

Water Reuse Projects List for Potential Case Study Development

This list of water reuse projects was compiled as part of Action 11.3 in the National Water Reuse Action Plan (WRAP): Develop and Highlight Case Studies Relevant to the Water in Circular Economy and Resilience (WICER) Framework. The list presents projects titles, brief project descriptions, and team members who will facilitate the development of case studies under the scope of this action. Please note that this list is subject to change and may not be comprehensive of all projects that will be highlighted under Action 11.3.

Project Title	Brief Description	Action Team Author
Reno-Stead Reclamation Facility, Nevada	The project is within a closed basin in the northern limits of the City of Reno and is part of a smaller wastewater treatment plant. The project should benefit small and medium size communities by exemplifying a multi-faceted water reuse system. The Advanced Purified Water Facility is in the design phase with construction to follow.	Xylem
Pikes Peak Visitor Center, Colorado	Over 800,000 tourists visit Pike Peak’s Visitor Center annually—a facility that is not serviced by piped water in a drought-stricken area of Colorado. ¹ The Center uses non-potable water reuse for toilet flushing, demonstrating a cost-effective option relative to pumping and trucking waste to the Spring’s wastewater treatment plant.	Xylem
Alaska Water and Sewer Challenge	Over 3,300 rural Alaskan homes do not have access to running water or a flush toilet, largely due to aging systems and environmental challenges that threaten supply (e.g., permafrost that warps water piping). ² The Alaska Department of Environmental Conservation, in coordination with tribal, state and federal agencies, initiated a research and development effort to find more efficient and affordable methods to deliver drinking water and sewage disposal services to rural Alaska to improve the health of rural residents.	Jacobs
Sustainable Water Infrastructure Project (SWIP), California	A key project in the Santa Monica Bay Enhanced Watershed Management Plan, the City of Santa Monica’s SWIP provides benefits to the communities that both live and work in Santa Monica and greater Los Angeles County, which includes both affluent and disadvantaged communities, by helping protect the coastal environment through stormwater pollution prevention. The SWIP also produces an alternative, sustainable water supply for both non-potable reuse and groundwater replenishment producing carbon footprint reductions, climate resiliencies, and overall cost savings compared to imported water for all Santa Monica residents.	Stantec

¹ Pikes Peak – America’s Mountain. (2021). *Our Road to Sustainability*. <https://coloradosprings.gov/pikes-peak-americas-mountain/page/our-road-sustainability-pikes-peak>

² Alaska Department of Environmental Conservation. (2022). *Alaska Water and Sewer Challenge*. <https://dec.alaska.gov/water/water-sewer-challenge/>

Los Angeles County Sanitation District's (LACSD) Diversion Program, California	LACSD's diversion program accepts stormwater and urban runoff for treatment and recycling and allows for smaller systems, some in underserved communities, to participate in and contribute to larger regional water recycling efforts. LACSD coordinates with the LA County Safe Clean Water Program, which provides funding for multi-benefit stormwater projects including diversions to LACSD facilities and prioritizes funding for disadvantaged communities.	Stantec
Cloudcroft, New Mexico	This small, remote mountain resort community pursued water reuse to help address the stress of drought and tourism on their water supply. The project was started over 10 years ago and is just now coming to full fruition.	CDM Smith
Town of Amherst, Massachusetts	The Amherst Wastewater Treatment Plant reclaims effluent to reduce potable water consumption in response to drought.	CDM Smith
Sterling Creek Water Reclamation Facility, Georgia	The Sterling Creek Water Reclamation Facility provides 3 MGD of treated effluent to the Elbow Swamp, sustaining a constructed wetland system and providing water for irrigation. This project exemplifies how a community with restricted water withdrawals can implement innovative water infrastructure and protect a critical wetland.	World Bank
Shakopee Mdewakanton Sioux Community, Minnesota	The Shakopee Mdewakanton Sioux Community (SMSC) in Minnesota operates a water reclamation facility, using reclaimed water for irrigation and discharge to wetlands for wildlife habitat. Facility construction took only 18 months to complete, and this innovative project strengthened sovereignty and created more resources for the SMSC.	World Bank
Microsoft and City of Quincy, Washington	Microsoft teamed with the City of Quincy to build a water treatment plant, which provides reclaimed water for cooling at data centers and injection into the local aquifer.	World Bank
Constructed Wetlands for Water Reuse and Stormwater Management, Oklahoma	These constructed wetland designs integrate water reuse and stormwater management to enhance water supply and multi-purpose project benefits	World Bank
The Living Machine of the Corkscrew Swamp Sanctuary, Florida	The Living Machine treatment system at Corkscrew was the first to be permitted in Florida. Wastewater enters septic tanks and is treated with microbial digestion before entering the Living Machine, where open container tanks are filled of plants and water flows over the marshlands into a chlorination tank. This is a small-scale, innovative project that addressed the challenge of tourism impacts in an environmental sanctuary.	World Bank
U.S. Coast Guard Headquarters, Washington, DC	The green roof at the U.S. Coast Guard Headquarters intercepts, stores, and treats stormwater—up to and including water from a 95th percentile storm—and uses it for onsite irrigation and water features.	EPA

