

## RDPO Helps Fund Efforts to Build Emergency Potable Water Capabilities in the Region and Enhance Water System Resilience

The [Regional Water Providers Consortium](#) – a group of 20 water providers working collaboratively in Washington, Clackamas and Multnomah Counties – continued their efforts to **prepare for water supply disruptions** with the help from the RDPO and its resources, including Urban Areas Security Initiative grants and RDPO partner-contributed funds. The RWPC is a signatory to the RDPO inter-governmental agreement and sits on the RDPO Steering Committee, as well as participates in the RDPO Public Works Work Group.

In 2017, the RWPC added two mobile water treatment systems (MWTS) -- one in Milwaukie, the other in Gresham, bringing the total in the region to six. Portland Water Bureau, City of Beaverton and Clackamas River Water manage one or more of these regionally deployable assets. A seventh system has been ordered for South Fork Water Board, which serves West Linn and Oregon City.



Figure 1: Inside a mobile water treatment system.



Figure 2: Exterior of a mobile water treatment system.

The MWTS is a self-contained, independently powered water pumping and treatment system that can be set-up in 30 minutes and treat up to 30,000 gallons per day from most fresh water sources. Portland Procurement Services negotiated a five-year price agreement of \$112,000 per unit to keep the price stable for anticipated future purchases.

The addition of these three MWTS will more than double the emergency water treatment and supply capacity in the region, however, more systems are still needed to bridge the gap in the event of a large-scale emergency such as an earthquake.



Figure 3: A reusable water bag.

With \$54,000 in funds RDPO partner-contributed funds, \$14,000 in UASI FY'15 and \$20,000 from Consortium partners, the Consortium purchased 57,000 one-gallon water bags to house with the MWTS and previously funded mobile water distribution systems. The reusable bags allow for the distribution of water to members of the public who may not have their own containers. The bags are imprinted with instructions on how to treat and store water and can also be used as part of the region's preparedness outreach efforts.

Since the Consortium's inception in 1997, it has been working towards **building interconnections among water systems within the region to increase the resiliency and reliability of supply to individual communities and the region as a whole.** Regional interconnectivity had been studied on a large scale, but there was limited information on the smaller, yet important, interconnections that exist between each of the water providers. In 2011, with a UASI grant, the Consortium completed the Interconnections Map and Evaluation Project (IMEP) which resulted in the creation of an ArcGIS geodatabase of all existing water system facilities within the region, including existing water system interconnections and a pipe network overlay. The geodatabase was designed to help water providers:

- identify pathways for routing water in emergency situations
- identify system vulnerabilities and
- develop emergency operational strategies



Figure 4: RWPC workshop.

In 2017, with combined RDPO/UASI and RWPC partner funds, the RWPC updated the IMEP to reflect infrastructure changes and expand the utility of the geodatabase to help identify sites to deploy mobile water treatment and distribution systems. The update concluded with a table top exercise to ensure water providers continue to know how to use the geodatabase in the event of an emergency. The table top exercise introduced a new crop of water provider staff to the geodatabase and provided another opportunity for the region's water providers to work together and build relationships before an emergency happens.

**For more information, contact:**

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