



GRAND COUNTY

LEARNING BY DOING

2019 Notable Events

The following summary of notable events in 2019 is provided to give context to the ongoing monitoring and cooperative Learning By Doing (LBD) effort in Grand County, Colorado. This summary is accompanied by a “Monitoring Year 2019 Snapshot,” which summarizes monitoring results in the Fraser and Colorado River basins. Additional information on monitoring results for the full LBD cooperative effort area (CEA), are included in the 2019 Aquatic Resource Monitoring Report.

In 2019, LBD made significant strides in operations, monitoring, and stream restoration efforts. The following is not meant to be exclusive or comprehensive, but to highlight some of the most notable events of 2019 that may have had a positive impact on water quality.

Climate, Hydrology and Impacts

- Grand County experienced above average snowpack in 2019. The Colorado Basin River Forecast Center (CBRFC) April 1, 2019 Most Probable Runoff Forecast at Kremmling was 113 percent of average. The actual runoff at Kremmling was 129 percent of average. The highest sub-basin runoff forecast within the LBD CEA was in the Willow Creek basin at 125 percent of average, and the lowest was in the Fraser River basin at 102 percent of average. The April 1 Most Probable Runoff Forecast into Granby Reservoir was 107 percent of average.

Coordination Calls

- 2019 was the fifth consecutive year in which LBD conducted weekly water coordination calls from late May to mid September. Calls provide a forum to discuss conditions and weekly projected operations, allow LBD partners to be responsive to low flow and high water temperature conditions through coordination of environmental water releases, and foster communication, relationships, and trust amongst stakeholders.

Operations

- Denver Water Moffat Collection System spill bypasses¹ totaled approximately 42,000 acre-feet (af) during runoff season due to increased available water on the West and East Slopes. This included water diverted from the Williams Fork River basin so that water could be

¹ “Voluntary/environmental bypasses” are releases pursuant to the CRCA; “required bypasses” are releases pursuant to a permit or ROD; “maintenance bypasses” are releases to allow for maintenance; “spill bypasses” are releases as a result of a full reservoir or system constraint (full east-slope reservoirs).

bypassed for environmental benefit into the Fraser River basin on St. Louis and Ranch creeks in early June for environmental benefit. Maintenance bypasses totaled 100 af from the Fraser River Collection System.

- The Grand County Mitigation and Enhancement Coordination Plan (MECP), U.S. Forest Service (USFS) Off-license Agreement, and Section 404 Permit for the Moffat Project all have flushing flow requirements. In 2019, these flows were met or exceeded at all locations.
- Northern Municipal Subdistrict pumped more than 12,000 af from Windy Gap to Granby Reservoir, including 3,000 af for Middle Park Water Conservancy District. Unfortunately, Granby Reservoir spilled in late June and July. This included all Windy Gap water pumped in 2019 and carryover Middle Park water pumped in 2018. Granby Reservoir has spilled in 2011, 2014, 2015, 2016, 2017, and again in 2019.
- Release of 5,412.5 af from the Endangered Fish Pool in Granby Reservoir for the Upper Colorado River Endangered Fish Recovery Program was delayed from its usual August 1st start date due to wet conditions downstream that made additional water unneeded. An exchange of 833 af of the 5412 water into Wolford Mountain Reservoir aided high stream temperatures on the Colorado River above the Williams Fork confluence, while providing temporary storage for later release.

Restoration Projects

- In 2017, volunteers planted approximately 2,400 willows as part of LBD's Fraser Flats River Habitat Project. In 2019, roughly 1,300 willows were observed. Of these, approximately 50 percent were in good to fair condition. While overall survivorship of willows is satisfactory, the revegetated area could be improved with supplemental plantings in future years.
- Volunteers planted more than 2,000 willows along a one mile section of Ranch Creek in 2018. In 2019 approximately 2,000 willows were observed with 75 percent in good or fair condition. The dry year in 2018 did not affect the survivorship of the plantings as much as expected.
- Denver Water completed construction of phase 2 of its Williams Fork River Restoration Project in October 2019. Phase 2 included restoration of 0.34 miles on the Upper Reach of the project, located upstream of the Williams Fork inlet on either side of County Road 3. This compliments habitat connectivity improvements by Grand County's Aquatic Organism Passage culvert project. Phase 2 also included the 0.86-mile restoration at the Kemp Breeze State Wildlife Area. The entire project equals 2.08 miles of restoration on the Williams Fork.

Monitoring Programs

- The LBD Monitoring Subcommittee (Subcommittee) re-evaluated objectives for macroinvertebrate monitoring. During this process, 13 macroinvertebrate metrics were established to provide information to meet program objectives. The Subcommittee issued an RFP for macroinvertebrate monitoring and selected Timberline Aquatics to carry out the bioassessments.
- The Subcommittee issued an RFP for sediment monitoring and selected GEI as the consultant to conduct sediment surveys. The monitoring plan included a change to the

A new approach to managing aquatic resources

www.grandcountylearningbydoing.org

methodology for conducting pebble counts. The new methodology is more robust and adheres to Colorado Division of Water Quality guidelines for collecting sediment data to assess aquatic health.

- The Subcommittee added a new macroinvertebrate and sediment monitoring site on the Fraser River upstream of Union Pacific Railroad's (UPRR) Moffat Tunnel discharge to establish baseline conditions for comparison with a monitoring site located just downstream of the UPRR's discharge. Contingency funds were reserved for emergency macroinvertebrate monitoring at the downstream site in the event of a spill or unauthorized discharge.
- The Subcommittee added weekly temperature data downloads from July–September at site CR-2.3, Colorado River upstream of the confluence with the Blue River. This is the last temperature monitoring location in the CEA and provides important information that will assist the Operations Subcommittee in its decision-making process.
- The Subcommittee developed and executed an extensive Aquatic Resource Monitoring Plan, the result of which is the 2019 Aquatic Resource Monitoring Report.