

Services

- Hydrology/Flood Flow Prediction
- Hydraulic Modeling/Flood Studies
- Bridge, Culvert, Diversion, Structure and Canal Design
- Scour Analysis and Bank Protection Design



DAM ON LABARGE CREEK
Lincoln County, WY



SURVEYING FOR FEMA MAP UPDATES
Teton County, WY



DIVERSION STRUCTURE, EDEN CANAL
Sublette County, WY



GLACIER NATIONAL PARK - DIVIDE CREEK
Flood modeling and risk analysis for NPS facilities

Nelson Engineering has an expert understanding of hydrology and hydraulics as our bridge and hydraulic structure designs demand. We accurately model flood flows and their impacts on bridges, subdivisions, and existing infrastructure. We use the industry standard program, HEC-RAS, to model flood flows.

Hydraulic modeling is only as good as the hydrologic regime that the model relies upon. Our experience brings us a full understanding of hydrologic uncertainty and risk and how they affect your project. Nelson Engineering believes that risk for critical structures dictates multiple methods of analysis be used to determine design flood flows. Hydraulic flow structural design skills applied in conjunction with accurate determination of worst-case flood conditions result in hydraulic structures that last.

We couple modeling and floodplain regulation expertise to secure updates and revisions to FEMA floodplains and to permit infrastructure construction in the floodplain.



KILLPECKER CREEK BRIDGE
Rock Springs, WY
Hydraulic modeling, floodplain permitting, and scour analysis