annual Drinking Water State Revolving Loan Fund (DWSRF) Report for State Fiscal Year 2019 (SFY 2019). The report covers DWSRF operations from July 1, 2018, through June 30, 2019. Washington state received a \$24,815,000 capitalization grant for SFY 2019.

This report to the U.S. Environmental Protection Agency (EPA) describes the activities we used to reach the goals and objectives in the SFY 2018 Intended Use Plan. It includes:

- Progress toward meeting long- and short-term goals.
- Sources and uses of funds.
- The financial status of the DWSRF.
- Compliance with federal DWSRF requirements.

Washington has been a longtime national leader in our utilization of DWSRF capitalization and set aside funding. Over the past five years, we've been very active in resolving unliquidated obligations, maximizing our loan fund utilization rate, and continually looking for new strategic opportunities to meet the needs and expectations of our 4,000 federally regulated utilities.

In 2017, several extenuating circumstances affected overall performance of our DWSRF loan program, including a delayed capital budget from our state Legislature, transition of loan management responsibilities from Department of Commerce to us, and funding shortfalls in both our capital and operational budgets. During SFY 2019, the program reduced staff and expenditures to finish the year with a positive cash balance. The program is no longer at risk of experiencing short term cash deficiencies.

In our 2015 needs assessment, we projected that—over the next 20 years—there would be an \$11.7 billion need for drinking water infrastructure improvements. We are working closely with all infrastructure funding partners to coordinate strategies to address these long-term funding needs.

Executive Summary

Congress established the DWSRF Program when it reauthorized the Safe Drinking Water Act in 1996. EPA manages DWSRF funds at the federal level and ODW administers DWSRF at the state level. ODW establishes program priorities, carries out oversight activities, and administers the Public Water System Supervision (PWSS) system. ODW partners with the Public Works Board at the Department of Commerce to provide financial review of loan applicants, approve the final loan list, and manage its DWSRF loan contracts.

More than 6.1 million Washington residents—87 percent of the state's population—get their drinking water from public water systems. During the last 20 years, the DWSRF Program provided more than \$935 million in construction loan funds for more than 678 projects.

About 600 public water systems benefited from these loans, which helped improve their drinking water infrastructure and protect public health.

Report Sections

Section I: A brief program history, including recent innovations and changes.

Section II: Progress reaching program goals.

Section III: DWSRF sources and uses, including binding commitments and set-aside activities.

Section IV: An overview of program financial conditions.

Section V: Compliance with federal capitalization grant provisions and the operating agreement.

Section I: Program History

This section discusses program progress and recent changes.

Program History

The DWSRF Program was created in 1996 through the Safe Drinking Water Act (SDWA). The SDWA made a financing program possible in Washington state to improve drinking water and protect public health. Early in the program's development, we partnered with the Public Works Board for loan contract administration. Together, we created a sustainable revolving loan program that provides low-interest loans to public water systems for needed drinking water infrastructure improvements.

DWSRF funding comes from EPA capitalization grants, state match, loan fees, loan repayments, and interest earned on loans and balances held at the State Treasurer's Office. ODW and the Public Works Board continuously work to improve the program.

Loan Assistance Status

Since the DWSRF Program began, the state has executed 667 project loan contracts totaling **\$936,273,049**. The loans range in size from \$13,600 to \$12,000,000.

DWSRF Subsidy Requirements

In 2009, Congress and EPA determined that even low-interest rates are not affordable for some systems. Therefore, DWSRF Programs must provide additional loan subsidies to disadvantaged communities. Washington provides assistance to disadvantaged communities through reduced interest rates and principal forgiveness.

We determine which systems are disadvantaged by using a specific affordability criteria. The Affordability Index is a percentage calculated by dividing the average water bill, including

the debt service payment with the requested loan, by the median household income (MHI). Below is a summary of subsidy tracking and detailed information about our subsidy process.

Summary of Washington Subsidy Awards							
SFY Year	Cap Grant Amount	Subsidy Required	Subsidy Committed	Subsidy Committed	Subsidy Expended	Subsidy Expended	Notes
11	\$34,650,000	30%	\$11,502,685	33%	\$11,406,799	33%	Subsidy met
12	\$24,044,000	30%	\$7,508,737	31%	\$7,205,397	30%	Subsidy met
13	\$22,914,000	20-30%	\$6,204,374	27%	\$6,001,757	26%	Subsidy met, 2 projects open, still drawing
14	\$21,499,000	20-30%	\$4,460,057	21%	\$4,431,159	21%	Subsidy met, 1 project open, still drawing
15	\$19,741,000	20-30%	\$3,964,599	20%	\$3,382,450	17%	2 projects open, monitoring closely
16	\$19,600,000	20-30%	\$4,060,444	21%	\$3,324,706	17%	3 projects open, monitoring closely
17	\$18,233,000	20-50%	\$3,722,119	20%	\$2,374,374	13%	6 projects open, monitoring closely
18	\$18,394,000	20-50%	\$4,455,166	24%	\$667,024	4%	Contracts executed in SFY 2018 due to transfer of loans from Commerce to Health and capital budget not being passed
19	\$24,815,000	20-50%	\$5,878,204	24%	\$	0%	Contracts executed
Total	\$203,890,000		\$51,756,385	25%	\$38,793,666		

Starting with the highest scoring applicants, we award subsidy as follows:

- Water systems with an Affordability Index of 2.01–3.50 percent receive 30 percent of their loan as principal forgiveness.
- Water systems with an Affordability Index of 3.51 percent or more receive 50 percent of their loan as principal forgiveness.
- Consolidation or restructuring projects that involve a change of ownership receive up to 50 percent principal forgiveness.
- To meet the required subsidy award for SFY 2018, another criterion for receiving subsidy was developed using the Debt Service Coverage (DSC) Ratio. Those systems with a DSC ratio of less than 1.20:1 are eligible for up to 30 percent principal forgiveness if subsidy dollars are still available after using the other screening methods.

We describe these programs in more detail below.

Reduced Interest Rates

ODW began offering reduced interest rate loans in 2009, when EPA issued affordability guidelines to states. Systems with an Affordability Index between 1.5 percent and 2.0 percent qualify for a reduced annual interest rate—lowered from 2.25 percent to 1.75 percent.

Principal Forgiveness (20 percent)

Principal forgiveness is one of the special funding methods the DWSRF Program offers, based on the Affordability Index. Projects where the average monthly water rate will exceed 2 percent of the MHI for the service area qualify. Certain consolidation projects may qualify for principal forgiveness as well. Not all systems on the list that qualify for subsidy will receive a subsidy. There is a set amount of subsidy available and we award it based on project scores.

Since SFY 2011 (SRF Yr 14), Washington awarded about \$51.8 million in principal forgiveness. For SFY 2019, EPA required Washington to award at least 20 percent of the capitalization grant as principal forgiveness.

Recent Changes and Innovations

Investment Grade Efficiency Audit

Washington state law requires public water systems that receive infrastructure financing to complete an investment-grade efficiency audit. All DWSRF projects undergo this audit. The audit focuses on ways to apply energy efficiency to water systems. This is similar to EPA's "Green Projects," which address water or energy efficiency improvements or other environmentally innovative activities.

Recent Legislative Priorities

The 2016 Legislature passed HB 5251, transferring administrative duties of the DWSRF Program from the Department of Commerce and the Public Works Board (PWB) to ODW. The transfer became effective July 1, 2018, and all contract administration activities now reside at Department of Health.

Interagency Coordination

State and federally funded agency staff formed the Maximizing Resources Group to coordinate strategies and decision-making on infrastructure project priority and funding sources. DWSRF participates in ongoing quarterly meetings. In addition, DWSRF staff participate in a multi-year, multi-agency (Sync) effort to improve use of infrastructure funding per recently passed state legislation. Some of the activities Sync focused on include value planning, asset management, affordability criteria, regionalization, and improved outreach to jurisdictions seeking funding for water infrastructure improvements. Sync

submitted its first legislative report in December 2018. Sync will continue to meet, identify, and implement improvements to infrastructure funding programs in the state.

National Historic Preservation Act

Washington state continues to streamline National Historic 106 project reviews, which results in more efficient 106 project reviews and the ability for projects to proceed to construction in a timely manner. Currently, a 106 review occurs on all DWSRF loan projects; Washington does not execute non-equivalency loan contracts at this time.

Consolidation Grant Program

The DWSRF Program implemented a Consolidation Grant Program to reduce the number of small public water systems with compliance issues. Community public water systems are eligible to apply for this grant and must demonstrate they are eliminating one or more public water systems serving fewer than 10,000 people. The maximum grant amount is \$30,000, and water systems can use it for feasibility studies, connection fees, or restructuring projects. Historically, these grants were funded with set-asides.

Due to lack of a capital budget in SFY 2018, and inability to accept the capitalization grant award, the consolidation grant program was suspended. We modified our rules and processes and in SFY 2020, we will resume this funding program using the Drinking Water Assistance Administrative Account (05R). This account is supported by the 1.5 percent loan origination fee.

Preconstruction Loan Program

In SFY 2018, we suspended the Preconstruction Loan Program due to lack of a capital budget and inability to accept the capitalization grant award. We will allow existing DWSRF construction loan holders to convert to a preconstruction loan if unable to proceed to construction within 18 months of contract execution.

Emergency Loan Program

The DWSRF Program developed an emergency loan program for publicly and privately owned nonprofit community water systems serving fewer than 10,000 people that are impacted by an unforeseen event like flooding, drought, fire, or earthquake. The maximum amount allowed per entity is \$100,000, with up to 75 percent principal forgiveness (based on an Affordability Index), 1.5 percent fixed interest rate, with the ability to reduce to 1.0 percent (based on an Affordability Index), and six-year loan term.

The DWSRF Program designated \$500,000 for this program. We did not receive any emergency loan applications in SFY 2019, but we will continue to offer this program. DWSRF loan repayment dollars provide funding for the Emergency Loan Program.

Section II: Program Goals

As part of the DWSRF Intended Use Plan, the SDWA requires ODW to identify DWSRF goals and objectives. Part of ODW's mission is to ensure safe and reliable drinking water. The DWSRF Program supports that mission by providing:

- Low interest loans to improve drinking water system infrastructure.
- Technical assistance to improve drinking water system operational, technical, managerial and financial capacity.

DWSRF Mission

The Drinking Water State Revolving Fund (DWSRF) Program helps water systems by providing affordable financing to eligible entities for planning, designing, and constructing public water facilities that provide safe and reliable drinking water.

Vision

Washington state is a national leader in providing comprehensive financial and technical support to water systems.

Goals

Washington state public water systems are safe, reliable, sustainable, and affordable.

Philosophy

The overall philosophy of the Washington state DWSRF is to maximize the availability of DWSRF funds for project construction.

Short-Term Goals

- 1. Improve the program's Washington Loans and Tracking system**
 - a. Health's Washington Loans and Tracking (WALT) system is functioning and all DWSRF contract files were transitioned to Health. Update the annual invoice to improve and meet customer expectations.
 - b. Evaluate and implement a process for electronic invoicing.
 - c. Work with the system vendor and DOH IT to set up an electronic (ACH) payment system.
- 2. Assess our fund management system for opportunity.**
 - a. Continue working with Public Financial Management (PFM) consultants on updating the predictive model with current financial information.
 - b. Monitor our lending rate policy closely and adjust interest rates for long-term inflation.
 - c. Continue monitoring effects of loan repayment changes recently implemented.

- 3. Continue to grow and expand programs that improve readiness to proceed and improve use-rate of construction money awarded.**
 - a. Award bonus points on construction loan applications for applicants that completed preconstruction activities, such as design and permitting work.
 - b. Conduct an annual review of readiness-to-proceed criteria for construction loans and improve the criteria to better identify “shovel ready” applicants.
 - c. Contact loan recipients experiencing project delays. That got several projects back on track and de-obligated over \$7,000,000 to fund future projects.

- 4. Ensure that at least 15 percent of the total assistance award provides financial assistance to small systems that have projects ready for construction.**

Technical assistance providers are available to help systems prepare for construction loans, such as assistance with rate-setting and income surveys.

- 5. Provide financial and technical assistance to help public water systems increase technical, financial, and managerial capacity.**
 - a. Continue to provide technical assistance through two contracts: Rural Community Assistance Corporation (RCAC) and Small Community Initiatives (SCI). These technical providers assist systems with board training, funding applications, rate setting, and asset management.
 - b. Offer asset management training.
 - c. Award bonus points to construction loan applicants that attended asset management training or completed an asset inventory.

