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# EPA Region 10 DWSRF **WATERS** Awards

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**2017**  
**WATERS**

Well-Planned  
Affordable  
Transferable  
Efficient  
Resilient  
Sustainable

# 2017 WATERS Award Winners

## Alaska

- Anchorage Water & Wastewater Utility
- City of Cordova

## Idaho

- Comore Loma
- City of Orofino

## Oregon

- City of Beaverton
- Pelican Bay Heights
- Rainbow Water District
- Sustainable Infrastructure Planning Projects (SIPP) program

## Washington

- Liberty Lake Sewer & Water
- City of Port Townsend
- City of Seattle

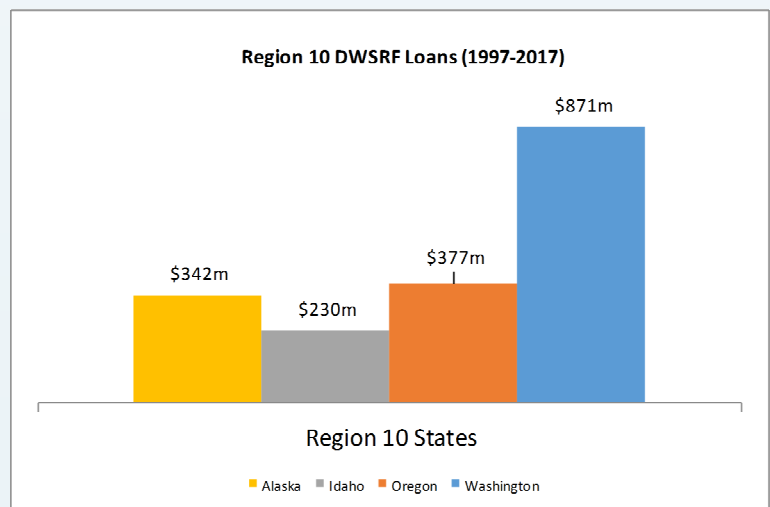
## About The **WATERS** Awards

Recognizing the most innovative and effective DWSRF projects.

Since the first Drinking Water State Revolving Fund (DWSRF) loan was signed back in 1997, borrowers have utilized this program to fund projects that deliver a public health benefit as well as meet other related goals. The EPA Region 10 WATERS award program seeks to recognize exceptional DWSRF projects, nominated by state DWSRF staff, that help borrowers maintain, or return to, compliance with the Safe Drinking Water Act, as well as achieve one or more elements of the **WATERS** award. Those elements include projects that: are **Well**-planned, address **Affordability** issues, are **Transferable** to other communities, provide benefits for water or energy **Efficiency**, as well as add **Resiliency** and/or **Sustainability** attributes.

### About the Region 10 DWSRF Program

Over the past 20 years, the Region 10 DWSRF program has been capitalized at a total of \$1.2 billion. To date, using those funds, along with state match, repayments and interest earnings, Region 10 states have provided \$1.8 billion in DWSRF loans.



## About the DWSRF Program

The DWSRF program was created by the 1996 Amendments to SDWA. The first capitalization grants were awarded to states in 1997. To date, approximately \$19 billion in DWSRF grant funds have been awarded nationwide. Using those funds, along with state match, repayments and interest earnings, states have provided \$33 billion worth of DWSRF loans. These loans have funded approximately 13,000 projects, helping to ensure the provision of clean and safe drinking water to an estimated 757 million residents.



### **Anchorage Water and Wastewater Utility, Ship Creek Water Treatment Facility Upgrades**

The Anchorage Water and Wastewater Utility (AWWU) used an \$8.7 million DWSRF loan to finance upgrades to their existing treatment facility to produce energy efficiency. Because of the long cold winters, AWWU heats water prior to distribution to prevent freezing in water tanks, water distribution pipes and service connections. The water treatment facility is co-located with the Anchorage Municipal Light & Power power generation station. Waste heat from the power generation process is used to heat the water with the heat exchanger system, nearly tripling the amount of energy recycled. This has produced an estimated savings of \$3 million per year, making the thermal-generation plant one of the world's most energy efficient.

### **City of Cordova, LT2 Compliance Upgrades**

The City of Cordova's unique geography and high demand for water used in fish processing, requires the public drinking water system to rely on four surface water sources treated in three water treatment plants. For many years three of the water sources, Murcheson Falls, Heney Creek Dam/Meals Reservoir, and Orca catchment, were unfiltered. Water from the backup source, Eyak Lake, has been filtered and chlorinated at the 3.5 MGD treatment plant. This project enabled Cordova's drinking water treatment and distribution system to meet Long Term 2 Surface Water Treatment Rule compliance requirements with the installation of UV disinfection at Orca, Meals, and Murcheson Water Treatment Plants, upgrades to the filter system at Eyak Lake Water Plant, a new Onsite Sodium Hypochlorite Generation System, and upgrades to the SCADA system. This project was made significantly more affordable by the 1.5% interest rate, as well as \$1.9 million of principal forgiveness.







### Comore Loma, Water System Upgrades

The Comore Loma water system serves approximately 1000 people and is located in Idaho's Bonneville county. The project, which was funded by a \$3 million DWSRF loan, provides additional storage and pumping capacity, emergency power, distribution system upgrades, and a new well house and a new water source. Because the project incorporated installation of energy efficient pumps with variable frequency drives, advanced LED lighting, and a SCADA system, this community will save over \$62,000 per year in energy costs. The project was made more affordable by \$717,000 in principal forgiveness, as well as a 30 year loan term and a 1.25% interest rate.

