

Three Baseline Cross-Sections in the Big Gypsum Study Area: Dolores River, CO

By Rob Anderson

June 30, 2010

Materials and Methods

Study site

The Big Gypsum Study Area (BGSA) is located 72 miles downstream of McPhee Dam at an elevation of 5300 ft. Big Gypsum Valley is also 18.5 miles downstream from the confluence of Disappointment Creek, a major contributor of sediment to the Dolores (Richard et al. 2007).

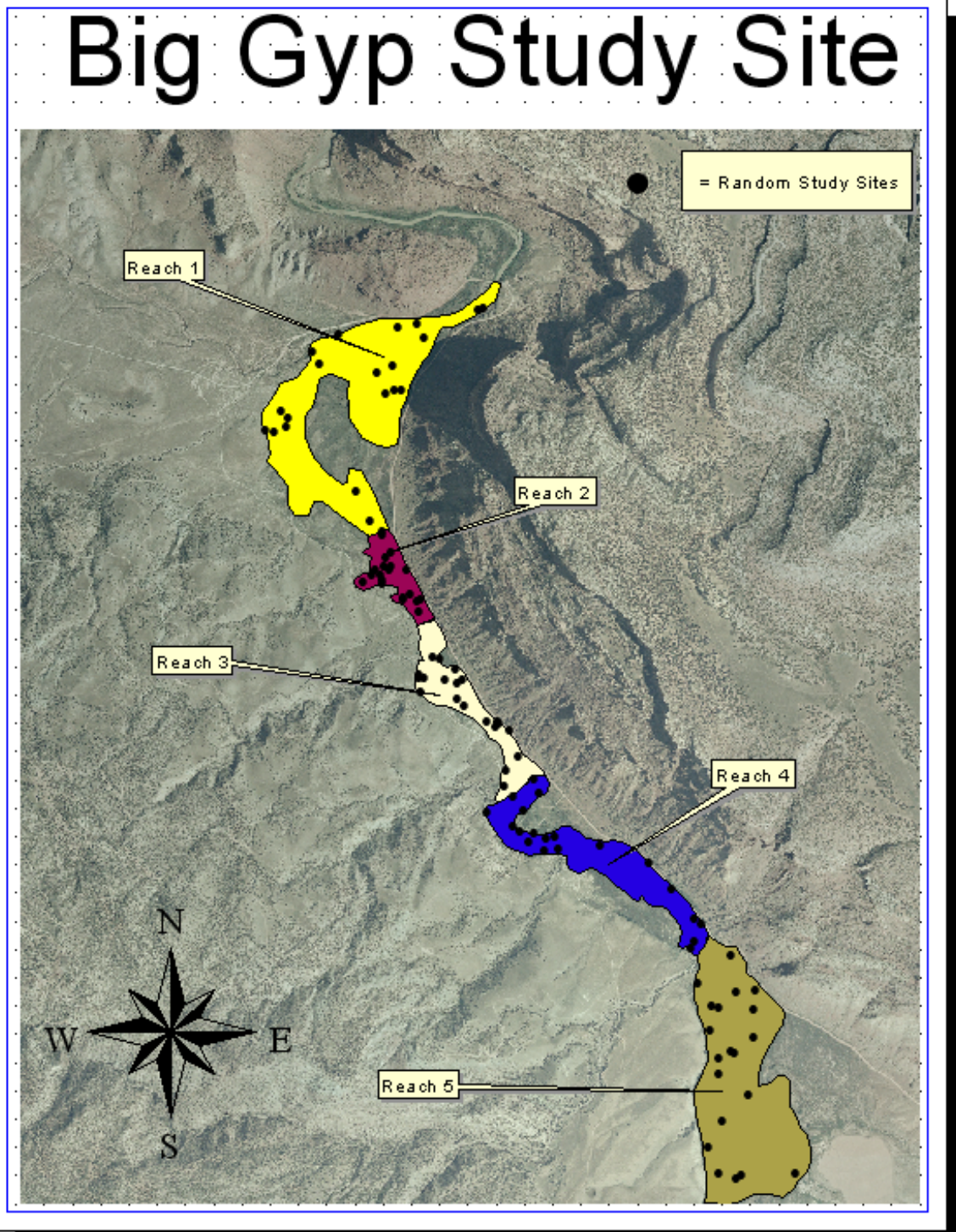
The Big Gypsum Study Area has been divided into five reaches (Figure 1). The reaches were identified so that each reach has characteristics similar to those of five distinct reaches of the Lower Dolores River between McPhee Dam and the confluence with the San Miguel River.