- 6. Review and implement process improvement efficiencies.**
 - a. Continue to improve WALT to better serve internal and external needs.
 - b. Provide sufficient information technology system infrastructure to manage the loan and grant program while creating efficiencies for our loan recipients.
 - c. Conduct construction site visits and inspections during construction.
 - d. Conduct construction inspections at the end of the project for the larger projects.
 - e. Provide contract training with each applicant approved for a construction loan and one-on-one training for those that needed additional help

Long-Term Goals

- 1. Strengthen the fiscal integrity of the fund.**

Solid and complete financial analysis is required to understand the implications of any particular DWSRF financial policy choice, such as leveraging the fund to provide additional cash flow. Washington has continued to contract with PFM, a firm that specializes in state revolving funds, to provide ongoing support and create a long-term financial strategy. A solid plan would protect the financial future of the DWSRF using all relevant operating assumptions for the program.

- 2. Acknowledge and address household affordability constraints.**

Strategically use the DWSRF subsidy provision and any applicable set-aside funds to maximize the program’s impact on achieving affordable compliance. Washington is assessing affordability criteria across funding programs and DWSRF staff are participating in this effort.

3. **Use DWSRF funds to promote resilient, energy-efficient infrastructure.**
 - a. Require an investment-grade energy audit for each construction loan.
 - b. Continue to designate a “resiliency project category” to the risk categories used to score and rank construction loans.

4. **Continuously improve the DWSRF program so we are more efficient and better able to serve our customers.**
 - a. Improve the online application process.
 - b. Educate water systems about the DWSRF construction loan program before each loan cycle.
 - c. Maintain emergency funding to assist systems affected by unforeseen events and ensure they continue to maintain public health protection.
 - d. Reinstate the Consolidation Grant Program using the loan origination fee project fund.

Environmental Results Goals

Washington’s DWSRF project loan funds and set-aside work plans support strategic planning Goal 2, “Protecting America’s Waters,” and strategic Objective 2.1, “Protect Human Health,” by safeguarding human health through regulations and protection of public drinking water. Our program provides funding to help achieve this federal performance standard. We intend to meet or exceed EPA’s annual performance targets.

We will use the following performance measures to help ensure the loan program achieves federal standards:

- **Annual percentage of assistance agreements to bring water systems into compliance.** Based on available funds, Washington funded 8 DWSRF-eligible projects from our fall 2017 loan cycle. All of these eligible projects intend to address compliance or public health issues.
- **Fund utilization rate (cumulative loan agreement dollars compared with the cumulative funds available for projects) for the DWSRF loan fund.** We calculate this at the end of each state fiscal year. Washington’s fund utilization rate continues to exceed national performance targets.

Section III: Sources and Uses of DWSRF Funds during FY2019

This section discusses DWSRF assistance activities during SFY 2019. Details include:

- Sources of program funding and use.
- Status of loan and grant activities.

- Status of set-asides, binding commitments, and water system capacity activities.

Uses of DWSRF Funds in SFY 2019

We received 25 applications, totaling \$41 million for funding this cycle.

We determined six projects ineligible or unable to meet the underwriting criteria. We offered loans to the seven highest-ranking projects and moved one loan applicant from 2016 (2016-044 Nob Hill) to the SFY award list. Eight new projects went to contract [plus additional funding for an existing construction loan contract of about \$500,000 for a total of \$ 20.2 million (Table 2)]. Tables 3 and 4 provide a summary of unfunded and ineligible loan applications.

We had no remaining project funds to carry over to the fall 2019. The program continued to make available \$500,000 for emergency loans; there were no emergency loan applications in SFY 2019.

The amount of DWSRF construction loan assistance approved in SFY 2019, is about \$20.2 million and includes 8 funded new construction loan projects. The program funding available to assist existing DWSRF construction loans with construction cost overruns, but this funding was only used by one loan recipient due to capital budget issues (2015-044 Tulalip Shores for \$173,818).

The following table reflects construction loans approved for SFY 2019 only and does not reflect NIMS data as multiple loans from SFY 2017 and 2018 were also recorded in NIMS during SFY 2019. This was due to the legislative adjournment in 2017 in which a state budget was not passed. The additional loans reported in NIMS were reflected in past annual reports.

Table 1: DWSRF Facts – Construction Loans Funded in SFY 2019

Approved construction projects in Fall 2017 Loan list	Construction Loans Funded in SFY 2019
New Construction Projects	8 projects awarded, 8 contracted, 1 additional award for construction overrun
Project Funding (including loan fees)	\$20,205,128
Total Population Served	48,238
Standard Interest Rate	1.5%
Repayment Period for Standard Loans:	20 Years
Small Systems Funded (water system populations < 10,000) 2017 Loan list:	7 projects and \$16,648,477 (85% of available SRF construction loan money)
Disadvantaged Community Loan Funding in 2016 Loan list:	4 projects totaling \$11,756,408 (\$5,878,204 in loan forgiveness)
Set-Aside Assistance:	\$7,692,650

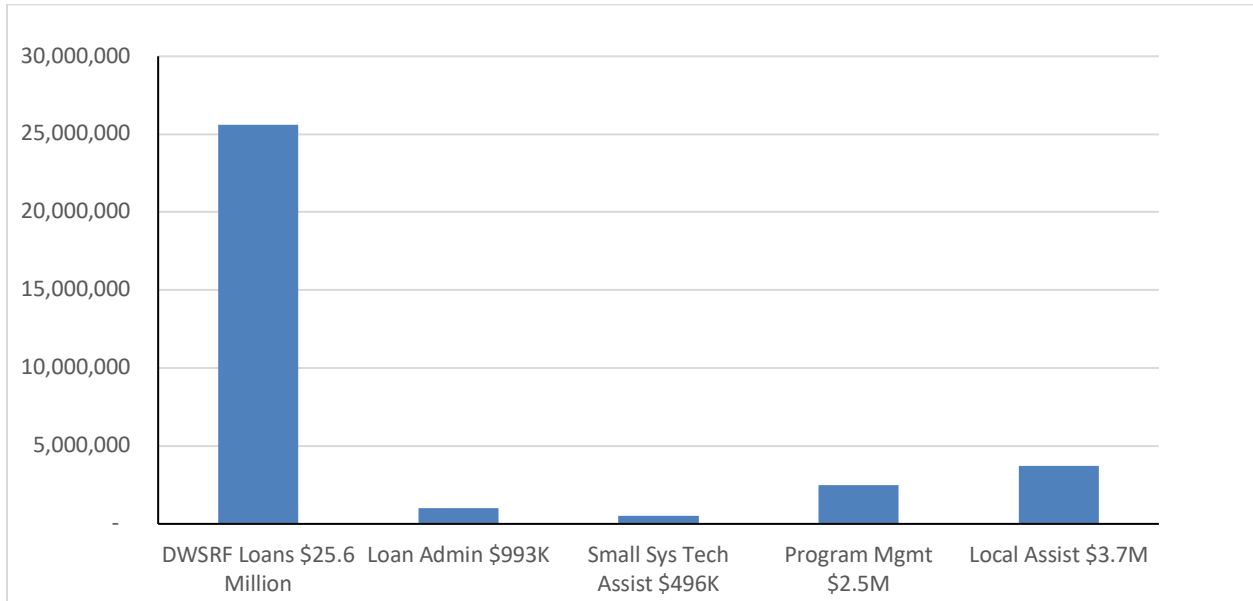
Demographics of the Applicants:

Ownership Type	Project Applications	Projects Funded
Cities/Towns	14	4
Water Districts	2	1
Public Utility Districts	3	1
County Owned	2	0
Private/Non Profit	5	2

System Size	Population	Projects funded
Large system	> 100,000	0
Medium systems	<100,000 and >= 10,000	1
Small systems	<10,000	7

Figure 1 below describes the DWSRF funding allocation for the 2017 fall construction loan-award list. The \$25.6 million in DWSRF loans includes \$500,000 of emergency funding, and \$3.0 million for construction cost overruns.

**Figure 1: 2018 DWSRF Allocation of Available Funds:
Construction Loan Awards and Set Asides.**



**Table 2: Construction Projects Funded for SFY 2019
2017 Fall DWSRF Construction Loan List**

DOH #	Applicant	Project Name	Population	Loan Amount (excludes loan fee)	Client Total Loan Amount (loan – subsidy) + fee	Loan Fee	Subsidy at project completion	Subsidy Percent	AFI <i>prior</i> to loan	AFI <i>post</i> loan	Interest rate (%)	Term In Years	Remarks or Special Contract Conditions
2017-2235	Port of Walla Walla	Port of Walla Walla, Tyson, and Burbank Shell Water Consolidation	1,620	\$6,000,000	\$6,000,000	Waived	\$3,000,000	50%	N/A	N/A	1.0%	24	Consolidation project, 50% subsidy awarded
2017-2241	City of College Place	Christ Community Church Fellowship Consolidation	15	\$1,195,431	\$1,195,431	Waived	\$597,716	50%	N/A	N/A	1.0%	24	Consolidation project, 50% subsidy awarded
2017-1967	City of Richland	KID Lorayne J Water System Consolidation	307	\$1,842,130	\$1,842,130	Waived	\$921,065	50%	N/A	N/A	1.0%	24	Consolidation project, 50% subsidy awarded
2017-2265	Snohomish County PUD No. 1	Warm Beach Water Association Consolidation	918	\$2,718,847	\$2,718,847	Waived	\$1,359,424	50%	N/A	N/A	1.0%	24	Consolidation project, 50% subsidy awarded
2017-2226	Holiday Hideaway	Aeration Tank 2 and Booster Pumps	156	\$387,500	\$391,375	\$3,875	0	0	0.85	0.92	1.5%	20	AFI less than 2.0%, no subsidy
2017-2258	City of Othello	Reservoir Project	7,680	\$2,673,730	\$2,699,730	\$26,730	0	0	1.2	1.26	1.5%	20	AFI less than 2.0%, no subsidy
2017-2257	City of College Place	City Well No. 2	7,818	\$1,804,569	\$1,822,615	\$18,046	0	0	1.2	1.28	1.5%	20	AFI less than 2.0%, no subsidy
2016-040	Nob Hill Water Association	Minnesota Reservoir	29,624	\$3,500,000	\$3,535,000	\$35,000	0	0	0.66	0.67	1.5%	20	Moved from 2016 award list. AFI less than 2.0%, no subsidy
Total				\$20,122,207	\$20,205,128	\$83,651	\$587,205						

**Table 3: Unfunded Construction Projects
(Projects did not score high enough for funding)
2017 Fall DWSRF Construction Loan List**

DOH #	Applicant	Project Name	Population	Loan Amount
2017-2232	City of Prosser	Wells 2 and 3 Replacement	5,894	\$2,286,135
2017-2256	City of Cheney	Well #3 Re-drill	16,392	\$1,818,000
2017-2230	City of Raymond	Raymond Heights Reservoir Rehabilitation	4,620	\$1,555,400
2017-2206	City of Palouse	Palouse Water System Improvements	1,167	\$2,588,667
2017-2255	Alderwood Water & Sewer District	East Side Water Pressure Reduction	183,448	\$3,030,000
2017-2404	City of Olympia	Kaiser Road Water Main Extension	68,819	\$864,171
2017-2266	Woodland Heights	Pump House and Water Distribution Upgrades	108	\$736,830
2017-2253	Mason PUD- VRH Booster	View Ridge Heights Booster Station	256	\$97,065
2017-2261	City of Toppenish	2018 Water Main Improvements	8,950	\$1,310,624
2017-2227	Town of Cathlamet	Columbia Street Water Main	1,630	\$508,751
2017-2254	Mason PUD- Hood Canal	Hood Canal Main Replacement	604	\$75,532
2017-2231	City of Grandview	2018 Water Main Project	11,010	\$1,503,765
Total				\$16,374,941

**Table 4: Ineligible Construction Loan Projects
2017 Fall DWSRF Construction Loan List**

DOH #	Applicant	Project Name	Population	Request	Reason
2017-2264	McKees Beach	Water System Upgrades	28	\$636,000	No current planning document with proposed project
2017-2236	Grays Harbor County	Copalis Rocks Water System Improvements	21	\$370,670	Outstanding audit finding
2017-2267	Pierce County/Kapowsin	Kapowsin Transmissi on Main Repair and New Well	70	\$1,068,075	No current planning document with proposed project
2017-2262	Sandy Hook Yacht Club Estates	Well Number 2	492	\$293,714	No current planning document with proposed project
2017-2259	City of Spokane	Five Mile Booster Station	227,509	\$3,030,000	Outstanding audit finding
2017-2260	City of Spokane		227,509	\$2,272,500	Outstanding audit finding
Total				\$ 7,671,009	

