

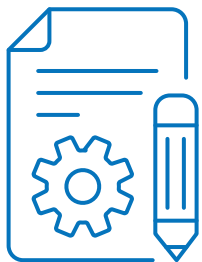


Long Term Control Plan Updates

Lead to Improved Efficiency for Omaha's CSO Program

Approximately every five years, the Long Term Control Plan (LTCP) is updated to make sure future water quality improvement projects are as efficient and cost effective as possible.

The last update to the Long Term Control Plan (LTCP) occurred in 2014. In 2018, the Program Management Team began exploring possible plan modifications through an extensive optimization effort. This effort used state-of-the-art modeling tools and techniques to review completed, current and future projects. This effort resulted in the identification of various alternatives that have been incorporated into the LTCP Update, due in March 2021.

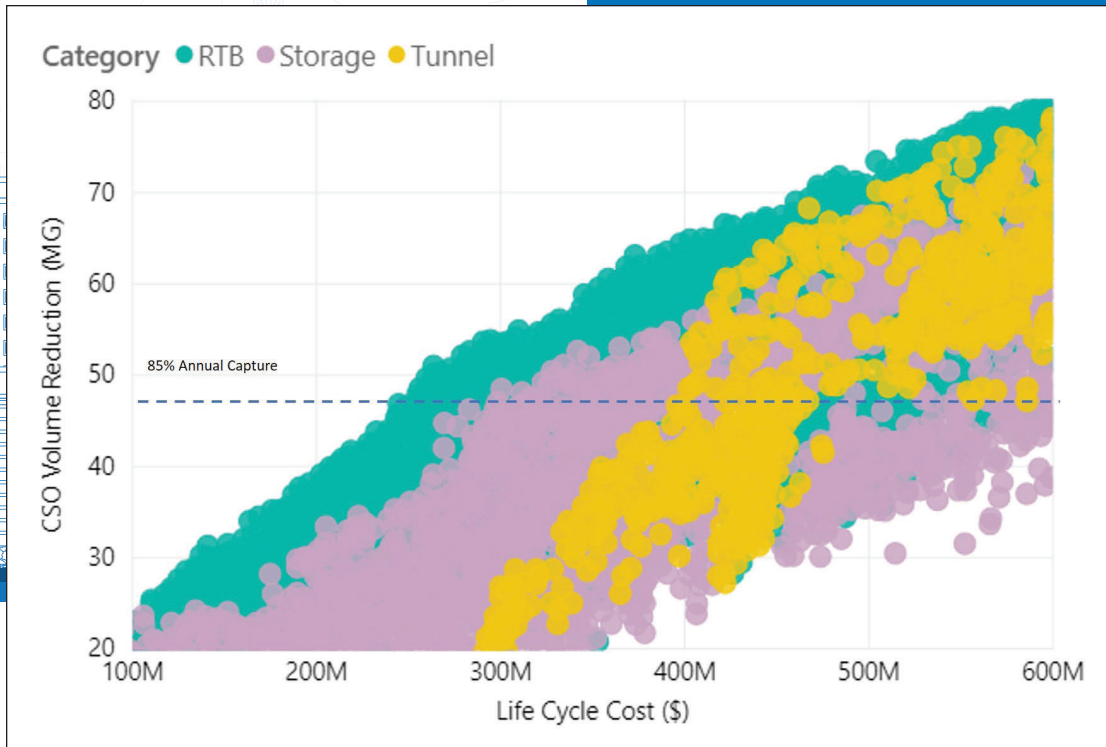


More than 100,000 alternatives to capture wet weather volume and

reduce combined sewer overflows were evaluated with optimization software and the Program's model of the collection system. Leveraging the team's knowledge of prior, proven CSO projects, alternatives were narrowed down to three beneficial options and new or updated technologies for more detailed evaluation. The selected preferred alternative would replace a planned deep tunnel system with high-rate wet weather treatment and storage facilities that could be achieved at a lower projected cost.

Other planned CSO projects were examined through the LTCP Update effort to determine if projects could be removed, built upon, redesigned or further evaluated to meet the Program's goal of capturing 85% of wet weather volume.

