

Environmental and Water Resources Engineering Seminar Series Presents:

Thursday, January 16th 2025, 3:30-4:30pm



Zoom Link: <https://utexas.zoom.us/j/94105241294>

North Austin Reservoir and Pump Station Improvements - Upgrading Austin's Water Infrastructure to Enhance System Reliability: A Case Study

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Abstract

The presentation will showcase an important project for Austin Water, the North Austin Reservoir and Pump Station project. The existing facility originally featured a 10-million gallon tank or reservoir, constructed over 100 years ago and in need of replacement, and a distribution pump station, also aging and approaching the end of its useful life. Austin Water contracted CDM Smith to provide design services for replacing the reservoir and pump station. The project, now under construction and approaching startup, features a new 8-million-gallon prestressed concrete reservoir and 50 million gallon per day (MGD) vertical turbine pump station housed in a new building. The reservoir has a smaller footprint with increased height to reduce site impervious cover and improve stormwater management. Located in a high traffic area, the reservoir was also designed with a low-profile dome and parapet walls to enhance site aesthetics. Computational fluid dynamics helped optimize the placement of the inlet and outlet pipes, eliminating the need for baffle walls and resulting in cost savings. Vertical turbine pumps were selected for their hydraulic advantages and ability to drain the reservoir without cavitation. The presentation will cover the planning, design, and construction of the new reservoir and pump station facility.



Background

Melissa Woo is an environmental engineer and Project Technical Leader at CDM Smith with 13 years of experience. She obtained her bachelor's degree in environmental engineering at Cal Poly San Luis Obispo and her master's degree in water quality engineering at UC Berkeley. She has a wide variety of experience in water and wastewater treatment and infrastructure projects, including planning, design, construction services, and program management type projects.