

LEARNING b y D O I N G

Learning by Doing 2015 Annual Report

The overarching goal of Learning by Doing (LBD) is to “*maintain and, where reasonably possible, restore or enhance the conditions of the aquatic environment in the Colorado, Fraser, and Williams Fork River Basins, upstream of the Colorado River confluence with the Blue River (the Cooperative Effort Area).*” LBD is implemented under the terms of two intergovernmental agreements (IGAs): one between Grand County, the Colorado River Water Conservation District, Middle Park Water Conservancy District, and Denver Water; the other between the same entities and Northern Colorado Water Conservancy District, Municipal Subdistrict. Resources, in terms of water, money and operational flexibility are committed to the effort, and a committee, the LBD Management Committee, has been created to implement the LBD Cooperative Effort. In addition to the signatories to the IGAs, the LBD Management Committee includes Colorado Parks and Wildlife (CPW) and Trout Unlimited (TU).

Although active participation in the LBD cooperative effort is not required to commence until after the issuance and acceptance of the Records of Decision and all necessary permits for the Moffat Project (Denver Water) and Windy Gap Firming Project (Municipal Subdistrict), respectively, the Management Committee began meeting in late 2013 and has undertaken a number of activities. LBD activities in 2014 are summarized in the *LBD Summary of Activities – 2014*.

This report summarizes LBD activities in 2015.

GOVERNANCE

In 2015, the LBD Management Committee held a total of five in-person meetings under the structure identified in the May 2015 Operation Principles (i.e., a Technical Committee meeting followed by a Governance Committee meeting). Representatives from the U.S. Forest Service and the Bureau of Reclamation joined members of the Management Committee in most of these meetings. In addition, weekly operational calls were held from May 20 to September 2, and several additional subcommittee meetings or calls were held to work on the development of various aspects of the program, including monitoring, operations, and specific projects.

LEARNING b y DOING

Thanks to a private grant, the Management Committee retained a Project Coordinator to assist in implementation of the LBD program. Kiki Sayre was selected out of a pool of over 25 applicants and began work on December 1, 2015. The grant is administered by Trout Unlimited and is expected to provide sufficient funding for four years (assuming no more than 15 hours per week on average).

MONITORING

Monitoring in 2015 was commissioned by Grand County with contributions from Denver Water and the Municipal Subdistrict, and, to a lesser extent, the River District and Trout Unlimited. Monitoring was conducted by Tetra Tech, in accordance with the Grand County Stream Management Plan (SMP) recommendations, *“to assist the LBD Management Committee in evaluating management actions taken to maintain or improve the health of the Fraser and the Colorado Rivers in Grand County, including the flushing flow recommendations made in the SMP for several key river reaches and upper Fraser River sediment pond.”* Specifically, monitoring was conducted to (1) evaluate flushing flows in key reaches within the SMP project area, (2) evaluate sediment accumulation in key reaches within the SMP project area, and (3) incorporate and evaluate fish monitoring data collected by CPW, and macroinvertebrate monitoring data collected by GCWIN. The results of this monitoring are included in *Tetra Tech’s Final Draft Report, 2015 Monitoring Report*, dated February 17, 2016.

In addition to the monitoring conducted by Tetra Tech, GCWIN conducted extensive stream temperature monitoring. Denver Water and its consultant will use collected hydrology and stream temperature data to evaluate the effectiveness of the 500 acre-feet of water released in 2015 and will supplement this report when the information is completed.

To assist in gaining a better understanding of the various data collection efforts underway within the Cooperative Effort Area, the River District has developed a map of known sampling locations, diversions, and bypass locations. Currently, catalogued sites measure temperature, water quality, streamflow, PHABSIM, and sediment within the Cooperative Effort Area. This is an ongoing effort, which will be updated as the LBD Monitoring Plan is further developed.

LEARNING b y DOING

Finally, in 2015, the Management Committee designated a subcommittee charged with the development of a long-term monitoring plan specifically designed to meet the needs of LBD, as provided in the IGAs, including assessment of changes due to on-the-ground projects designed to improve stream conditions. The Monitoring Plan is expected to be completed in 2016.