In March, the City submitted the 2021 LTCP Update to the Nebraska Department of Environment and Energy for review. Approval is anticipated in

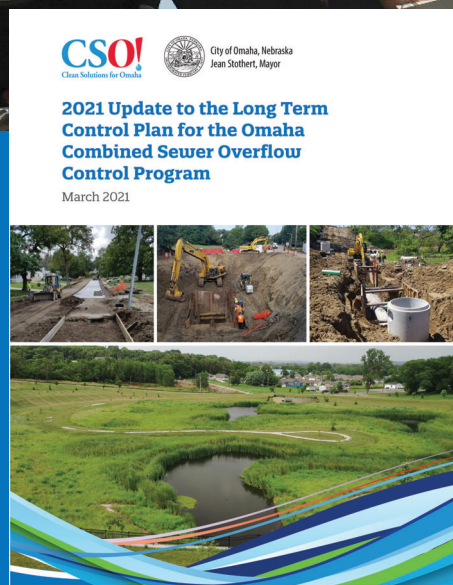
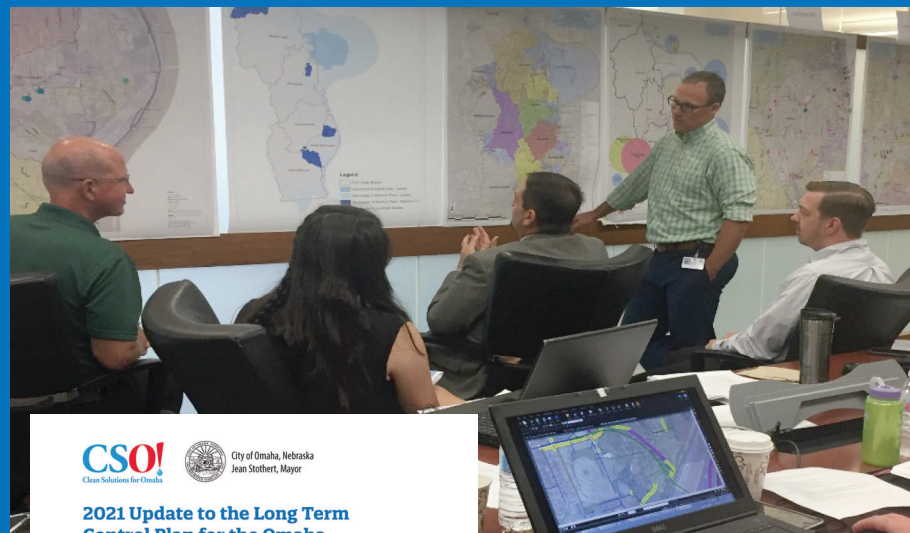


Trade-off curves were used to capture and visualize general trends between cost and CSO volume across all alternatives. The figure (left) shows a trade-off curve summarizing output data produced during the optimization process. Each point represents an alternative, and colors are based on the predominant control technology in each alternative. The selected preferred alternative would replace a planned deep tunnel system with high-rate wet weather treatment and storage facilities (retention treatment basins) that could be achieved at a lower projected cost.

summer or fall of 2021. Looking ahead to the 2026 LTCP update, the plan will be confirmed or refined based on performance of the Saddle Creek Retention Treatment Basin Project, currently under construction.

Additionally, the City's Public Works Department is finalizing a Master Plan to improve its two water resource recovery facilities over the next 20 years. Upgrades are needed to continue to serve the growing metro area and meet the regulatory requirements regarding discharges to the Missouri River.

A Cost of Service Study will soon begin to define how to best distribute costs to operate and maintain wastewater collection and treatment systems across the customer base. With cost savings realized through CSO Program efforts to date and sound financial practices established by the City's Finance Department, future sewer rate increases are anticipated to be less than what was previously forecast.



In March, the City submitted the 2021 LTCP Update (at left) to the Nebraska Department of Environment and Energy for review. As part of the update, engineers and other consultants studied more than 100,000 high-level alternatives (above) through an extensive optimization effort.