Figure 2: Percentage of Construction Loan Dollars by Population Served

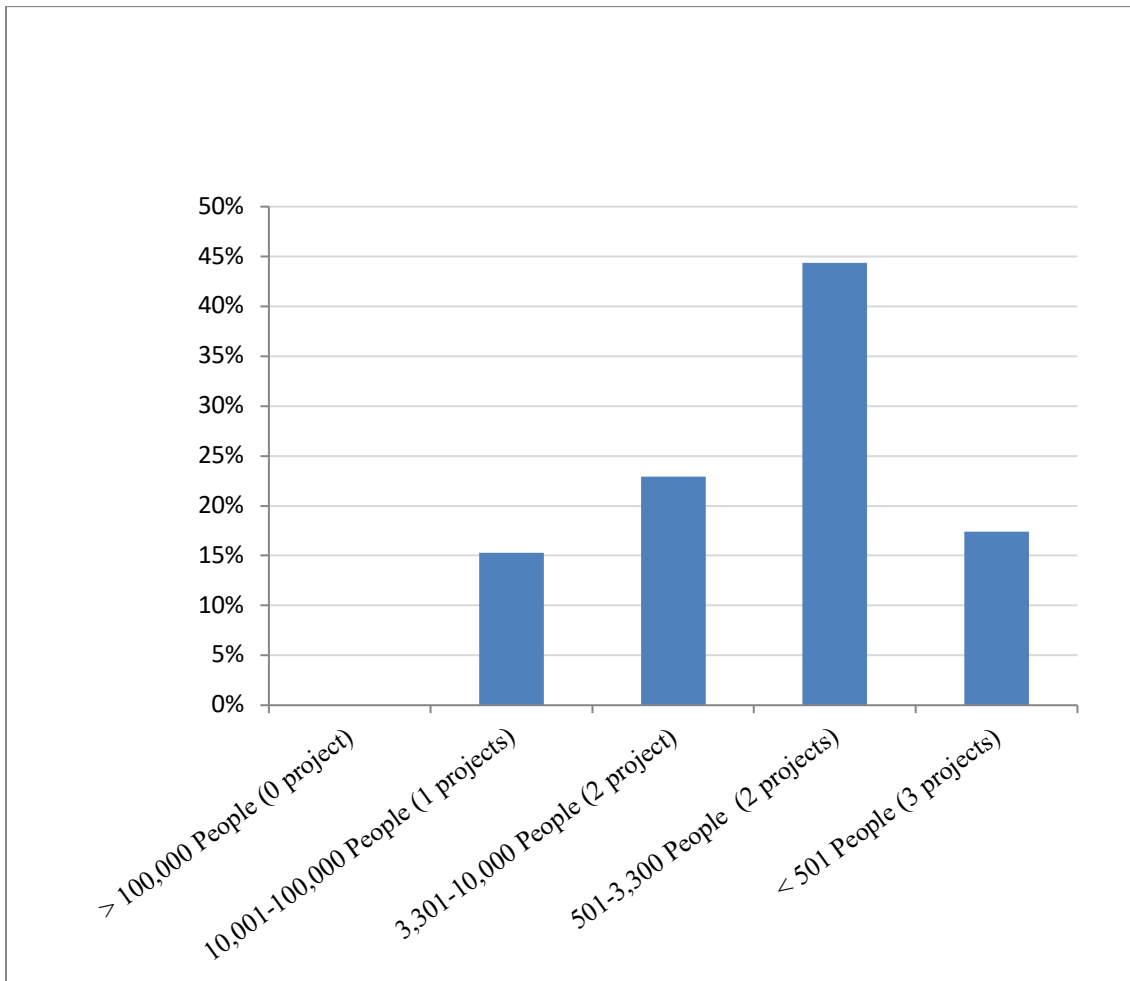


Figure 2 shows the percentage of construction loan dollars by population served for the DWSRF 2017 loan list. 85 percent of funds committed to projects serving 10,000 or fewer people. 15 percent committed to projects serving 10,001 to 100,000 people. We received no project applications serving 100,000 or more people.

- \$3,000,000 in loans to water systems serving more than 10,000 people.
- \$16,648,477 in loans to systems serving fewer than 10,000 people.

Figure 3: Distribution of Construction Loan Dollar by Loan Type

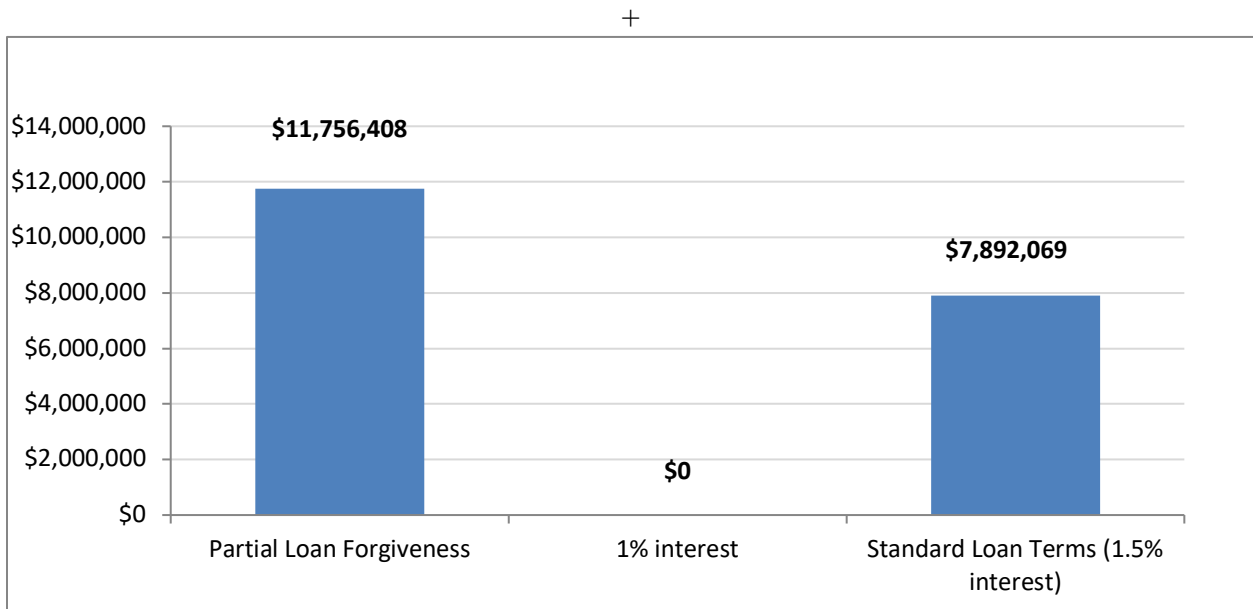


Figure 3 shows the 2017 DWSRF loan funding terms (interest charged and loan forgiveness) by total dollars awarded. The loan list includes four loans approved for partial loan forgiveness, zero loans approved for a 1.0 percent interest rate (no principal forgiveness awarded), and four loans with a standard interest rate of 1.5 percent.

**Figure 4: Distribution of Construction Loan Dollars by Project Type
(does not include loan fee)**

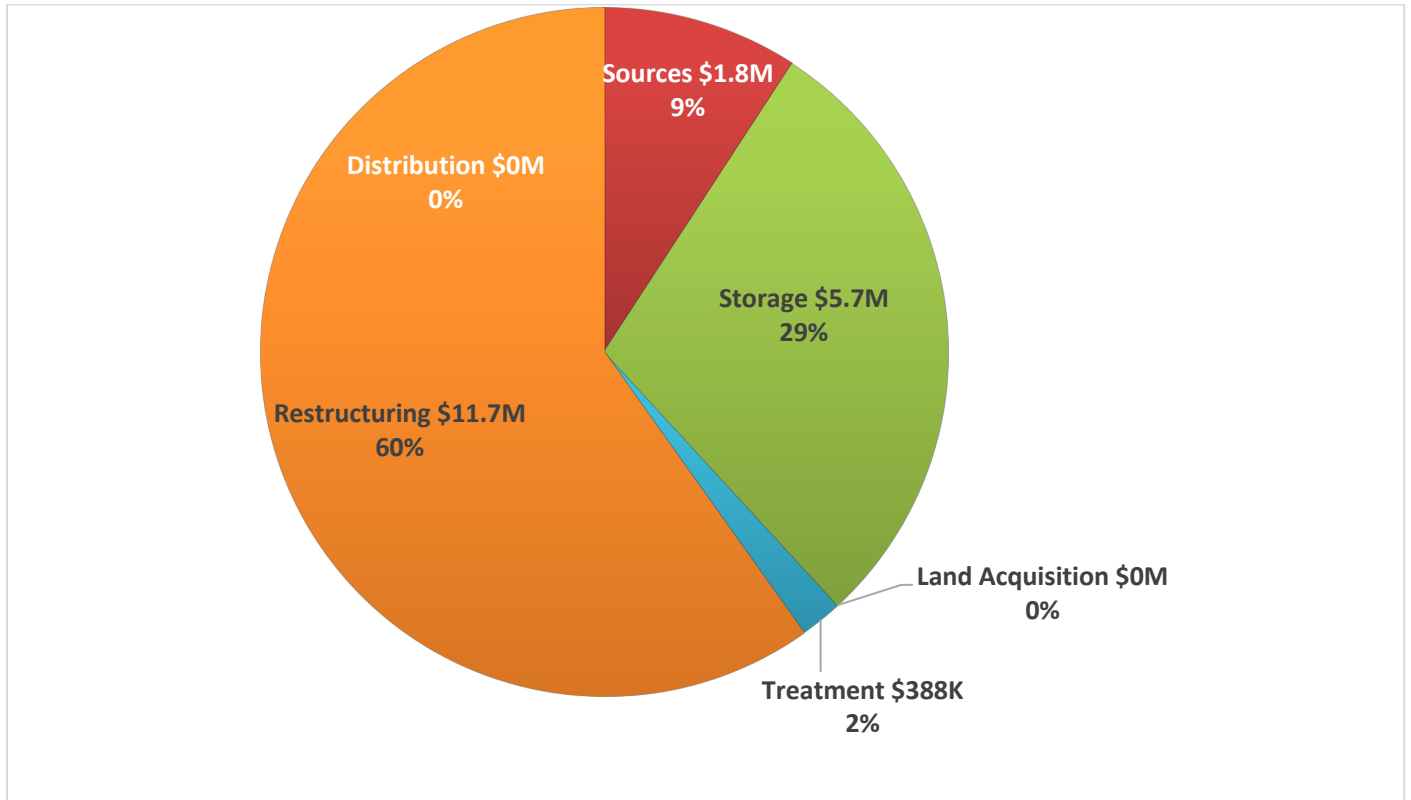


Figure 4 shows the number of SFY 2019 DWSRF construction project dollars awarded by project type. The 2017 DWSRF construction loan list includes projects that will address water quality issues (arsenic, cryptosporidium, nitrates) and water system consolidation.

Table 4 shows DWSRF and ARRA funding sources and uses for SFY 2019, and over the life of the program.

Table 4: Total DWSRF Funds Received and Earned (2019 Actuals)

SOURCES OF FUNDS	SFY 1998–2018	SFY 2019	TOTAL
Capitalization Grant	483,910,224	24,815,000	508,725,224
State Match (transfers from PWA account)	87,478,398	4,963,000	92,441,398
Interest earning used for State Match *	942,447	0	942,447
Investment Interest Earnings	17,757,437	-155,325	17,602,112
Used as State Match (years 1-4 only) *	-942,447		-942,447
Balance of Investment Interest Earnings	16,814,990	-155,325	16,659,665
Principal Repayments	201,987,908	42,105,959	244,093,867
Interest on Principal	45,433,362	6,167,581	51,600,943
Total Actual Funds Received and Earned	853,392,319	77,740,890	931,123,209

SOURCES OF FUNDS	1998–2018	SFY 2019	TOTAL
DWSRF LOAN ACCOUNT **			
Executed Loans for Systems 10,000 + Population	467,459,156	0	467,459,156
Executed Loans for Systems < 10,000 Population	365,032,965	0	365,032,965
De-obligations ***	-56,936,610	0	-56,936,610
Preconstruction Loan	0	0	0
Emergency Loans	0	0	0
SET-ASIDE COMMITMENTS			
State Program Management (10%)	42,634,512	2,481,500	45,116,012
Technical Assistance (2%)	8,934,567	496,300	9,430,867
Local Assistance (15%)	52,507,653	2,481,500	54,989,153
Loan Administration (4%)	18,851,603	992,600	19,844,203
Total Set-Aside	898,483,846	6,451,900	904,935,746

* \$942,477 of investment earnings applied toward the 20 percent state match requirement for the first four capitalization grants. EPA approved using these excess investment earnings as a one-time exception.

