

AUSTIN PERMITTING AND DEVELOPMENT CENTER

In the summer of 2020, the City of Austin completed construction of its new Permitting and Development Center. Located in the Highland Park redevelopment in central Austin, the 260,000-square foot office and conference space can accommodate up to 1,000 employees and their customers. The new building includes two onsite water reuse systems, which have been named to help the public understand how they work. OSCAR (On-Site Collection and Reuse) collects A/C condensate and rainwater to reuse for irrigation and landscape maintenance around the building. CLARA (Closed-Loop Advanced Reclaimed Assembly) treats the building's wastewater and recycles it for toilet and urinal flushing. Together, OSCAR and CLARA are helping the City of Austin to save over one million gallons of drinking water each year, reducing the site's potable water use by 75%.

OSCAR can collect and store 40,000 gallons of rainwater and A/C condensate from the building. Before the water enters the storage tanks it passes through 350-micron filters capable of handling flows up to 1,500 gallons per minute. The filters are self-cleaning, meaning less maintenance to perform to keep the system running. The collected water is used for irrigating the outdoor landscape and to occasionally send water to CLARA to help dilute solids and aid in the blackwater treatment. CLARA collects up to 5,000 gallons per day of wastewater from

the building's sewers, treats it using advanced membrane technology, and then recycles the clean water back to the building to flush toilets and urinals. A detailed description of CLARA's treatment system can be found [here](#). CLARA is designed with overflow piping to the City of Austin's sewer mains so that wastewater can still be treated when CLARA is offline for maintenance. Both OSCAR and CLARA are backed up by the City of Austin's potable water supply, and are metered to track how much potable water is being saved by the systems.

Drivers

The City of Austin intentionally chose the Permitting and Development Center, where the majority of customers to the building are individuals seeking to build, demolish, remodel or perform any type of construction in Austin, as the site for the demonstration of onsite water reuse systems. Austin has identified onsite water collection and reuse as a strategy in its long-term water supply plan, Water Forward, to help extend the city's core water supplies from the Colorado River and Highland Lakes. The demonstration project is meant to encourage other building owners and developers to include onsite water reuse in their projects. There are signs throughout the property to educate customers on the innovative water reuse systems used in the building.



System Cost

The total cost to design and construct CLARA was \$1.7 million, which included the cost of pipe to supply non-potable water to the building's toilets and urinals. The total cost to design and install OSCAR was \$625,000.

Operation and Maintenance

CLARA will be operated and maintained by Austin Water's certified wastewater treatment plant operators. These operators are licensed by the State of Texas and require the same certifications as Austin Water's municipal wastewater treatment plants.

OSCAR is operated and maintained by a third-party facility management contractor. Operations and maintenance needs for OSCAR are low and include basic leaf and debris clearing in the filters and gutters, and the occasional maintenance of pumps.

Ownership

The systems are owned by the City of Austin.

Refence Contact

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Austin Water

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Project Status:	Completed
Development Size:	260,000 sq.ft.
Onsite water sources:	Rainwater, A/C condensate, Blackwater
End uses:	Toilet flushing, Irrigation, Landscape water feature
Treatment train components	Cartridge filters, Membrane Bioreactor
Potable water savings:	Up to 5,000 gallons/day; 1,500,000 gallons/year
Estimated utility savings:	\$11,000
Drivers:	Demonstration project, public education, and promotion of onsite water reuse
System Cost:	\$1,700,000 for blackwater system including \$145,000 for dual-distribution plumbing; \$625,000 for rainwater and condensate system
Annual O&M Cost:	TBD
Owners	City of Austin