



Wastewater Engineering: Studies and Masterplans

- **201 Studies**
- **Inflow, Infiltration, and Flow Studies**
- **Modeling Analyses**
- **Feasibility Studies**
- **Masterplans**

WEI has performed 201, inflow and infiltration, and feasibility studies. Projects involved line televising and flow monitoring (WEI owns three flow monitors) and system modeling. Project conditions included high ground water, aerial and buried river crossings, and existing and proposed lift stations. Evaluations encompassed conventional and various alternative sewage systems including flat grade sewers, grinder pressurized, septic effluent pumped (STEP), vacuum, and other systems. Masterplans involved modeling, capacity analyses, projections, and recommended phased upgrades.

Selected Projects



Northern Gila County Sanitation District, Payson, AZ

Study involved 24.9 square miles and included analyses, projections, and recommended priority and phased upgrade improvements through build-out conditions.

North Delta Sewer Feasibility Study, Delta County, CO

Studied 3.5 square mile area, investigating conventional and various alternative sewage systems, including flat grade sewers, grinder pressurized, septic effluent pumped (STEP), and vacuum systems.



Fruitvale Water & Sanitation District Study, Grand Jct., CO

Televised and evaluated lines, monitored system flows, estimated system-wide build-out flows, determined Manning "n" values of sewers, and evaluate line capacity.

201 Study, Red Cliff, CO

Performed 201 sewer study for the town, including inflow and infiltration evaluation and proposed reduction and improvements.



Combined Sewer Separation Master Plan, Grand Jct., CO

Analyzed 3.75 square miles of downtown Grand Junction for separation of combined sewers and stormwater management master plan. Project involved modeling and analysis of 10 subbasins with approximately 60,000 feet of pipeline and \$12,000,000 worth of improvements. Masterplan required coordination with the City, railroad company, utility companies, and several state and federal agencies.

Country Club Park, Grand Jct. CO

Sewer feasibility study involved 65 lots, considering shallow and deep conventional sewers, septic effluent pumping (STEP) systems, and grinder pressure systems.

D Road Interceptor Feasibility & Cost Study, Clifton, CO

Study involved conceptual plan and detailed profile of 25,800 linear feet of 18 inch to 30 inch sewer line, with crossings of another district's sewerlines, storm drain and large water lines, and five major drainageways, and detailed costing.

Community Masterplan Update (2020 Plan), Fruita, CO

Evaluated sewer system, made projections, identified systematic upgrades, and updated the sewer master plan for a community with population of 8000.

Scenic School Interceptor, Grand Junction, CO

Feasibility study involved two miles of interceptor sewerline, one under-river crossing, two over-river crossings, and a lift station.