<p>City of Rupert, Idaho and Hayden Area Regional Sewer Board, Idaho</p>	<p>Beginning in 1989, Idaho began issuing permits for water recycling and issued the first municipal land application/reuse permit to the City of Rupert to irrigate 407 acres of agricultural fields. As the program grew, a wastewater land application technical working group was formed in September 1993 to expand the original guidelines.</p> <p>During the irrigation season, 100% of effluent is used to irrigate 486 acres of alfalfa and poplar—crops that uptake a lot of water and are harvested frequently. The main motivation for agricultural irrigation is to avoid discharge of the wastewater effluent to a sensitive receiving body during periods of low-flow.</p>	<p>EPA</p>
<p>City of Oswego, Kansas</p>	<p>The City’s treatment system consists of a three-cell lagoon with a total surface area of 33.8 acres. The lagoon is designed to handle 305,000 gallons/day during normal flow and 709,000 gallons/day during wet weather flows. During warmer months, some of the lagoon effluent is disinfected with chlorine, pumped to a holding pond and used to irrigate fairways and greens at the Oswego Golf Association golf course. Using treated effluent instead of treated drinking water to irrigate the golf course saves the city a considerable amount of money each year.</p>	<p>EPA</p>
<p>Water Conservation and Reuse Grant Pilot Program, New York and Comprehensive Water Reuse Program, New York</p>	<p>These reuse incentive programs provide financial reimbursements to property owners to install water efficiency technologies and a 25% water and wastewater fee discount to customers who install onsite reuse systems that reduce building consumption by at least 25%, respectively.</p>	<p>EPA</p>
<p>Cox Automotive, Georgia</p>	<p>Cox Automotive intends to use car wash wastewater to wash/detail cars and clean shop floors. The reuse project is in progress; engineering is complete, and processes have been installed, but operations where reuse is occurring is pending. Water treatment consists of the following physico-chemical processes: filtration, oil and grease separation, and carbon absorption. The facility has the capacity to treat up to 6,000 gallons per day.</p>	<p>GHD</p>
<p>Loudoun Water, Virginia</p>	<p>Loudoun Water installed purple pipe to their new developments with the goal to serve 10 percent of their demand through reuse. The project started about 15 years ago and services multiple data centers. Loudoun Water connected administrative building toilets and has long-term plans of supplemental storage for water treatment supply. Loudoun Water serves more than 40 facilities and, as of 2021, delivered 675 million gallons of reclaimed water.</p>	<p>GHD</p>

Fairfax County, Virginia	Fairfax County installed a water reuse facility about eight years ago and serves the local Resource Recovery Facility with three million gallons per day, as well as golf courses and some other small users. They also have bulk filling for construction dust control and for landscaping.	GHD
Administrative Building in Alexandria, Virginia	AlexRenew installed a water reuse facility about seven years ago to serve their new administrative building for bathrooms and water feature, potential users in Alexandria, construction dust control, and local bulk fill users.	GHD
City of Pico Rivera, California	This project is a state of the art advanced indirect potable reuse facility for groundwater recharge. The project incorporated a community center to benefit the community of Pico Rivera. The Pico Rivera community has a population of about 64,000, and approximately 38 percent of residents live below 200 percent of the federal poverty level. ³	GHD

³ Los Angeles County. (2018). *City and Community Health Profiles: Pico Rivera*. <http://publichealth.lacounty.gov/ohae/docs/cchp/pdf/2018/PicoRivera.pdf>