

Saddle Creek Retention Treatment Basin (RTB)



RTB Construction: Through Q3 2021 Outfall Channel Construction: Through Q1 2022 Operations Building Construction: Through Q4 2022 Substantial Completion: Q1 2023 Final Completion: Q2 2023

For a virtual tour of the completed facility design, visit **omahacso.com/projects/saddlecreekrtb**





Throughout the summer and fall of 2021, construction will continue. Above-ground improvements include a building to house controls, grit and screening equipment, and chemicals. The building will provide office space for full-time staff, some additional city offices and maintenance access to the facility.

An odor control system will also be installed to address the risk of odors from the facility. The site will include fencing and lighting for security purposes.

We expect the remaining construction activities to have a minimal impact to the surrounding neighborhoods, which include concrete and material delivery and some general construction noise.



Facts and figures:

	Total	Amount Completed as of April 2021
Cast-in-place Concrete	28,000 cubic yards	70%
Precast Concrete	421 panels	
Structural Steel	218 tons	
Reinforcing Steel	7 million pounds	70%
Concrete Forms	400,000 square feet	70%
Excavation	231,000 tons	86%
l-Pile	68,500 linear feet	100%



City of Omaha, Nebraska Jean Stothert, Mayor

Note: Comparison of Comparison

05-2021

The Saddle Creek Retention Treatment Basin (RTB) facility will reduce combined sewage overflows discharged to Little Papillion Creek.

The Saddle Creek RTB, a wet weather treatment facility, is an important project for Omaha's water quality improvement program, called Clean Solutions for Omaha (CSO!).

The project site was chosen for its proximity to CSO 205, a combined sewer outfall along Little Papillion Creek. Building a basin here first and foremost will reduce the discharge of untreated combined sewage to the creek, but it also utilizes limited-use land, as the site was previously a construction and debris landfill. Additionally, this project allows the City to retire a 50-year-old grit removal basin.

Much of the sewer system in the eastern parts of Omaha is a combined sewer system, meaning stormwater and sanitary sewage are conveyed through a single pipe. During wet weather events, like rain or snow melt, our sewer system can be overwhelmed due to extra stormwater in that single pipe. This can cause a combined sewage overflow into our river and streams. In this area of Omaha, wet weather events can cause untreated combined sewage to overflow into the Little Papillion Creek from the sewer outfall located near 64th and Center - just south of the University of Nebraska Omaha (UNO) Baxter Arena. The purpose

PROJECT TIMELINE



This project is part of the CSO Program's requirement to capture or treat 85% of wet weather volume.

of the new wet weather facility is to capture, treat and store combined sewage during wet weather events, with some conveyed to the Papillion Creek Water Resource Recovery Facility for treatment. This reduces untreated combined sewage entering the creek.

With the new facility, during wet weather events, combined sewage will be diverted from an existing outlet channel that flows to Little Papillion Creek to the RTB headworks, where large materials like cans, rocks, tree branches, floatable solids and other heavy material such as sand are removed using a grit pit and mechanical screens. Once these materials are removed, a disinfectant is added.

If a small wet weather event occurs, the combined sewage will be retained in the facility's underground basin and then sent to the Papillion Creek Water Resource Recovery Facility (PCWRRF) for treatment once the wet weather event ends. If the underground basin fills up due to a larger wet weather event, a decholorination agent is added to the combined sewage and stormwater, which is then sent through an overflow channel and into the creek.

PROGRESS TO DATE



190,000 tons of soil excavated for 3.3 million gallon basin



13 miles of steel beams support the facility's structure



2,500 truckloads of concrete poured for the basin and facility walls





Over 190.000 tons of soil have been excavated to create space for the construction of the 3.3 million gallon basin. Once completed, the basin will capture and treat a combined sewage flow rate of 160 million gallons per day.

Steel beams have been driven into the foundation to support the facility's concrete structure. These 848 steel beams (approximately 13 miles in total) support the weight of concrete, water, soil and other building materials. In Q1 of 2021, all of the pile driving was completed.

The concrete work for the channel and diversion structure was completed in 2020.

Construction from summer 2020 to fall 2021 is primarily focusing on placing rebar and concrete pours. Approximately 25,000 cubic yards of concrete, roughly 2,500 truckloads, will be used to construct the basin and the facility's walls.



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Winter 2020 Completed remaining construction of 60-inch sanitary sewer