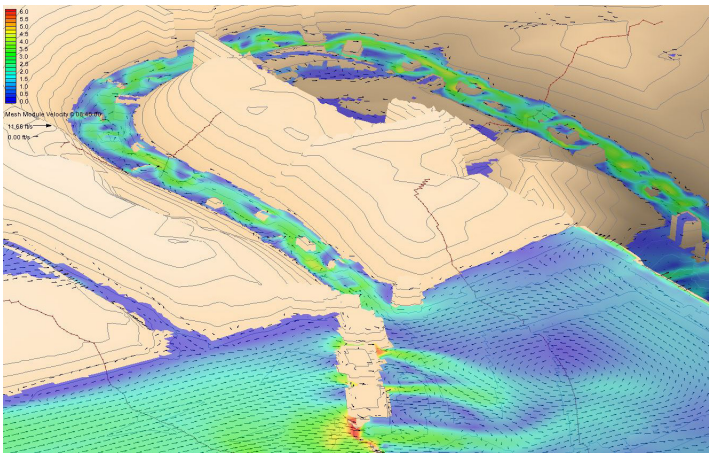
Elk Creek Fish Passage Project (2017-2018)

Name of client: Trout Unlimited,
Owner: Ware and Hinds Diversion Co.

Project Location: New Castle, CO (Elk Creek)
Name of project manager/engineer: Quinn Donnelly, PE

Brief description of project – RiverRestoration led the design, survey and construction oversight effort for improving fish passage around the 6-foot-tall Ware and Hinds Diversion Dam on Elk Creek in New Castle, Colorado. RiverRestoration worked collaboratively with the diversion company, local landowners, Colorado Parks and Wildlife, and Trout Unlimited to define project goals and develop project details. The project includes a 200 foot long fish passage channel and a gate system to function in conjunction with the existing diversion works.

Tasks associated with the project included hydrographic survey, preliminary and final design, local floodplain permitting and construction oversight. RiverRestoration utilized 1D and 2D hydraulic models to configure the bypass channel to provide reduced velocities and refugia for trout and other fish swimming around the diversion dam. The project utilized a combination of rock-ramp and boulder vertical slot weirs to provide velocities less than 5.0 feet per second, for upstream passage of brown and rainbow trout. This project opened up 3.3 additional miles of excellent trout spawning and rearing habitat on Elk Creek.



SRH-2D model output of Elk Creek Fish Passage channel around a small low head dam. This modeling exercise allows to detail the fish passage channel and identify and improve upon areas of low velocity and refugia to optimize upstream passage for all life stages of fish.

Elk Creek Fish Passage channel around the Ware and Hinds Diversion Dam in New Castle, CO

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