

Design of Hydraulic Structures

ACE has conducted numerous projects involving the planning, conceptual design, final design, and construction of large and small flood control structures, water control and supply structures, erosion and sediment control structures and bridges. Project experience includes feasibility studies, conceptual design, final design, and development of construction plans, specifications, and construction documents. For many projects, staff members have been involved in the construction supervision of hydraulic structures.

Representative ACE projects include:

- *Etna Diversion Structure, Etna, WY:* ACE engineers completed the rehabilitation and design of a concrete irrigation diversion dam on the Salt River. The project included the design of the diversion dam, headgate and fish passage structure.



**Etna Diversion Structure
Salt River, Wyoming**

- *Tucker Gulch Hydraulic Evaluation, Golden, CO:* This project included the design and stability analysis of a series of drop structures in Tucker Gulch, Golden, Colorado.

- *Goshen Irrigation District Rehabilitation Study, Torrington, WY:* ACE engineers completed the hydraulic evaluations and preliminary rehabilitation design efforts of existing structures were conducted for the Goshen Irrigation District. This work was conducted in order to assess the potential for increasing canal capacity and to determine capacities of existing structures including siphons, spillways and tunnels.

- *Green River Municipal Intake Structure, Green River, WY:* ACE staff participated in the evaluation and design of a municipal intake system and diversion structure in the Green River near Green River, Wyoming.

- *Big Goose Creek Drop Structure, Sheridan, WY:* An existing 8-foot vertical drop in Big Goose Creek in Sheridan, Wyoming was replaced with a series of four low-head grouted riprap structures. These structures were designed to be stable during the 100-year flood, reduce physical hazards, and to be aesthetic, integral parts of the river environment.



**Green River Municipal Intake Structure,
Green River, Wyoming**