### City of Orofino, Water Treatment Upgrades

The City of Orofino, Idaho, used a \$9.7 million DWSRF loan to construct a 2.2 mgd water treatment plant, a new water intake on the Clearwater River, a new raw water pump station, and upgrade a water reservoir and transmission lines. Because the community converted from conventional filtration to membrane filtration, and installed energy efficient pumps, they will save 15 million gallons of water and 212,700 kWh of electricity per year, and reduce chemical use by 90%. The project was made more affordable by \$2.5 million in principal forgiveness, as well as a 30 year loan term and a 0% interest rate.



### City of Beaverton, Aquifer Storage & Recovery (ASR) Well #5 Project

The City of Beaverton used a \$5 million DWSRF loan to design and construct a new ASR well to replace an existing ASR well that was past its design life. ASR wells can serve as an innovative and lower cost alternative to traditional water reservoirs, if the right geological conditions exist. Oregon's basalt geology provides exceptional underground storage capacity. During the winter months, surface water is pumped and treated, then placed into the ASR well for use during the drier summer months. By using this approach, Beaverton is able to meet a variety of key objectives, including seismic and drought resiliency. The project was also made more affordable by inclusion of \$750,000 in principal forgiveness.



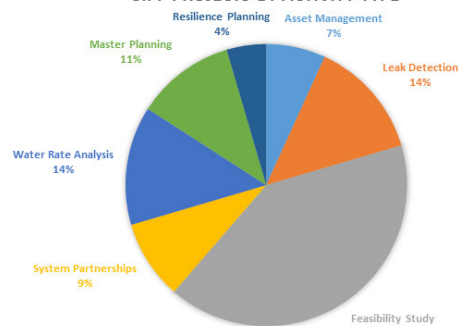


## Pelican Bay/Harbor Water Merger and Annexation Project

The Pelican Bay Heights Water District used the proceeds of a \$394,027 DWSRF loan (with 100% principal forgiveness to address affordability issues) to merge with neighboring Harbor Water Public Utility District. Pelican Bay served a population of approximately 40, while Harbor Water serves more than 3,000 customers. The project included design and construction of two 10,000 gallon reservoirs, and an intertie.



SIPP PROJECTS BY ACTIVITY TYPE



## Oregon's Sustainable Infrastructure Planning Projects (SIPP) program

Since 2015, Oregon has funded 44 planning projects with a total of \$850,000 in fully forgivable loans through the SIPP program. SIPP was established to encourage water systems to become more sustainable through planning, generate projects that are ready to proceed, and fully utilize the additional subsidy authority from the DWSRF program. Projects are selected to receive up to \$20,000 each based on readiness to proceed, capital improvement history, and preference is given to systems with fewer than 300 service connections. The link contains more information about SIPP:

<http://www.oregon.gov/oha/PH/HEALTHYENVIRONMENTS/DRINKINGWATER/SRF/Pages/sipp.aspx>

## Rainbow Water District, Chase Wellfield GWUDI Mitigation Project

The Rainbow Water District, near Springfield, Oregon, received a \$3 million DWSRF loan to construct a new treatment system, new transmission line, develop a new water source, and acquire land/easements. Part of the project, the transmission line, addresses seismic concerns, which provides resilience. The project was also well planned due to the hiring of consultants to perform an aquifer study to evaluate water supply options. The project will help mitigate E.coli issues prevalent in Well #2, which were likely caused by the well being GWUDI. The GWUDI designation required the District to install treatment to comply with the SWTR. The project was made more affordable by increasing the loan term to 30 years, and providing \$515,000 in principal forgiveness.





## Liberty Lake Sewer and Water District, Consolidation of East Side Liberty Lake Improvement Club with Liberty Lake Sewer and Water District

The Liberty Lake Sewer and Water District (LLSWD), which serves residents near Spokane, Washington, used a \$905,465 DWSRF loan to consolidate the East Side Liberty Lake Improvement Club (ESLLIC). This water system was incorporated in 1945 and serves approximately 300 residents. The two systems already had an intertie, and a contractual relationship for LLSWD to operate and maintain the ESLLC water system. The project included upgrades to the existing intertie, replacement of old and under-sized distribution mains, and abandonment of two primary wells for ESLLC. The consolidation project was made significantly more affordable by provision of 50% principal forgiveness, which brought the base water rates down from \$50.76 to \$18.52.



## City of Port Townsend, LT2 Compliance Project

Residents in the City of Port Townsend, on Washington's Olympic Peninsula, receive their drinking water from two rivers, the Big and Little Quilcene Rivers, via 30 miles of transmission pipeline. For more than 30 years, the water was not filtered under criteria laid out in the original Surface Water Treatment Rule. However, as a result of LT2, the city was required to install either UV disinfection or filtration. The city used two separate DWSRF loans totaling more than \$8 million to design and construct a membrane filtration plant capable of producing 3 million gallons per day. The project is considered efficient in that the design allows flow through the treatment process with existing hydraulic head, eliminating the need for pumping. Project affordability was accomplished via \$1.5 million of principal forgiveness.



## City of Seattle, Chester Morse Lake Emergency Pump Station

One of Seattle's primary water sources is the Chester Morse Lake reservoir on the Cedar River. Seattle Public Utilities (SPU) used two DWSRF loans totaling \$18 million to construct a new floating pump station. This pump station allows SPU to consistently deliver, regardless of seasonal water level variations, 240 million gallons per day to the 1.4 million people served by the utility, while maintaining adequate in-stream flow commitments for aquatic life. The pump station replaced two temporary pump stations that were past their design life and were complex to mobilize and use. The project improves SPU's resiliency during low-inflow/drought conditions.

