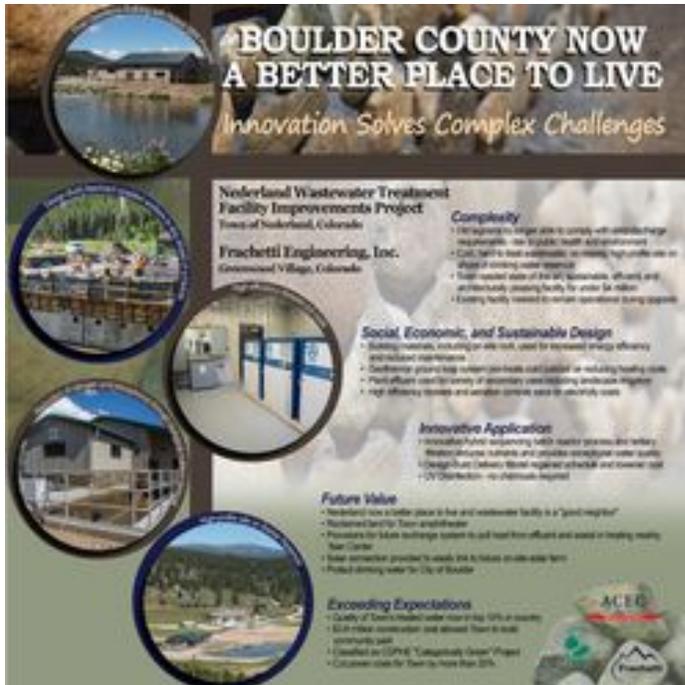


2014 ACEC Colorado Engineering Excellence Award Winner - Wastewater



Frachetti Engineering, Inc. was recently awarded their second American Council of Engineering Companies (ACEC) Colorado Engineering Excellence award, this time for the Nederland Wastewater Treatment Facility Improvements Project.

The mountain community of Nederland, CO was faced with a regulatory mandate to replace their aging and non-compliant lagoon wastewater treatment facility which sat on the shores of Barker Reservoir and supplied drinking water to the City of Boulder. However, after completing the initial project design in early 2011, the construction bids came in at nearly \$7 million, which was \$2.5 million over the Town's budget. The Town found itself in a stalemate: They needed the project but lacked the financial capability. In early 2011, the Town retained Frachetti Engineering, Inc. (FEI) to break the stalemate and help rescue the stalled project.

FEI and the Town worked hand-in-hand to re-design and deliver an improved, innovative, and cost-effective facility upgrade using a design-build approach that not only met the \$4.5 million budget; but also included advanced treatment processes for nitrogen and phosphorus treatment and higher quality effluent. The revised project also met the Town's energy efficiency and sustainability goals and qualified for a 0% interest rate SRF loan as a "100% Categorically Green" project.

The "green" and innovative elements integrated in the new facility include a hybrid sequencing batch reactor process; tertiary filtration to reduce nutrients; a geothermal ground loop to pre-heat HVAC system air and reduce heating costs; the use of on-site river rock for building exteriors;

and reclaiming plant effluent for internal facility water needs rather than potable water. This project resulted in the lowest possible carbon footprint while cutting power costs by over 30% and treated water of quality in the top 10% in the country. The Town of Nederland and downstream users will reap the benefits of this innovative and cost-effective project for many years to come.