Cross-Sectional Analysis

In order to monitor channel dimensions and migration, three cross-sections were surveyed within the study area. These cross-sections will be surveyed annually.

All cross-sections and transects in this study were established perpendicular to the river at each location, extending into the upland vegetation and so encompassing all riparian vegetation.

Figure 1: The Big Gypsum Study Area Divided into 5 Reaches.



Results and Discussion

Cross-Sectional Analyses

The cross-sectional analyses are shown below in figures 2-4 below. The graphs show the elevation change in the channel looking downstream.

Figure 2:

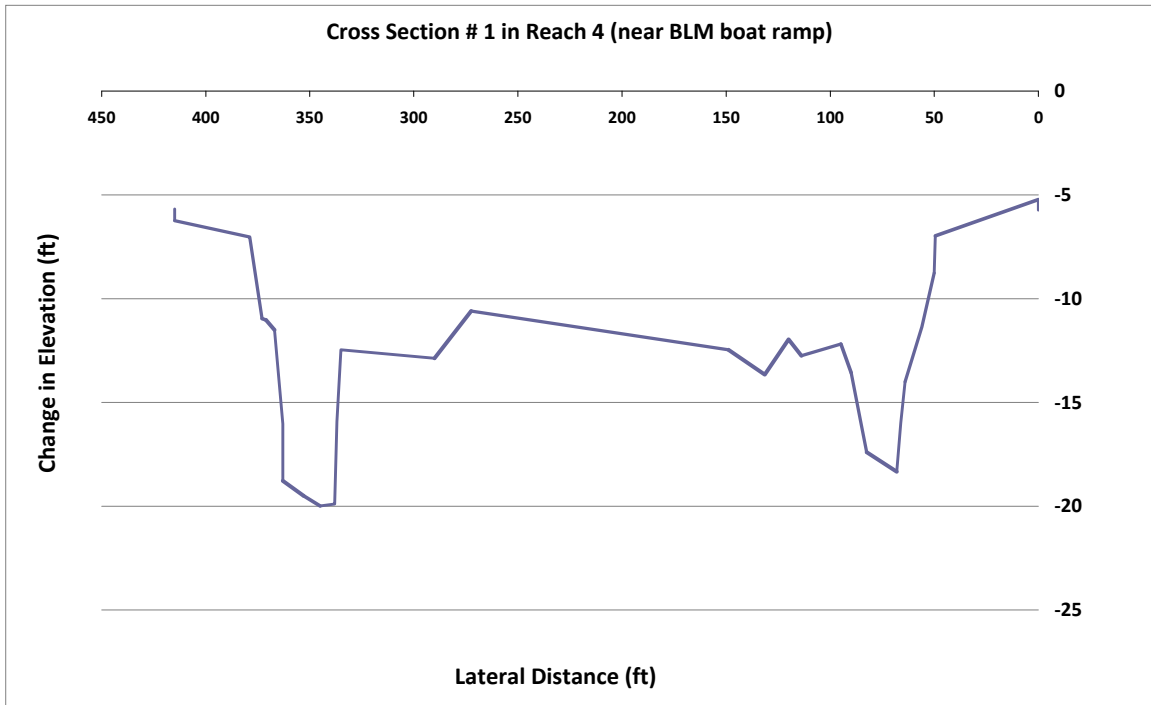


Figure 3:

