

Sylvan Dale Flood Recovery Project Summary Sheet

Project Background: The Sylvan Dale Guest Ranch (SDGR), located within the river corridor at the mouth of the Big Thompson Canyon, was severely damaged by the massive 2013 flood. The force of the flood waters and extensive sediment deposition scoured existing natural features, destroyed the Ranch's main lodge and several cabins, and severely damaged other Ranch infrastructure and nearby county roads.

The SDGR project was used as a demonstration project to showcase river restoration techniques at a small scale. Some components of the project included defining a low-flow channel to concentrate water in the river for aquatic organisms during dry times; replicating natural bedforms such as pools, riffles, glides, and point bars; placing boulder clusters in the active river channel to enhance pools and improve aquatic habitat; grading to reconnect the channel with its floodplain in order to improve conveyance of future flood waters and sediment; and revegetation with native seeds and willows. A side channel was also created as part of this project to provide additional aquatic habitat and channel complexity.

BASIC INFORMATION

- ✓ Construction dates: March – May 2017
- ✓ Funding source: DOLA CDBG-DR Watershed Implementation Grant Program
- ✓ Project design engineer: Ecological Resource Consultants (ERC)
- ✓ Construction oversight: ERC
- ✓ Contractor: Tezak Heavy Equipment
- ✓ Vegetation design: ERC
- ✓ Vegetation contractor: Western States Reclamation
- ✓ 100% private property

Weed Management:

Larimer County did not visit this site during their [2018-2021 weed management efforts](#).



BY THE NUMBERS

- ✓ Project length: 3,300 linear feet
- ✓ 9 in-stream structures constructed
- ✓ 1,150 linear feet of bioengineered streambanks
- ✓ 400 willow and cottonwood live stakes planted
- ✓ 0.6 acres seeded

For more information:
See [Section 4.10 of the Big Thompson Flood Recovery Monitoring Plan](#)

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Pre-project construction:

Before the project, the channel section was wide, shallow, and homogenous, with few natural features and limited aquatic habitat.



Post-project construction:

The project consolidated flows along the bedrock, regraded the floodplain to provide additional capacity for higher flows, and added boulder clusters to enhance aquatic habitat.

Monitoring Summary (2017 - 2021)

| | 2017 | 2018 | 2019 | 2020 | 2021 |
|--------------------------------|--|------|-------------------|-----------------------|-----------------------|
| Substrate Survey | | | | 9/2020 (BTWC) | |
| Aquatic Habitat/ Pool Area | | | | 9/2020 (BTWC) | |
| Water Chemistry | Annual (at City of Loveland WTP immediately downstream of project) (COL) | | | | |
| Benthic Macros | | | | 12/2020 (RMF/BTWC) | 11/2021 (RMF/BTWC) |
| Photo Points | | | 10/2019 (BTWC) | | 10/2021 (BTWC) |
| Flow | DWR STREAM GAGE (BTABCMCO) | | | | |

RECOMMENDATIONS

- ✓ The project was dominated by in-stream work, so tracking changes in vegetation is not a high priority. However, occasional visits from Larimer County for weed monitoring and management may be beneficial.
- ✓ CPW fish surveys and BTWC/Rocky Mountain Flycasters benthic macroinvertebrate monitoring occur regularly. Interviewing angling guides who regularly visit the Sylvan Dale Guest Ranch would provide qualitative complementary information about the fishery and associated aquatic habitat.
- ✓ Staff to monitor the head gate in the diversion side channel closely via photo point documentation and narrative descriptions to ensure that the diversion structure is functioning as intended.
- ✓ Permanent cross-section survey transects have not been established; if coalition staff opts to survey cross-sections, transects are suggested at approximately Stations 17+00 (within a riffle) and 15+00 (at the downstream end of the constructed pool).