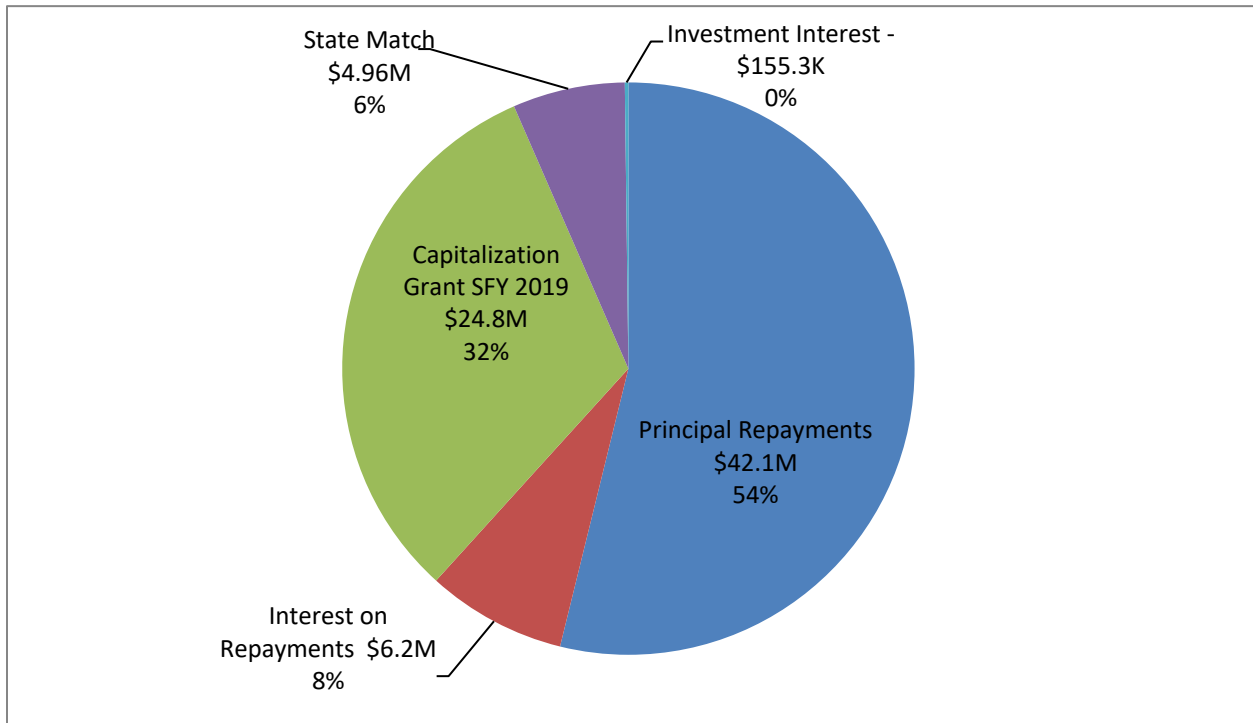
** Loan amendments not included in amount of executed loans.

*** De-obligations are previously obligated funds that become available for new commitments. For example, infrastructure projects that came in under budget, or funds committed to projects that did not move forward.

DWSRF Funds Received and Earned

The below figure shows the breakdown of the total actual funding sources received and earned in SFY 2019.

Figure 5: Total DWSRF Fund Received and Earned (2019 Actuals)



Total Binding Commitments during State Fiscal Year 2019:

- **There were no executed loans during SFY 2019.**

- **Disbursements**

From 1997 through June 30, 2019, the state disbursed \$739,910,440 to DWSRF capital projects.

State Fiscal Year 2019 Federal Funding Accountability and Transparency Act (FFATA) Reporting

For State Revolving Fund Year 23 Capitalization Grant the program utilized eight loans totaling \$16,962,270 for the Federal Funding Accountability and Transparency Act reporting list.

DOH #	Applicant	Project Name	Population	Loan Amount (excludes loan fee)	Client Total Loan Amount (loan – subsidy) + fee
2017-2235	Port of Walla Walla	Port of Walla Walla, Tyson, and Burbank Shell Water Consolidation	1,620	\$6,000,000	\$6,000,000
2017-2241	City of College Place	Christ Community Church Fellowship Consolidation	15	\$1,195,431	\$1,195,431
2017-1967	City of Richland	KID Lorayne J Water System Consolidation	307	\$1,842,130	\$1,842,130
2017-2265	Snohomish County PUD No. 1	Warm Beach Water Association Consolidation	918	\$2,718,847	\$2,718,847
2017-2226	Holiday Hideaway	Aeration Tank 2 and Booster Pumps	156	\$387,500	\$391,375
2017-2258	City of Othello	Reservoir Project	7,680	\$2,673,730	\$2,699,730
2017-2257	City of College Place	City Well No. 2	7,818	\$1,804,569	\$1,822,615
2016-040	Nob Hill Water Association	Minnesota Reservoir	29,624	\$3,500,000	\$3,535,000
Total				\$20,122,207	\$20,205,128

Set-Aside Activities

Our DWSRF Program is uniquely structured to provide direct program assistance in the form of grants, technical assistance to small systems, and other types of expenditures through a separate mechanism known as the DWSRF set-asides. Four types of set asides have been authorized in our DWSRF Assistance Agreement, including:

- DWSRF program administration.
- Technical assistance to small systems.
- State program management support.
- Local assistance and support for other state programs.

Administration and Technical Assistance

Washington state reserves 4 percent of each capitalization grant for administrative expenses and direct technical assistance for loan recipients. DOH and Commerce use this set-aside to administer the DWSRF Program. We use these funds to:

- Manage loan portfolios.
- Review preliminary engineering reports.
- Prepare annual capitalization grant applications.
- Meet with potential borrowers to discuss the status of a loan application.
- Manage DWSRF loan contracts.

PGM ADMIN 4%	SFY1998 - 2018 *Includes ARRA	SFY 2019	TOTAL
Grant Amount	19,356,413	992,600	20,349,013
Health Expended	11,178,480	0	11,178,480
Commerce Expended	8,144,738		8,144,738
Balance	33,195	992,600	1,025,795

Small System Technical Assistance

Due to lack of technical, financial, or managerial capacity, many small systems are unable or ineligible to apply for loan assistance through DWSRF. We can use DWSRF set-asides to provide extra technical assistance to help these systems achieve the compliance level required for an SRF loan. Technical assistance activities can include completing an engineering feasibility study to highlight operational areas for improvement, helping to complete an environmental review, developing cost estimates during the planning process, or helping to complete an application for DWSRF funds.

We contract with the Rural Community Assistance Corporation (RCAC) to provide training and outreach and to help small community water systems develop technical, managerial and financial (TMF) capacity. The RCAC Program provides TMF capacity development assistance to dozens of small water systems each year. This program helps build small system capacity by providing various services, such as board training, rate studies, planning assistance, and asset management planning.

RCAC has trained field staff in every region and works closely with ODW staff to assist systems in becoming self-reliant and knowledgeable about roles and responsibilities. The improved financial capacity is consistent with our Water System Capacity Development strategy and building working relationships with small water systems in order to help rural communities improve technical, managerial, and financial capacity. In SFY 2019, RCAC provided seven trainings on asset management and rate setting. RCAC provided direct assistance to 24 water systems in the following categories:

- **Planning:** 12 systems received planning assistance, including creating water system plans, small water system management programs, asset management programs, and capital improvement plans. These documents will assist systems in being eligible for DWSRF and other funding for proposed capital improvements.
- **Financial:** 10 systems received assistance to improve financial capacity, including rate studies, income surveys, and funding applications.
- **Managerial:** Seven systems received assistance to improve managerial capacity, including creating or updating bylaws and articles of incorporation, board training, and facilitation of consolidation projects.

- **Technical:** One system received assistance to address algal blooms at its surface water intake impoundment.

TECH ASST 2%	SFY1998 - 2018 *Includes ARRA	SFY 2019	TOTAL
Grant Amount	9,215,648	496,300	9,711,948
Expended	9,125,651	0	9,125,651
Balance	89,997	496,300	586,297

State Program Management (10%)

ODW reserved 10 percent of the federal capitalization grant for:

- Administrative assistance to the Public Water System Supervision (PWSS) Program.
- Monitoring water quality.
- Maintaining information about water systems.
- Improving water system infrastructure.
- Assisting capacity development initiatives and regulatory requirements.
- Helping water systems respond to emergencies.
- Supporting the state Operator Certification Program.

This set-aside also includes the administration, management, and technical support DOH requires to continue meeting its obligations and role as the state agency responsible for implementing and managing the Safe Drinking Water Act.

PGM MGMT 10%	SFY1998 - 2018 *includes ARRA	SFY 2019	TOTAL
Grant Amount	46,848,621	2,481,500	49,330,121
Expended	46,211,175	173,340	46,384,516
Balance	637,446	2,308,160	2,945,605

Local Assistance and Other State Programs (15 percent)

This set-aside allows DWSRF project assistance grants to drinking water systems, expenditures for technical assistance, or other types of program support. During SFY 2019, DOH used the 15 percent set-aside to support several activities, including:

- Providing direct engineering technical assistance to water systems by:
 - Responding to drinking water emergencies and customer complaints.
 - Consulting on possible treatment alternatives and providing engineering expertise to solve distribution system problems.
 - Helping water systems establish timelines and potential financial and technical resources to mitigate the issues.
 - Evaluating the results of third party sanitary surveyors of smaller water systems.

- Consulting directly with the water system to resolve any deficiencies found during an inspection.
- Conducting sanitary surveys, which included:
 - Conducting training for third-party sanitary surveyors.
 - Communicating with each purveyor before and after each survey.
 - Providing purveyors with technical assistance to prepare for and follow-up after sanitary surveys.
 - Supporting regional enforcement staff in addressing sanitary survey compliance issues.
 - Training and technical assistance to 31 local health jurisdictions that participate in sanitary surveys.
 - Maintaining our sanitary survey database.
 - Assigning a surveyor to each water system in need of a survey each year.
 - Recording significant deficiencies and tracking water utility progress toward addressing them.
- Providing third-party contractors and local health jurisdictions with:
 - Sanitary survey assignments.
 - Approval and financial assistance for direct technical assistance work.
 - Financial assistance with ODW-sponsored training costs.
- DOH staff review and analyze source-specific information on source water protection and susceptibility, and work with water systems, state agencies, local governments, and technical assistance providers to increase substantial implementation of source water protection.
 - Maintain and enhance a public geographic information system (GIS) mapping database that includes source water protection areas, potential contaminant sources, water system service area boundaries, and other key information.
 - Make grants available to water systems to improve their source water protection.

LOCAL ASST 15%	SFY1998 - 2018	SFY 2019	TOTAL
Grant Amount	52,507,653	3,722,250	56,229,903
Expended	52,469,772	148,516	52,618,289
Balance	37,881	3,573,734	3,611,614

See **Appendix B** for more information on set-aside work plans and contracts.

System Capacity for Water Systems

The SDWA requires states to develop and implement programs to ensure public water systems have adequate system capacity and certified system operators. If systems fail to comply with these federal requirements by specified deadlines, EPA could withhold or withdraw 20 percent of the state’s future DWSRF capitalization grants.

Capacity Development Program Highlights

In Washington, the Capacity Development Strategy for existing systems integrates capacity development across all programs to help existing systems attain the technical, managerial, and financial (TMF) capabilities they need to provide safe and reliable drinking water now and into the future. The information we gather and relationships we build through our programs help us assess the capacity challenges of small water systems and focus our efforts on their needs.

Full implementation and reporting to EPA of our capacity development strategies for both new and existing systems is required to ensure that we receive full funding of our DWSRF Capitalization Grant. Failure to meet these obligations by the due date could result in a withholding of up to twenty percent of our grant award.

In addition to maintaining our robust planning and compliance programs, highlights in this reporting period involved strengthening our training programs, expanding technical assistance partnerships to help small water systems, and building a coordinated approach to asset management across our planning, capacity development, and funding programs. We published an updated Water System Design Manual (2019 edition) and released a draft Water System Planning Guidebook. See Appendix D for details.

We used this set-aside funding to support a number of training efforts including our successful “A Day with DOH” trainings where operators, water system managers, consultants, and ODW staff spend a day learning about the Revised Total Coliform Rule (RTCR), source water protection, operator certification, unregulated contaminants, lead and copper, school lead expectations, sanitary surveys, Drinking Water State Revolving Fund and emergency funding, and the Unregulated Contaminant Monitoring Rule (UCMR).

As part of ODW’s capacity development strategy, we used set-aside funding to further develop our performance-based training. We provide Performance-Based Training (PBT) for

surface water filtration plants. Surface water treatment involves highly technical work and potentially significant risk to public health if that work is not performed properly. The goals of PBT are to improve operator skills, encourage surface water treatment that goes beyond the minimum requirements, and to develop ODW staff skills at the same time. See **Appendix D** for more details on PBT.

We continue to work closely with water systems that treat for arsenic with our Arsenic Treatment Optimization Program (ATOP). We listen to operators and water system owners to understand how each treatment system operates. We strive to support them in their efforts to maximize the use of their treatment facilities. We help them provide an enhanced level of public health protection for customers. Due to these efforts, the concentration of arsenic in treated water has declined significantly over time. See **Appendix D** for more details on ATOP.

We expanded our technical assistance partnerships through a pilot technical assistance project using DWSRF set-aside funds. Washington's Public Utility Districts are well-operated, publicly owned utilities that are uniquely qualified to assist small water systems develop their capacity because they are located in the same regions and have knowledge and resources useful to their small neighboring systems. The final report on this project is summarized in Appendix D.