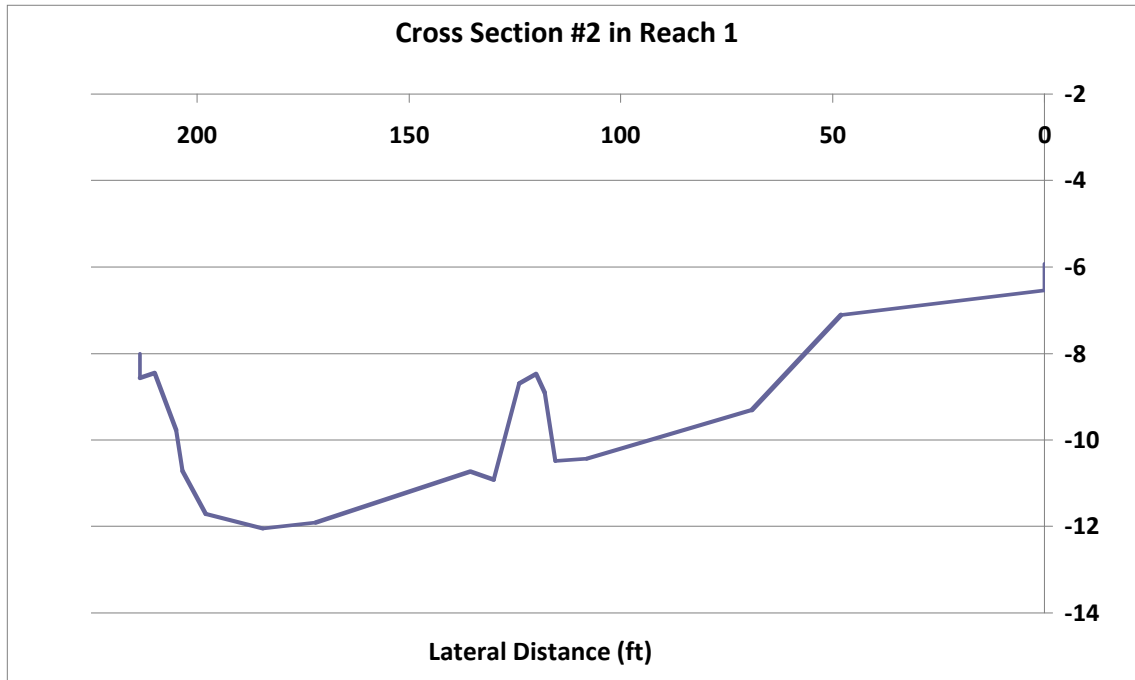
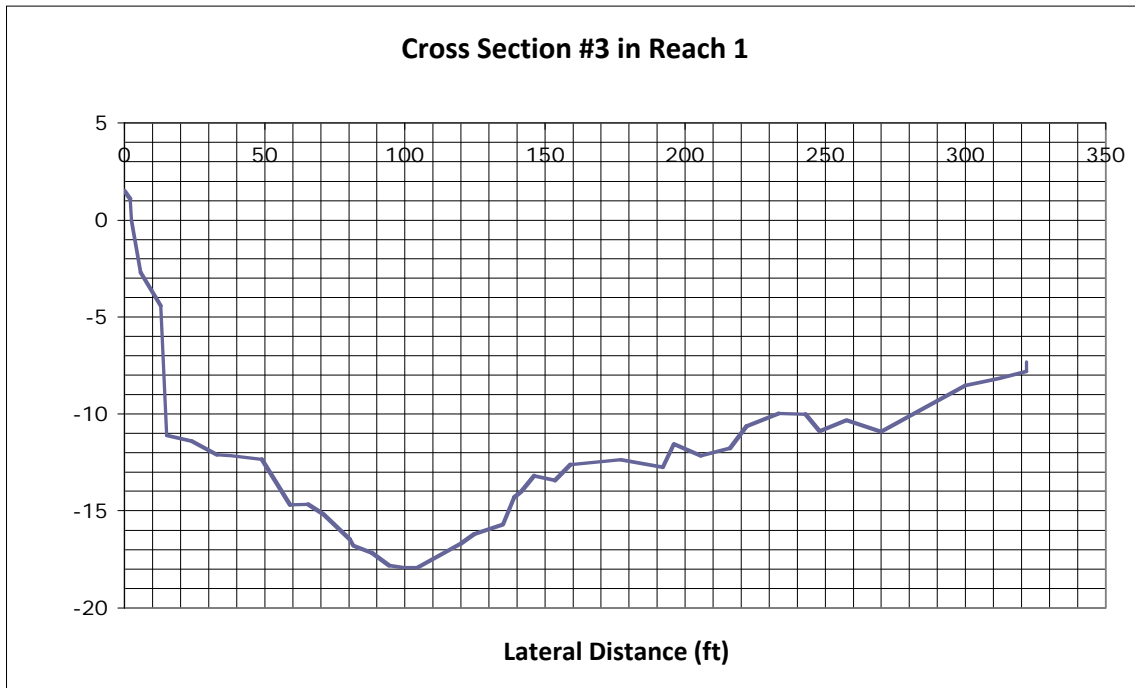


Figure 4:



Sources Cited

Richard, G.A., and R.M. Anderson. 2007. Channel-Forming Discharge on the Dolores River and Yampa River, Colorado. Colorado Division of Wildlife Technical Publication No. 44.