

# South Boulder Creek Aquatic Habitat Improvements Design-Build

Boulder, Colorado



top: Initial conditions  
bottom: After restoration

South Boulder Creek is a major stream corridor that provides significant ecological and recreational benefits for the City of Boulder. The City Open Space and Mountain Parks (OSMP) department wanted to improve aquatic habitat in approximately two miles of the creek which had suffered the impacts of water diversions,

*A diverse suite of solutions, which employs eight different design elements, restored two miles of fish habitat that had been degraded by grazing, water diversions and channel modifications.*

channel modifications, and grazing. Of particular concern was the lack of available overwintering fish habitat during low-flow winter months.

To address the low flow concerns, the City negotiated a minimum flow of 7 cfs in the winter--an improvement from the previously common low flows of 1 cfs. The Colorado Division of Wildlife (CDOW), which awarded a 'Fishing is Fun' grant to help fund the project, will stock the project area with a Whirling Disease-resistant rainbow trout (Hofer-strain) to try to establish a self-sustaining population for recreational fishing.

Biohabitats, with Budhoe's Backhoe LLC as our subcontractor, was selected as the design-build contractor for this major fish habitat restoration project. Because the

channel morphologic conditions varied within each reach of the project area, a spectrum of solutions was required. The overall approach was to enhance, create, and maximize fish habitat throughout four reaches by leveraging existing stream features and applying treatments in targeted locations to address specific morphologic issues. Techniques such as boulder clusters, a low flow meander channel, side pools, meander cut off, log pools, log wing deflectors, and woody debris clumps were used to improve aquatic habitat. Biohabitats also completed all Section 404 permitting, including biological assessments for Federally Endangered Species.

## SERVICES

- Planning
- Permitting
- Design-Build

conservation planning  
ecological restoration  
regenerative design



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