Water systems must be able to manage all aspects of operations to ensure their long-term sustainability. A system cannot be sustainable if it does not address ongoing operation, maintenance and infrastructure repair, and replacement costs in its rates.

To help small water systems prepare for the future, we created a workgroup, consisting of ODW and EPA staff, to build a coordinated approach to asset management across our planning, capacity development and funding programs. The goal of this group was to develop, promote, and distribute tools in support of asset management activities of our small water systems. One result of these efforts is that we will now include demonstrations of practicing asset management, or developing a plan to do so, as a part of our construction loan approval process.

Source Water Protection Program Highlights

We adopted the Source Water Protection Program requirements in 1993, and modified them in 1999, in response to the SDWA 1996 amendments. We based the program on existing programs and regulations within the state. Examples of those regulations include; source water protection planning documents, local critical aquifer recharge area (CARA) regulations, and state water quality regulations. Source protection depends on partners in local, state, and federal agencies that have permitting or other water quality oversight. The majority of water systems throughout the state do not own or control their source protection

areas. Therefore, the information in the water systems protection plans needs to be incorporated into local and state regulations for the systems to achieve source protection. In 2018, we expanded the program by one fulltime staff person dedicated to source protection. Since then, we're able to interact with local planning departments to provide direct guidance on local ordinances and applications that have potential source water protection impacts. We are already seeing improved ordinances and conditioned permits as a result.

Our GIS tools continue to be an important component of our program. This year we completed a set of updates that ensure the tools remain available to the public. We again had to upgrade to a supported platform that works on multiple devices including smartphones. We also improved the way the data is presented and developed enhanced search tools to help users obtain the desired information. We continue to improve our data with updated location and protection areas.

We continue to develop and enhance additional relationships and connections with our state sister agencies. We regularly attend Ecology's Water Quality Partnership meetings and track changes to water quality standards. This year we worked closely with Ecology to incorporate additional source water protections into their storm water manuals which includes the underground injection control program for storm water. We continue to work with Ecology on updates to their CARA regulations.

We continue to enhance our program through outreach and education events. This year we co-hosted two workshops that brought diverse stakeholders together to learn and share experience in surface water quality activities, funding, and protection. Each event provided water systems an opportunity to engage with individuals working in the watershed they draw water from and talk about opportunities for future collaboration. EPA sponsored these workshops.

This was our third year participating in the Drinking Water Providers Partnership (DWPP). This partnership holds an annual call-for-proposals for projects that benefit fish and drinking water quality. Through this partnership, an additional \$175,000 was invested in drinking water watersheds in the state this year.

In addition to the DWPP, we continue to provide grants to water systems for source water protection activities. See **Appendix C** for source water protection success stories.

Operator Certification Program

The state has had an Operator Certification Program since 1979. When SDWA requirements changed in 1996, we expanded our program to certify operators of all Group A community, nontransient noncommunity, and transient noncommunity systems that have treatment, disinfection, or meet the state definitions for significant noncompliance.

ODW's mission is to work with others to protect the health of the people of Washington State by ensuring safe and reliable drinking water. The Operator Certification and Training Program (OC&T) affects our mission by coordinating, collaborating, and communicating with water systems, certified operators, governing bodies, and our training partners.

Full implementation, and reporting to EPA of our operator certification program, is required to ensure that we receive full funding of our DWSRF Capitalization Grant. Failure to meet these obligations by the due date could result in a withholding of up to twenty percent of our grant award.

Our certified waterworks operators represent the foundation for 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. We estimate that 30 percent of our 4,000 certified operators will retire in the next 5 years. Please review the EPA report we submit every year documenting our continuing compliance with EPA's program guidelines and our past and future operator certification activities. We include a portion of that report below:

Operator Certification Activities:

- Receive, process, and assist candidates with waterworks certification exam, operator-in-training upgrade, and reciprocity applications.
- Track, assist, and enforce annual certification renewal requirements and tri-annual continuing education requirements.
- Receive, process, assist, and provide practical exams for Backflow Assembly Tester candidates.
- Evaluate courses and training to ensure relevancy to the continuing education requirements.
- Coordinate certification exam testing with our 3rd party testing providers.
- Evaluate, provide, track, and enforce temporary certifications.
- Work with third-party trainers and organizations to provide ODW speakers for conferences and seminars and ensure a valuable and consistent message.
- Provide technical oversight and content for our newsletters and publications.
- Identify, assist, and enforce operator requirements for water system operator vacancies.
- Work with data management staff to ensure certified operator information remains relevant and easily accessible.

- Provide technical assistance on; groundwater treatment, surface water treatment, water distribution, and cross-connection control.
- Receive, investigate, and prosecute complaints against operators.
- Champion water use efficiency by managing data and communicating, tracking, and implementing compliance activities.
- Work with our external partners through our Cross-Connection Control Committee, Operator Certification Advisory Committee, Satellite Management Agency Advisory Committee, Training and Technical Assistance Providers Summit, and our Value of Water External Group.
- Provide innovation in workforce development, succession planning, inter (and intra) agency coordination, rule and policy revision, and maintaining a national perspective.

Successes and Accomplishments:

- Understaffing and a realignment of ODW priorities made 2018 a challenging but successful year for OC&T. The Distribution and Cross Connection Control Advisor position remained vacant all of 2018, as did the Certification and Operator Systems Manager position. Plans to fill an additional legislator approved position to provide technical assistance, certified waterworks operator accountability, and proactivity in workforce development; were also unrealized.
- 2018 was the end of the 3-year professional growth cycle for our certified Washington Waterworks Operators. Each cycle certified operators must obtain at least 3.0 CEU in relevant training and submit this information for review prior to being eligible to renew their certifications.
- We developed an online exam application process for waterworks operator certification. This new process launched in January 2019 and reduces the certification application time by 2-weeks. Applicants also pay their fees online, which satisfies a long-standing request from operators and utilities.
- We continue to advance our paperless initiative by providing online waterworks operator certification renewals, validation cards, and contact information updates through our long-standing interagency agreement with Green River College. “In-house”, we also moved to on-line “exam passed” letters and certificates.
- We worked with the Department of Ecology to develop DOH operator certification and cross-connection control guidance for their “new” Reclaimed Water Rule and existing “Criteria for Sewage Works Design” manuals. These guidance manuals include extensive details on protecting potable and reclaimed water from lower quality water through cross-connections.
- We participated in several conferences, seminars, and workshops with operators, utility managers, consultants, and staff from other ODW programs.

- We continued engaging state agencies and key stakeholder groups to help attract the utility workforce of the future. We spoke with our utility operators, managers, and elected officials to help them prepare for the retirement of the baby boomers and stop taking a minimalistic approach to water system operations.
- We worked with Evergreen Rural Water of Washington to develop a waterworks operator apprenticeship program; now approved through Labor & Industries. Implementing this two-year program will create WMD 2, WTPO 2 OIT, and CCS certified operators.

Section IV: Financial Summary

This section is an overview of financial management activities since the DWSRF Program's inception.

A. Status of Loans

As of June 30, 2019, 31 projects were completed and 22 loans paid off.

B. Loan Disbursements or Cash Draw Proportionality

EPA requires us to disburse federal and state dollars proportionally. The state is tracking proportionality on a grant-by-grant basis. The state has disbursed \$ 739,910,444.00 of the \$ 928,440,552 committed to loans since the program's inception. Total disbursements consist of federal capitalization grants, ARRA funding, state match, and DWSRF repayment account dollars.

As of June 30, 2019, we expended \$463,749,912 in DWSRF federal grant funding, and \$92,441,398 as match to those capitalization grants, for an overall ratio of 80 percent federal and 20 percent state match—not including ARRA funding—as no match was required.

C. Set-aside Disbursements

We disbursed \$127,451,673 in set-aside funds since the program's inception—including ARRA.

D. Annual Repayment or Aging of Accounts

Through June 30, 2019, the DWSRF Program collected \$295,694,810 in payments. Of this:

- \$244,093,867 was principal.
- \$51,600,943 was interest.

E. Loan Portfolio Analysis

DWSRF projects are financed solely through capitalization grants, state match, loan repayments and loans and balances held at the Office of the State Treasurer. Washington does not sell bonds to finance DWSRF projects.

We prevent loan defaults by using the loan underwriting process to screen-out high-risk borrowers. The process to determine creditworthiness examines the applicant's character, management ability, financial strength, projected debt service coverage, authority to incur debt, and collateral. If we believe an applicant will have substantial problems repaying the loan, we recommend that the Public Works Board (PWB) bypass the application for the current loan cycle. For high-risk applicants approved for project funding, we include additional loan contract conditions to mitigate the risk of loan default.

F. Annual Reports on Credit Conditions of Borrowers

ODW staff conduct the following portfolio management activities:

- Send statements to each DWSRF borrower one month before the payment due date.
- Provide a one-month grace period for payments.
- Call borrowers two weeks after the payment due date to check on status of payment.
- Assess a 12 percent penalty on payments more than 30 days late.

If a borrower has difficulty repaying the loan, staff will work with the borrower to find a solution, such as imposing interest only payments for the year instead of a large annual principal and interest payment. Other solutions might involve further re-negotiating loan terms, such as extending the loan to 30 years, reducing interest rates, debt deferral, and in cases of extreme hardship, loan principal forgiveness for imminent default (if funding is available). If these methods fail, we would work with appropriate agencies to change system ownership to a satellite management agency, water district, public utility district, or another local government entity. We experienced zero loan defaults from 1997 through June 30, 2019.

G. Investments

The Washington State Treasurer manages investment of DWSRF funds, in compliance with state investment practices. All investment earnings remain within these accounts. From July 1, 2018, through June 30, 2019, the state earned a negative \$155,325 in interest on the DWSRF funds. This was the result of fund 04R having a negative balance for much of the year and how the state assigns interest income. Management reports that document these investment earnings are on file with the Office of the State Treasurer.

H. Financial Statements

The financial statements are in **Appendix A** and along with the final auditor's report.

Section V: Compliance with the Federal Capitalization Grant

The state has not entered into an operating agreement with EPA for the DWSRF Program. The state complied with the following program requirements and met the following conditions:

Compliance:

- Established state instrumentality and authority.
- Reviewed technical, financial, and managerial capacity (system capacity) of assistance recipients.
- Established DWSRF loan account, set-aside accounts, and loan fee accounts.
- Deposited all funds into appropriate accounts.
- Established capacity development authority.
- Implemented and maintained a system to minimize risk of waste, abuse, and fraud.
- Implemented and maintained a corrective action plan.
- Developed and submitted a project priority ranking system.
- Complied with all applicable state laws and procedures.
- Followed state accounting and auditing procedures.
- Required DWSRF loan recipient accounting and auditing procedures.
- Submitted an Intended Use Plan and used funds according to the plan.
- Complied with enforceable requirements of the Safe Drinking Water Act.

Conditions:

- **Payments based on payment schedule**
The state receives payments according to the payment schedule submitted with each capitalization grant.
- **Provide a State Match**
From 1997 through June 30, 2019, Washington state received \$508,725,224 in capitalization grants from EPA, including ARRA. The total amount of state match required for these funds is \$92,441,398. Washington has expended \$488,433,562 in federal grant funding as of June 30, 2019. The state spent \$92,441,398 as match to these capitalization grants, for an overall ratio of 80 percent federal and 20 percent state.
- **Submit Biennial Report and Audit**
This DWSRF Annual Report fulfills the state's responsibility to submit an annual report. DWSRF is part of the state audit cycle performed under the Single Audit Act. In addition to the statewide Single Audit, we contracted with a private certified

public accounting firm to conduct a compliance audit of the DWSRF fund for SFY 2019.

- **Ensure borrowers have a dedicated repayment source**

DOH staff conducts a credit evaluation for all applicants. This evaluation determines whether an applicant has the ability to repay a loan. For all public water systems, the expected revenue stream from user fees must be sufficient to repay the loan, cover operation and maintenance costs, and pay for other necessary expenses.

- **Use funds in a timely and expeditious manner**

As of June 30, 2019, the state expended 100 percent of all available grant and match funds used to provide loans to public water systems.

- **Ensure recipients comply with applicable federal cross-cutting authorities**

The state and all of our assistance recipients complied with all applicable federal cross-cutting authorities to the best of our ability. We followed all requirements and provided oversight and direction to help borrowers comply as well. Whenever we discovered a compliance issue, we corrected the problem—whether due to a change in federal policy or because we didn’t properly interpret a federal requirement.

- **Minority and Women's Business Enterprises Goals**

The state and EPA agreed to use the state statute as the basis for establishing fair share objectives for Minority and Women's Business Enterprises (MBE/WBE). The state fair share goals are:

Construction	10 % MBE	6 % WBE
Purchased Goods	8 % MBE	4 % WBE
Purchased Services	10 % MBE	4 % WBE
Professional Services	10 % MBE	4 % WBE

- **Implement capacity development strategy**

EPA approved the state’s capacity development strategy for existing water systems in 2000. Each year our annual capacity development report sent to EPA shows the state program continues to operate in compliance with EPA’s program guidelines.