MANAGEMENT GOALS & PROJECTS

In 2015, the Management Committee continued its evaluation of management goals and priorities for stream reaches within the Cooperative Effort Area, using the SMP as a starting point. The intent is to outline and prioritize on-the-ground work and projects designed to meet the goals of LBD in an efficient manner so as to maximize available resources. As it began compiling a master list of potential projects, the Committee realized that it may not be aware of projects planned or proposed by others in the area, and plans to develop a more comprehensive list. These efforts are expected to continue through 2016.

Fraser Sediment Pond. For the third consecutive year, CDOT removed sediment that accumulated behind Denver Water's diversion on the Fraser River. While the total sediment removed in 2015 (550 tons) was less than the previous two years (680 and 690 tons), this project has made a substantial difference in the streambed below Denver Water's diversion as shown in the annual monitoring report. Since implementation of the Sediment Pond Project, significant improvement continues in substrate and habitat quality below Denver Water's diversion. The August 2015 inter-gravel fine sediments were in the same range as spawning bars monitoring sites, and successful trout spawning could likely occur under the conditions encountered in 2015.

Fraser Flats Project. In 2015, the LBD Management Committee agreed to embark on a project to restore approximately 0.9 mile of the Fraser River downstream of the Town of Fraser. The project involves channel work and the creation of riffle/pool habitat to improve conditions for macroinvertebrates and trout, similar to what was recently performed upstream near the Fraser Safeway. A new point for public fishing access will be developed at the downstream end of the reach, courtesy of Grand County Water and Sanitation District #1. A total of \$100,000 has so far been committed for the project: \$50,000 that Denver Water has agreed to release from LBD funds prior to the official

LEARNING by DOING

start date of the LBD effort, and \$50,000 to be contributed by a private entity. Survey work for the project was completed by Tetra Tech in 2015. Bids for engineering and construction of the project are currently under review by the Management Committee. The Committee hopes to obtain the necessary permits for the project in 2016, and complete construction in 2017.

COORDINATED OPERATIONS

The LBD IGAs specify development of an annual operations plan *“to maximiz the stream environmental benefits of the available resources (including water commitments, system flexibility and funding).”* The plan is to *“explore opportunities for coordinated operations of diversion structures and reservoir releases among all water users in Grand County, including Northern Water; the Municipal Subdistrict; the Bureau of Reclamation; Denver Water; Middle Park Water Conservancy District; the Colorado River District; and in-county diversions for agricultural, municipal, industrial, and other uses.”* The purpose of coordinated operations is *“to allow the water users to meet the supply requirements of their systems, while maximizing the effectiveness of the Cooperative Effort.”*

To facilitate coordinated operations, the IGAs specify weekly coordination meetings or calls from May through September, or at such other times as mutually agreed by the Management Committee. The purpose of these meetings or calls is to *“highlight upcoming operational issues, discuss potential options to reduce possible negative impacts to the aquatic environment, and to coordinate implementation of actions under the Cooperative Effort.”*

A coordinated operations plan was not prepared for 2015, however, the Mangement Committee conducted weekly coordinated operation calls from May 20 to September 2, 2015. Calls were scheduled to follow weekly HUP calls, which include helpful information about water operations in the upper Colorado River, and a forecast of weather and stream conditions for the week.

Weekly calls were used to coordinate operations, including the use of 500 acre-feet of water made available by Denver Water in 2015 to test operational flexibility and environmental enhancement. These activities are further described in the *2015 Summary of DW water releases on the Moffat Collection System coordinated with LBD* (see

LEARNING b y DOING

attachment). In essence, Denver Water’s operational flexibility was used to prolong the period of “flushing flows” available to Ranch Creek, and the 500 acre-feet of environmental water was intended to improve stream temperature conditions in Ranch Creek in late summer.¹

In addition, weekly calls were used to coordinate operations with the Bureau of Reclamation to address increased stream temperatures detected in the Colorado River downstream of Granby Reservoir, resulting from shifting reservoir releases from the bottom outlet to the spillway, which releases significantly warmer water. The shift was necessary to implement hydropower facility and outlet work. In response, the Bureau of Reclamation began a planned spill of Granby Reservoir water to accommodate snow melt earlier than anticipated.

