Team Project Overview

1. The University of Colorado purchased 308 acres of land in an unincorporated area of south Boulder adjacent to the intersection of Highway 36 and Table Mesa and extending west almost to SH 93. Approximately 100 acres of this site has been deemed “developable,” and the Boulder campus is considering various uses. One option is dormitories with related facilities (food service, recreation) that would house 5,000 students. The site has no water or sanitation facilities. Sanitation is a particular concern since the site has a high groundwater table, sensitive wetlands, and surrounds South Boulder Creek, an environmentally sensitive stream which is also a water supply for Towns of Louisville and Lafayette. This project will develop and consider alternatives for the sanitation system for the development of the South Campus site. **Client: University of Colorado, Boulder**

2. The Lone Tree Creek Wastewater Treatment Plant (LTCWWTP) in Arapahoe County is a secondary wastewater treatment that uses a membrane bioreactor (MBR) treatment process. The owner, Arapahoe County Water and Wastewater Authority (ACWWA) wants to expand the plant from its current capacity of 2.4 MGD to 3.6 MGD with options to expand to 7.1 MGD in the future. They will reclaim treated wastewater for use in irrigation and other non-potable non-contact uses as well as meet standards for discharge into the Cherry Creek Basin. This project will develop and compare alternative advanced treatment processes, using a variety of criteria including performance, cost, product quality, and environmental impact. **Constraints include very stringent discharge standards for Cherry Creek Reservoir as well as regulations for reuse of treated wastewater effluents. Clients: Arapahoe County Water and Wastewater Authority and Richard P. Arbor Associates.**

3. The Boulder County Health Department has been conducting an inventory of on-site wastewater disposal systems in the County, especially focusing on older systems which have never received an official permit or been inspected. Of special concern are areas where there are clusters of these systems which have the potential to impact the water quality of surface and/or ground water. One community of fewer than 200 residences has a significant fraction of the septic tank-leachfield (“on-site”) wastewater treatment systems that are unapproved and are 26 to more than 50 years old, raising concerns about their integrity and potential for contamination of the nearby surface water and groundwater. This project will use data collected by the County to assess the status of the on-site systems and consider alternatives for either on-site or community wastewater treatment. **Clients: Residents and Boulder County Health Department.**