- **Implement operator certification program**

We adopted policies and procedures and the Water Works Operator Certification Rule (chapter 246-292 Washington Administrative Code), approved by EPA. Our annual Operator Certification Report shows our program continues to operate and comply within EPA’s program guidelines.

- **Conduct environmental reviews**

We conduct environmental reviews, similar to reviews required for projects under the National Environmental Protection Act, for all construction projects.

Appendix A

SFY 2019 Audited Financial Statements

Appendix B

SFY 2019 Set Aside Work Plans and Contracts

The following tables provide details on set-aside work plans in progress or initiated between July 1, 2018, and June 30, 2019. A number of work plans reference reports as deliverables. All reports are maintained with each work plan and available on request.

2% SRF Set-Aside Work Plan Deliverables:

Work plan and Task Name & Number	Description of Work plan and Deliverable Number	Date Due
Water Treatment Plant Advisor 356-20-02-S Task 1	Fund Water Treatment Plant Advisor position to provide technical assistance activities to small water systems with surface water treatment facilities. 1) Fund 1.0 FTE for 20 months. 2) List of technical assistance products delivered and/or list of systems that received technical assistance.	01/01/2019
Cross Connection Control TA 356-20-02-S Task 2a	Fund staff to 1) assess the status of cross-connection control (CCC) programs of public water systems in Washington, 2) provide technical assistance and training on CCC, and 3) implement the CCC Compliance Strategy. 1) Fund 1.0 FTE for 20 months. 2) CCC Program Plan for 2018 to 2023 (Internal Doc to Guide Program). 3) CCC Annual Summary Report Web Portal Application. 4) <i>Water Main Break Response Protocol for Chlorinated Systems</i> (DOH Pub 331-583).	01/01/2019
Water Treatment Plant Advisor 361-21-02-S Task 1	Fund Water Treatment Plant Advisor position to provide technical assistance activities to small water systems with surface water treatment facilities. 1) Fund 1.0 FTE for 9 months. 2) List of technical assistance products delivered and/or list of systems that received technical assistance.	09/30/2019
Cross Connection Control TA 361-21-02-S Task 2	Fund staff to 1) assess the status of cross-connection control (CCC) programs of public water systems in Washington, 2) provide technical assistance and training on CCC, and 3) implement the CCC Compliance Strategy. 1) Fund 1.29 FTE for 9 months. 2) Written summary of 2018 Annual Summary Report data. 3) Written overview of CCC program activities conducted by Health. 4) Provide examples of technical and educational assistance materials Health produced.	09/30/2019

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Active Contracts SRF Set-aside Annual Report 7/1/18 - 6/30/19

There are currently no active contracts during this time for this set aside.

Completed Contracts SRF Set-aside Annual Report 7/1/18 - 6/30/19

There are currently no inactive contracts during this time for this set aside.

10% SRF Set-Aside Work Plan Deliverables:

Work plan and Task Name & Number	Description of Work plan and Deliverable Number	Date Due
<p>Program Administration & Management Support</p> <p>355-20-10-S Task 1</p>	<p>Fund staff to ensure that Health continues to meet its obligations for administration of the PWSS program and as the state primacy agency for implementation and administration of the Safe Drinking Water Act.</p> <p>1) Fund 22.4 FTEs for 21 months. 2) Maintain customer service support for Sentry and Sentry Internet during normal business hours. 3) Maintain accurate updated information in Sentry for Washington. 4) Completed summary of data integrity reporting for surface water treatment. 5) Completed summary of disinfection processes through rapid rate treatment resulting from tracer studies. 6) Provide updated Health Advisory Annual Summary Matrix. 7) Provide annual compliance enforcement report. 8) Annual summary report on evaluation of public water system cross-connection control programs.</p>	<p>03/31/2019</p>
<p>Sanitary Surveys and Technical Investigations</p> <p>355-20-10-C Task 3a</p>	<p>Fund a portion of each of the three regional office sanitary survey program lead positions. They perform a host of functions to enable us to complete, or contract with local health or private contractors to complete surveys, plus an unknown number of technical investigations.</p> <p>1) Fund 2.0 FTE for 9 months. 2) Provide summary report on items a - f, in tabular form, for sanitary surveys conducted during the 9 months. 3) Provide, upon request, a complete list of Group A public water systems that underwent a sanitary survey. <i>See Capacity Development report for more details on results.</i></p>	<p>03/31/2019</p>
<p>Sanitary Surveys and Technical Assistance Provided by LHJs and Private Contractors</p> <p>355-20-10-C Task 3b</p>	<p>Fund third party sanitary surveyors to complete sanitary surveys and provide technical assistance to small Group A public water systems.</p> <p>1) Signed contract with third party sanitary surveyors. 2) Report documenting number of Group A systems surveyed or received technical assistance.</p>	<p>07/15/2018 12/31/2018</p>
<p>Coliform Monitoring Program</p> <p>355-20-10-S Task 4</p>	<p>Fund staff to implement the Total Coliform Rule (TCR) for all Group A public water systems.</p> <p>1) Fund 0.75 FTE for 9 months. 2) Track coliform MCL and monitoring and Reporting incidents on a monthly basis and respond to violations in a timely manner. 3) Prepare annual summary report on number of coliform violations (major monitoring, major repeat acute MCL and non-acute MCL).</p>	<p>03/31/2019</p>

<p>Capacity Communications</p> <p>355-20-10-SC Task 5</p>	<p>Fund ODW staff to provide technical support to water systems to assist in developing their technical, managerial, and financial capabilities to achieve and maintain compliance with applicable drinking water regulations.</p> <p>1) Fund .70 FTE for 9 months 2) Semi-annual issues of Water Tap newsletter. 3) Summary report to EPA on the TA provided and the outcome at the time of the annual review.</p>	<p>03/31/2019</p>
<p>Engineering Tech Assistance</p> <p>355-20-10-S Task 6</p>	<p>Fund engineers throughout ODW to provide direct engineering technical assistance to water systems.</p> <p>1) Fund 4.0 FTEs for 9 months. 2) Provide annual report summarizing engineering activities, accomplishments, and recommendations for future activities and needs to assure water system success.</p>	<p>03/31/2019</p>
<p>Mid-Columbia Resiliency Coordination</p> <p>355-20-10-C Task 9</p>	<p>The Mid-Columbia Resiliency Coordination Project will provide education and outreach to the potentially impacted systems and their customers and help the systems organize and communicate their current efforts and future plans.</p> <p>1) Meeting notes and agendas 2) Letters of support for regional cooperation 3) Survey results from questionnaires 4) Quarterly reports describing all work performed 5) Lists of affected water systems 6) Final report</p>	<p>09/30/2018</p>
<p>Program Administration & Management Support</p> <p>358-21-10-S Task 1</p>	<p>Fund staff to ensure that Health continues to meet its obligations for administration of the PWSS program and as the state primacy agency for implementation and administration of the Safe Drinking Water Act.</p> <p>1. Fund 13.65 FTEs for 7 months to provide quality management and administration for the DOH ODW. 2. Maintain customer service support for Sentry and Sentry Internet during normal business hours for 12 months. 3. Maintain accurate updated information in Sentry for Washington State. 4. Completed summary of data integrity reporting for surface water treatment. 5. Completed summary of disinfection processes through rapid rate treatment resulting from tracer studies.</p> <p>Provide Health Advisory Annual Summary Matrix.</p>	<p>10/31/2019</p>
<p>Washington Loan Tracking</p> <p>358-21-10-S Task 2</p>	<p>Fund a contractor (The Innovation Network) to provide maintenance on the Washington Loan Tracking (WALT) system.</p> <p>Contractor will provide licenses, maintenance and hosting as required in the contract statement of work.</p>	<p>06/30/2019</p>

There are currently no active contracts during this time for this set aside.

Completed Contracts SRF Set-aside Annual Report 7/1/18- 6/30/19					
Work plan	Contract #	Contractor	Amount	Begin Date	End Date
355-20-10-C Task 3b	Consolidated Contracts	Local Health Jurisdictions	\$25,057	7/1/2018	12/31/2018
355-20-10-C Task 9	GVS23068	Commerce	\$29,343	01/01/2018	11/30/2018
358-21-10-C Task 2	PRV23351	Guard It Corporation	\$2,000	07/1/2018	06/30/2019
358-21-10-C Task 2	PRV21744	The Innovation Network	\$46,469	07/1/2018	06/30/2019

15% SRF Set-Aside Work Plan Deliverables:

Work plan and Task Name & Number	Description of Work plan and Deliverable Number	Date Due
Sanitary Surveys and Technical Investigations 359-21-15-S Task 1a	Fund a portion of each of the three regional office sanitary survey program lead positions. They perform a host of functions to enable us to complete, or contract with local health or private contractors to complete surveys, plus an unknown number of technical investigations. 1) Fund 2.0 FTE for 12 months. 2) Provide summary report on items a - f, in tabular form, for sanitary surveys conducted during the 12 months. 3) Provide, upon request, a complete list of Group A public water systems that underwent a sanitary survey. <i>See Capacity Development report for more details on results.</i>	06/30/2019
Sanitary Surveys and Technical Assistance Provided by LHJs and Private Contractors 359-21-15-C Task 1b	Fund third party sanitary surveyors to complete sanitary surveys and provide technical assistance to small Group A public water systems. 2) Report documenting number of Group A systems surveyed or received technical assistance between 1/1/18 and 6/30/19.	06/30/2019
Coliform Monitoring Program 359-21-15-S Task 2	Fund staff to implement the Total Coliform Rule (TCR) for all Group A public water systems. 1) Fund 1.25 FTE for 12 months. 2) Track coliform MCL and monitoring and Reporting incidents on a monthly basis and respond to violations in a timely manner. 3) Prepare annual summary report on number of coliform violations (major monitoring, major repeat acute MCL and non-acute MCL).	06/30/2019

<p>Capacity Communications</p> <p>359-21-15-SC Task 3a</p>	<p>Fund ODW staff to provide technical support to water systems to assist in developing their technical, managerial, and financial capabilities to achieve and maintain compliance with applicable drinking water regulations.</p> <p>1) Fund 1.20 FTEs for 12 months 2) Two issues of the Water Tap newsletter annually. 3) Summary report to EPA on the TA provided and the outcome at the time of the annual review.</p>	<p>06/30/2019</p>
<p>Capacity Development Pilot Project</p> <p>359-21-15-C Task 3b</p>	<p>Fund a two-year pilot for the Public Utility District #1 of Whatcom County to provide small water system capacity technical assistance at the local level.</p> <p>1) Draft Capacity Need Assessment report. 2) Submit quarterly reports including summary of program development activities and compilation of performance data to date. 3) Submit draft report in 7th quarter of two-year pilot to ODW and Whatcom County for review. 4) Submit a final report within 60 days of the completion of the two year pilot. 5) Presentation at the annual Washington PUD Association. 6) Presentation to Whatcom County Executive. <i>See Capacity Development report for more details on results.</i></p>	<p>06/30/2019</p>
<p>CPE Provider</p> <p>359-21-15-C Task 3d</p>	<p>Fund Sleeping Giants Environmental Consulting to perform Comprehensive Performance Evaluations (CPEs), Individual Filter Self Assessments (IFSA), and Comprehensive Technical Assistance (CTA).</p> <p>1) Provide at least 3 CPEs plus additional IFSA's or CTAs as needed 2) Produce report for each site evaluated <i>See Capacity Development report for more details on results.</i></p>	<p>12/31/2018</p>
<p>Consolidation and Restructuring TA</p> <p>359-21-15-C Task 4</p>	<p>Fund small Group A systems who may wish to consider consolidation with another system, restructure (transfer) ownership to another larger utility, or secure a regional water supply.</p> <p>1) Award one grant to small water system 2) Receive and review progress reports from grantee quarterly. 3) Regional staff review and approve all deliverables prior to reimbursements 4) Track the number of public water systems that were eliminated or changed ownership as a result of this grant. 5) Report summarizing activities.</p>	<p>06/30/2019</p>
<p>Engineering Tech Assistance</p> <p>359-21-15-S Task 5</p>	<p>Fund engineers throughout ODW to provide direct engineering technical assistance to water systems.</p> <p>1) Fund 4.0 FTEs for 12 months. 2) Provide report summarizing engineering and planning activities as described in the work plan and in items a-e of the deliverables 3) The number of customer complaints received and addressed.</p>	<p>06/30/2019</p>

Laboratory Support – Cyanotoxins 359-21-15-C Task 6a	Funding to support water systems in their efforts to better characterize the cyanotoxin risk of their sources. 1) Cyanotoxin monitoring results will be provided to the department and any water system that utilizes the services outlined in the interagency agreement.	
Laboratory Skills Training 359-21-15-C Task 6b	Training sessions by the Hach Company on lab skills for water analysis and for process instrument verification for pH, chlorine residual, and turbidity at strategic locations throughout the state. 1) One to two seven-hour hands-on training sessions for 20 participants at each training location.	06/30/2019
Interactive GIS Websites 360-21-15-S Task 1	Fund IT staff to develop, deploy and enhance source water protection intranet and internet applications, and provide source water protection data, information, mapping, analysis, and GIS support to ODW staff, EPA, public water systems and the general public. 1) Fund 6.0 FTEs for 14 months. 2) Annual Source Water Protection Report for activities accomplished.	08/1/2019
Assistance for Local Group A High Priority Projects 360-21-15-C Task 2	Fund local governments and municipal water systems to carry out source water protection projects to better protect Group A sources, with priority given to surface water sources and high-susceptibility groundwater sources. 1) Contractor work with DOH to develop draft work plan with specific deliverables and due dates that detail how the project will be accomplished and execute contract. 2) Contractor submit to DOH written quarterly reports detailing project progress. 3) Contractor submit to DOH all deliverables defined in the executed contract by agreed upon dates.	08/01/2019

Active Contracts SRF Set-aside Annual Report 7/1/18 - 6/30/19

There are currently no active contracts during this time for this set aside.