The effectiveness of Denver Water and the Bureau of Reclamation’s operations are currently being evaluated.

The LBD Management Committee has designated an Operations Subcommittee charged with the development of a 2016 Annual Operations Plan for committee approval.

PUBLIC OUTREACH

Thanks to the efforts and contribution of the River District, in 2015, the Management Committee launched its website: www.gclbd.org. The site is intended to keep the public informed about the nature and progress of the LBD efforts.

In addition, a series of articles were published in the Grand County newspaper, the *Sky-Hi News*, informing the public on LBD’s inception and activities.

RESOURCES

Denver Water and the Municipal Subdistrict have committed specific resources, in terms of water and money, which will be available to the LBD effort once it formally begins

¹ According to the SMP, Ranch Creek is one of the most impacted streams within the Fraser River systems both in terms of sedimentation and high stream temperatures.

LEARNING b y DOING

after issuance and acceptance of the permits. The Management Committee will be preparing a list of those resources for future reference.

While LBD is not officially in effect, members of the Management Committee dedicated resources toward the implementation of LBD activities in 2015, including:

- 500 acre-feet of environmental water (Denver Water)
- \$50,000 in LBD funds for the Fraser Flats project (Denver Water agreed to release and Grand County approved)
- \$50,000 from a private contributor for the Fraser Flats project
- \$2,300 to develop the LBD website (River District)
- \$120,000 private grant to hire a Project Coordinator for 4 years (15 hours per week)

In addition, both LBD Management Committee entities and advisory agencies have dedicated significant staff and volunteer resources to begin implementation of the program.

In 2015, the Management Committee established a Fundraising Subcommittee, charged with exploring grant opportunities to maximize resources available to implement the program.

SUMMARY OF ACCOMPLISHMENTS IN 2015

- Obtaining funding for and hiring a Project Coordinator
- Increasing flushing flows in Ranch Creek through the use of Denver Water's operational flexibility
- Increasing summer time base flows in Ranch Creek through the use of 500AF of Denver Water's environmental water
- Increasing Granby Reservoir releases in response to detected elevated Colorado River stream temperatures
- Implementing weekly coordinated operations calls
- Launching an LBD website
- Establishing subcommittees that began work to develop a long-term monitoring plan and an operations plan

LEARNING b y DOING

- Beginning work on the Fraser Flats project, including completion of channel surveys and obtaining bids for design and construction
- Continued stream monitoring to determine the effectiveness of the Fraser Sediment Pond Project
- Fraser Sediment Pond continued partnership with CDOT

GOALS FOR 2016

Permits for the Moffat and Windy Gap Firing projects are expected in 2016, which, along with the receipt of the FERC Amendment for Denver Water, trigger the official effective date of LBD and making some (but not all) of the committed resources available for implementation. However, as it has in the past, this timeframe may be further delayed. In either case, the LBD Management Committee anticipates continuing its cooperative efforts and tailoring its activities based on available resources.

Activities anticipated in 2016 include:

- Complete design of the Fraser Flats Project; begin construction depending on availability of funds and timing of issuance of required permits and authorizations
- Complete a long-term Monitoring Plan consistent with LBD IGAs and other agreements
- Complete a 2016 Coordinated Operations plan consistent with LBD IGAs
- Identify no less than one project for completion in 2017
- Establish stream management goals and priorities
- Implement coordinated operations and weekly coordinated operation calls
- Reach consensus on stream management goals and priorities
- Use environmental water to improve low flow conditions in identified reach(s) (assumes LBD is in effect)
- Use operational flexibility to improve flow conditions in identified reach(s)
- Inventory resources committed to the LBD effort, and identify additional funding needs and potential resources

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