

PRIVATE RANCH

Trout Pond Feasibility Assessment and Design

Routt County, Colorado



Water resources assessment and planning helps a landowner balance recreational uses with protection of ecological systems.

Above its confluence with the Yampa River in Colorado, the Elk River flows from its headwaters carrying clear waters from recent snowmelt. When owners of a nearby private ranch decided to create an interconnected series of trout ponds, they wanted to ensure that the water use complied with Colorado laws governing water rights and supported a healthy watershed. Biohabitats assessed the feasibility of rehabilitating a spring, creating trout ponds, and developing aquatic habitat and riparian protection measures for the project.

For the technical review, Biohabitats compiled available records and information sources on subsurface and groundwater conditions to better describe the hydrogeologic system and how it should influence the design. Biohabitats also installed

groundwater monitoring wells and collected groundwater data to refine the design information. Available surface water source inputs including potential irrigation water on the property were also evaluated.

With a clear picture of the site's regulatory and ecological constraints, Biohabitats defined the range of hydrologic conditions suitable for a pond fishery in this location and developed a preliminary design and management scenario. The preliminary design was then used as the basis for a successful water court case to allow a change of use, which opened the way for future final design and construction phases.

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800.220.0919
www.biohabitats.com