Completed Contracts SRF Set-aside Annual Report 7/1/18 - 6/30/19					
Work plan	Contract #	Contractor	Amount	Begin Date	End Date
359-21-15-C Task 1b	Consolidated Contracts	Local Health Jurisdictions	\$343,988	01/01/2018	06/30/2019
359-21-15-C Task 3b	N21873(1)	Whatcom County PUD #1	\$71,825	07/01/2018	06/30/2019
360-21-15-C Task 3	GVL23337	Chinook Water District	\$8,875.00	05/01/2019	08/31/2019

360-21-15-C Task 3	N22689	Cascadia Conservation District	\$5,239.00	07/1/2018	12/31/2018
360-21-15-C Task 3	GVS23942	Cascadia Conservation District	\$2,904	03/01/2019	07/31/2019
364-22-15-C Task 5	GVS23068	Commerce	\$25,956	06/01/2019	07/31/2019

4% SRF Set-Aside Work Plan Deliverables:

Work plan and Task Name & Number	Description of Work plan and Deliverable Number	Date Due
<p>Program Administration</p> <p>357-20-04-S Task 1</p>	<p>Fund staff to provide technical assistance activities that can include highlighting operational areas for improvement, helping to complete an environmental review, developing cost estimates during the planning process, or helping to complete an application for Drinking Water State Revolving Fund (DWSRF) funds.</p> <p>1) Fund 2.5 FTEs for 8 months. 2) Provide summary of these efforts to assist small systems</p>	<p>02/28/2019</p>
<p>DWSRF Financial and Economic Analysis</p> <p>357-20-04-C Task 2</p>	<p>Provide services related to the DWSRF debt transactions including short-term financing, notes, loans, letters of credit, lines of credit and bonds.</p> <p>1) On-going program support financial planning and policy development 2) Develop debt structure alternatives</p>	<p>02/28/2019</p>
<p>Small Communities Initiative</p> <p>357-20-04-C Task 3</p>	<p>Funding to assist small rural communities develop their technical, managerial and financial capacity and to help achieve and maintain compliance with drinking water regulations.</p> <p>1) Provide quarterly progress reports of activities completed and issues needing to be addressed. 2) Provide annual summary that has an outline and assessment of the process, public health related accomplishments, funding secured by the utility, and coordinating effort.</p>	<p>02/28/2019</p>
<p>Financial and Managerial Capacity Development Assistance and SRF Project Preparation</p> <p>357-20-04-C Task 4</p>	<p>Continues funding a contract to help small water systems increase their TMF capacity consistent with the state of Washington Water System Capacity Development Strategy. Efforts focus on increasing small systems' capacity to plan for and operate financially viable water systems.</p> <p>1) Provide a written Community Work Plan summarizing the work needed, an estimate of the number of hours and who will perform the work by the contractor prior to initiating work with a public water system. 2) Submit a written monthly report in PDF, Word, or Excel format to the Contract Manager by the 20th day of the following month. 3) Submit an annual report to ODW on overall program accomplishments, as well as recommendations on types of future assistance and training needed by participating utilities.</p>	<p>02/28/2019</p>
<p>Program Administration</p> <p>362-21-04-S</p>	<p>Fund staff to provide technical assistance activities that can include highlighting operational areas for improvement, helping to complete an environmental review, developing cost estimates during the</p>	<p>09/30/2019</p>

Task 1	<p>planning process, or helping to complete an application for Drinking Water State Revolving Fund (DWSRF) funds.</p> <p>1) Fund 3.7 FTEs for 7 months. 2) Provide summary of these efforts to assist small systems</p>	
<p>Small Communities Initiative</p> <p>362-21-04-S Task 2</p>	<p>Funding to assist small rural communities develop their technical, managerial and financial capacity and to help achieve and maintain compliance with drinking water regulations.</p> <p>1) Provide quarterly progress reports of activities completed and issues needing to be addressed. 2) Provide annual summary that has an outline and assessment of the process, public health related accomplishments, funding secured by the utility, and coordinating effort.</p>	09/30/2019
<p>Financial and Managerial Capacity Development Assistance and SRF Project Preparation</p> <p>362-21-04-S Task 3</p>	<p>Continues funding a contract to help small water systems increase their TMF capacity consistent with the state of Washington Water System Capacity Development Strategy. Efforts focus on increasing small systems' capacity to plan for and operate financially viable water systems.</p> <p>1) Provide a written Community Work Plan summarizing the work needed, an estimate of the number of hours and who will perform the work by the contractor prior to initiating work with a public water system. 2) Submit a written monthly report in PDF, Word, or Excel format to the Contract Manager by the 20th day of the following month. 3) Submit an annual report to ODW on overall program accomplishments, as well as recommendations on types of future assistance and training needed by participating utilities.</p>	09/30/2019

Active Contracts SRF Set-aside Annual Report 7/1/18 - 6/30/19					
Work plan	Contract #	Contractor	Amount	Begin Date	End Date
362-21-04-C	CBO22594	RCAC	\$262,668	03/01/2019	08/31/2019

Completed Contracts SRF Set-aside Annual Report 7/1/18 - 6/30/19

Work plan	Contract #	Contractor	Amount	Begin Date	End Date
357-20-04-C	CBO22594	RCAC	\$52,500	05/01/2018	02/28/2019
357-20-04-C	N22638	Commerce (SCI)	\$62,311	09/01/2018	11/30/2018
362-21-04-C	N22638	Commerce (SCI)	\$80,050	12/01/2018	08/31/2019

Appendix C

Success stories showing how we use a portion of our 15 percent set-aside funds to assist water systems with source water protection.

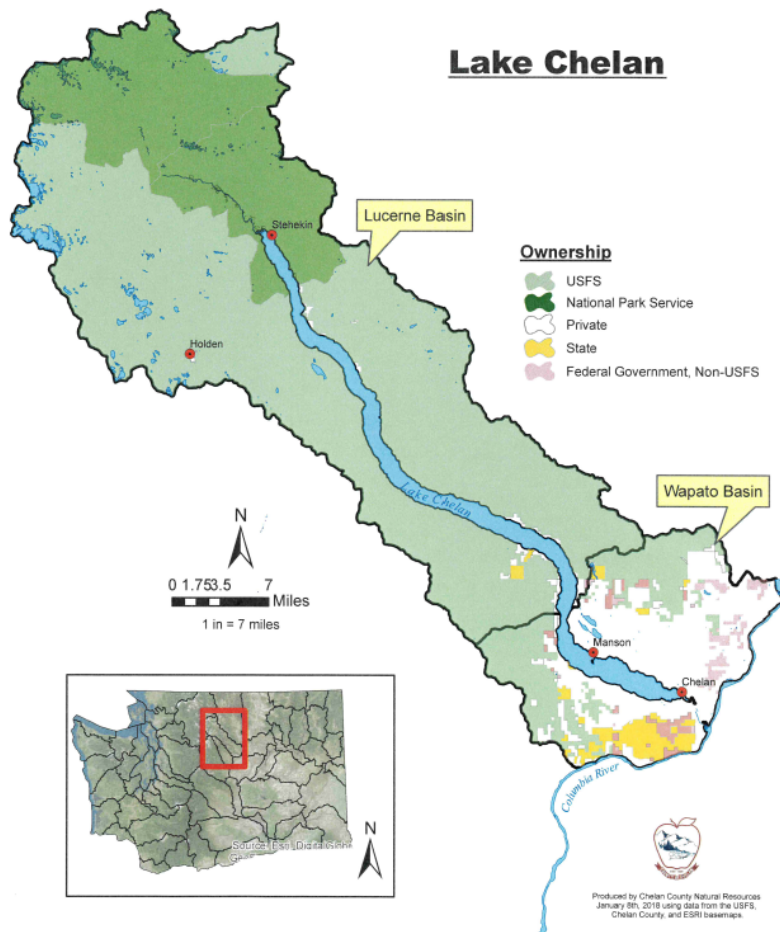
Lake Chelan: Keep it Blue campaign

Lake Chelan supplies drinking water for the cities of Chelan and Manson, the communities of Sunnybank, Bear Mountain, Little Butte, and other unincorporated areas of Chelan County. This lake has seen the population in the communities along its shores swell by 25,000-30,000 additional residents during the average summer day. This 53-mile-long lake extends from the City of Chelan to the town of Stehekin; with farms, forests and communities sharing its shorelines. The different landscapes and uses can have a negative

impact on water quality. This public education and outreach project intends to help visitors and residents understand the impacts their actions may have on this resource they all depend on.

The “Lake Chelan: Keep it Blue” water quality stewardship and protection campaign promotes the protection of drinking water resources and habitats that support native fish. This campaign was modelled after similar water quality outreach efforts in Lake Tahoe in Nevada and Flathead Lake in Montana. This project includes logo development for all education materials to increase awareness with easily recognizable branding. The education materials will be distributed at local businesses, schools, and

community events. Informational signs will be placed at highly visible entry points to the lake. They plan direct outreach during spring and summer months, as well as community outreach through newsletters and press releases, expected to reach approximately 50,000 people. This grant will be used to develop the framework for the campaign and allow it to



last beyond the funding window. This project was funded jointly by DOH and the United States Forest Service.

City of Leavenworth Watershed Outreach and Awareness

The City of Leavenworth receives its drinking water from Icicle Creek, a mountain creek with headwaters originating in the Eastern Cascades. The entire watershed is located on United States Forest Service (USFS) lands.

Leavenworth has a residential population of about 3,000 people. Special events in the area bring an additional 30,000 visitors to Leavenworth in a weekend. The Icicle Creek sub-basin is a small watershed that draws tens of thousands of visitors each year. The USFS documented 48,150 visitors



just last year at their registration sites. However, registration is not required at all recreational sites on the Icicle River, and many visitors go unreported.

Recreational activity is an identified threat to the drinking water supply and the watershed's habitat. Impacts to sensitive areas include:

- Damage to plants in riparian areas.
- Disturbances to fish and wildlife.
- Overcrowding.
- Improper disposal of human waste.

Risk of human-caused "increased turbidity" in the Icicle River is another threat to water quality. Efforts are made to notify people about the watershed. However, visitors are not educated about the impacts that recreational activity has on land, habitat, and water quality.

Scope of Project and Outcomes

Cascadia Conservation District (Cascadia) worked with Leavenworth and USFS to develop a public education campaign, which includes signage and brochures. They produced two articles in their newsletter that reaches 35,500 Chelan County residents. In 2018, Cascadia included a front-page article in their newsletter about Leavenworth's source and how recreationists can help maintain water quality. In addition to the newsletter, Cascadia staff engaged in direct outreach at 26 campgrounds and trailheads. They educated campers and hikers about the importance of maintaining good water quality in the Icicle basin. Recreationists also received an educational brochure. Staff talked with more than 190

people during these direct outreach activities. Cascadia attended and maintained a booth at 15 community events like Rock Fest, Bird Fest, and the farmers market. Educational signs were posted at 15 locations throughout Icicle basin. This project was funded jointly by DOH and USFS.

Chinook Water District - updated

Impoundment Algae Study

The Chinook Water District (District) has experienced significant algae blooms in their surface water impoundment over the past few years. These blooms have been tested and are not toxic, but do cause significant changes to the pH, along with other treatment difficulties in the District membrane filter system. Both ODW and the District want to better understand the reason for the blooms



and determine what activities can be undertaken to reduce them. The District is initiating a scientific research study in cooperation with the Washington State University (WSU) Water Quality Service Center within The School of the Environment (SOE). The study will identify the types and quantities of algae causing the seasonal bloom, examine the likely sources, and discuss potential mitigation measures.

Scope of Project and Outcomes

The overall goal is to determine current sources of algae in the small water supply reservoir operated by the District. Algae may come from upstream locations or generated within the reservoir itself. The algae source(s) are currently unclear. Nutrients (nitrogen and phosphorus) drive the algae growth. Identifying watershed and internal nutrient sources and their relative contribution is essential, not just for understanding algae sources, but for formulating realistic control plans.

The project will include a limnologic assessment of the reservoir and the role that feeder stream(s) play in algae production. The limnologic assessment will include:

1. Algae identification and quantification.
2. Water quality measurements relevant to, or indicative of, algae growth.
3. Zooplankton identification and quantification to quantify algae predatory controls.
4. Nutrient concentrations and potential sources.

Nutrient loading will be estimated by a mass balance and internal load modeling, as permitted by data. The nutrient loading analysis will be a key element for realizing goals of

long-term algae control in the reservoir. Sampling for this project is complete, the final report is due in the final quarter of 2019.

Cascadia Conservation District

City of Leavenworth Watershed Enhancing Partnerships to Protect Drinking Water

The City of Leavenworth receives its drinking water from Icicle Creek, a mountain creek with headwaters originating in the Eastern Cascades. The entire watershed is located on United States Forest Service (USFS) Lands.

The Icicle Creek sub-basin is a small watershed that draws tens of thousands of visitors each year. The USFS documented 48,150 visitors last year at their registration sites. However, registration is not required at all recreational sites on Icicle River, and many visitors go unreported.

Recreational activity is an identified threat to the drinking water supply and the watershed's habitat. Impacts to sensitive areas include:

- Damage to plants in riparian areas.
- Disturbances to fish and wildlife.
- Overcrowding.
- Improper disposal of human waste.

Building on the existing partnership between the District, Leavenworth, and USFS this project intends to evaluate several specific recreational impacts to water quality and assess the feasibility of programs to create long-term solutions.

Scope of Project

Cascadia Conservation District (Cascadia) worked with Leavenworth and USFS to evaluate existing trends and conditions contributing to non-point source pollution. Identify short and long-term solutions to address water quality concerns, evaluate alternative, resources, and capacity needs; and provide recommendations and timeline for implementation.



The project included the evaluation of existing trail and campsite condition data, user numbers, disturbance, and facilities. In addition there was baseline assessment monitoring conducted to establish a baseline of road use, parking patterns, dispersed campsite use, toilet availability and need, impacts to critical areas, and other activities that have potential to impact water quality.

Project Outcomes

Cascadia expanded this partnership to Leavenworth Mountain Association (LMA), who completed much of the assessment monitoring. Between April and August 2019 LMA conducted two surveys per month for a total of twelve monitoring days. During this time 6,587 vehicles were counted on approximately 15 miles of Icicle Creek Road which parallels the river. Four temporary toilets were placed strategically along the corridor up-river of the surface water intake, these were evaluated for use throughout the study period.

The final report for this project provided the following observations and recommendations:

- Visitors used the temporary toilets extensively. The toilets clearly fulfilled a need that was not otherwise being met. Consideration should be given to installing additional facilities.
- Capacity of parking and facilities is location and seasonally independent. Different recreational activities drive the need during different seasons, in different locations along the corridor.
- A few areas could use additional “no parking” signs to reduce impact of parking on unstable areas.
- Campers, hikers, and climbers seem to follow signage and be self-governing: education/signage works.
- More days of monitoring could provide a better baseline.

This project was funded jointly by DOH and the USFS.

Appendix D

The following are success stories of construction loans, special projects, and unique programs ODW offers—all of which protect public health and highlight the work of public water systems across the state.

Drinking Water State Revolving Fund



City of Walla Walla UV Treatment Project



Mill Creek raw water basin

For years, the City of Walla Walla has operated as an unfiltered surface water system under the filtration avoidance criteria in the Surface Water Treatment Rule. It disinfects its source water, Mill Creek, with chlorine and ozone.

Mill Creek water comes from a forested watershed spanning the border between Washington and Oregon. Walla Walla treats the water at its 24-million-gallon-per-day treatment plant constructed in 1921. Although the city updated

the plant throughout the years, the Long Term 2 Enhanced Surface Water Treatment Rule (LT2) made a major upgrade necessary. To remain in compliance with LT2, Walla Walla had two options:

1. Continue to operate as an unfiltered surface water system and install another train of disinfection, such as ultraviolet light (UV) to kill *Cryptosporidium*.
2. Install filtration.

Financing necessary improvements

The city applied for funding to address compliance with LT2, and received two Drinking Water State Revolving Fund (DWSRF) loans to help finance necessary improvements. The first loan, awarded in 2013, allowed the city to study alternatives for LT2 compliance and begin pilot testing the selected treatment alternative, slow sand filtration.

After a three-year pilot study, the city decided slow sand filtration was too expensive and elected to pursue UV reactors as the compliance solution. Using the second loan, awarded in 2015, the city installed the reactors. The project includes a roughing filter to pretreat Mill Creek water prior to the UV reactors, site piping improvements, chlorination system upgrades, updated

controls and electrical, and other treatment plant improvements for compliance with LT2. The city expects to finish the project in 2019.



Public health benefits

City of Walla Walla will comply with LT2 and be able to provide safe, reliable drinking water to customers.

UV reactors treat the water to achieve LT2 compliance

Funding Source	Amount
2013 DWSRF Loan Award	\$12,120,000
2015 DWSRF Loan Award	\$12,120,000
Total DWSRF Award Amount:	\$24,240,000

Drinking Water State Revolving Fund



City of Mabton

New Well Project

In 2014, the City of Mabton used a Drinking Water State Revolving Fund (DWSRF) loan to drill and equip a new well. The city needed the new well to replace a failed well and reduce demand on another well, which drew water with high levels of nitrate.

The city intended for the new well to produce about 1,000 gallons per minute. However, during well development, the well began to pull sand. Eventually, following additional work to rehabilitate the well, the city placed the new well into service; it produces 60 gallons of water per minute.

We awarded the City of Mabton a \$1,800,000 DWSRF construction loan with 30 percent principal forgiveness.



New well, control building, and generator.

The project included a new well, control building, and generator. A fence encloses the entire facility and a locked gate protects against unwanted entry.

Public health benefits

The City of Mabton now has another well source it can use to meet demands and reduce reliance on the high nitrate well. In addition, the generator on the new well will allow it to supply water during a power outage.

Drinking Water State Revolving Fund



City of Selah

Booster Pump Station and Well 7 Improvements Project

In 2016, the City of Selah received a Drinking Water State Revolving Fund (DWSRF) loan to replace an old booster pump station and install improvements at an existing well, Well 7. The existing booster pump station was located below ground, unsafe, and difficult to access for maintenance. In addition, the existing booster pump station was unable to reliably deliver adequate flow to the distribution system. The booster pump station was replaced with a new facility that is safe and easy to access for maintenance. It can also provide adequate flow to the distribution system.

The City also installed a number of improvements at one of its main wells, including a variable frequency drive pump and motor to better meet system demands, chlorination, and upgraded controls. These improvements allow this source to be more reliable and resilient.

We awarded a \$1,222,100 DWSRF construction loan to the City of Selah.

Public health and environmental benefits

The City of Selah can provide safe and reliable drinking water with the new booster pump station. The well improvements allow the City to better meet system demands.



New booster pumps

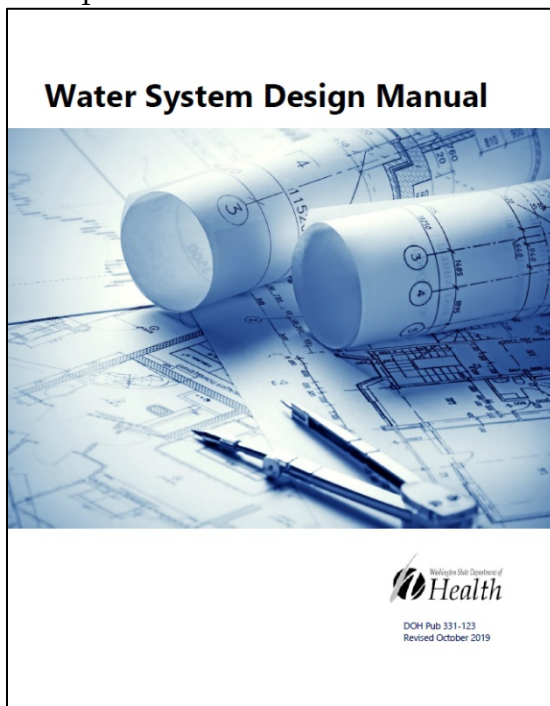
Capacity Development

Water System Design Manual (2019) & Planning Guidebook (2020)

One of the primary ways DOH ensures safe and reliable drinking water to the people of Washington is through review and approval of professional planning and engineering designs. Good planning and design helps ensure water system technical, managerial, and financial capacity to sustainably provide safe drinking water now and for generations to come.

Three years in the making and with the help and support of dozens of our water utility, consulting engineers, and regulatory partners, DOH is proud to share the updated “Water System Design Manual”. This edition marks 10 years from the previous edition and remains a primary tool for establishing uniform design concepts and a framework for state-licensed engineers to consistently review design documents.

Further, DOH recently shared a draft update of the “Planning Guidebook” - the document is currently out for public comments. The Guidebook is written to help water system governing bodies understand their managerial and financial role and to assist consultants in the preparation of plans. The Planning Guidebook references the Water System Design Manual in support of technical capacity. The document also attempts to bring together the interests of many of our partners, including local government, Tribes, and sister regulatory agencies. It is the planning process that enables information sharing and engagement with these partners.



Capacity Development

SRF Set Aside – Whatcom PUD Technical Support Program Pilot (2019)

In 2016 DOH partnered with the Public Utility District No. 1 of Whatcom County (PUD) to pilot a local outreach and technical assistance program. The 2-year pilot program aimed to assess and assist local small water systems with technical (T), managerial (M), and financial (F) capacity. The final report was submitted to DOH in January 2019.

Assessing water system capacity. The PUD reviewed a wide range of data on 145 public water systems to assess TMF capacity or lack thereof. The PUD found several key indicators most indicative of overall capacity:

- An engaged governing body
- A state certified operator acting “in responsible charge” of day to day water system operations
- Adequately functioning infrastructure – meaning that on-going investments in capital infrastructure are made in a planned and timely manner.

Providing technical assistance. The PUD reached out to all 145 water systems to assess the needs of the operator / manager of the system. They successfully engaged 104 of the systems (72%) to initiate and build a non-regulatory technical assistance relationships. The PUD found that operators and managers often wanted to talk about topics other than technical, managerial, and financial issues. However, by offering assistance on these issues it opened the door to more specific engagement on TMF capacity.

Outcome. The 2-year pilot program demonstrated the value of a willing and capable PUD advocating on behalf of the local drinking water community. Because of trusted local relationships and a desire to help small water system improve TMF capacity, the PUD is well positioned to offer water system restructuring or consolidation services when local governing bodies are ready for the change. DOH hopes to continue to support this partnership by securing a long-term, sustainable funding mechanism.

Performance-Based Training

Working with operators and building capacity



As part of ODW's capacity development strategy, we provide Performance-Based Training (PBT) for surface water filtration plants. Surface water treatment involves highly technical work that if not performed properly, could pose a significant public health risk.

The goals of PBT are to:

1. Improve operator knowledge and skills.
2. Encourage operators to achieve surface water treatment that goes above the minimum requirements by applying process control, priority-setting, and problem-solving techniques.
3. Develop ODW staff skills and improve knowledge of plant operation.

To help us develop and lead an effective training, we hired EPA's national Area-Wide Optimization Program (AWOP) contractor, Process Applications Inc. Treatment plant operators and ODW staff participate in five to six PBT sessions over a 16-month period. The training provides an opportunity to develop and deepen relationships. It promotes on-going communication on technical topics between the operators and ODW staff. ODW staff participate in the sessions as training facilitators who support the operators and learn along with them.

We provided this training to two separate groups of operators. The first group included operators of seven small package plants that use contact absorption clarifier technology. These small systems, located in southwest Washington, are challenged by limited budget, isolated location and difficulty in recruiting and retaining qualified staff. The second group included operators from the nine largest surface water treatment plants in our state. These rapid rate filtration plants supply drinking water to over half of our state's population. They typically have limited alternative supply options if their surface water supply is compromised. Large treatment plants face unique challenges. Layered management, staff specialization and multiple operators make communication and staff buy-in challenging.



During the training sessions, operators learn about process control, priority-setting, and problem-solving techniques. These sessions create an environment where there is motivation for producing high quality water. The training also encourages healthy competition between operators and acknowledges the significant role operators play in protecting public health.

Through these PBT trainings, we want operators to create permanent optimization programs at each of their facilities. The training inspired operators to collaborate for on-going technical support, communication, knowledge sharing, and problem solving. With the training now complete, operators from eight of the nine large plants have continued to meet and hold workshops, sustaining the optimization programs at each of their facilities.