



LEFTHAND WATERSHED
oversight group

Board Minutes – April 17, 2018

Attendees

Chris Smith
Kathy Peterson
Rick Kauvar
Sue Schaffler
Ken Lenarcic with Ward proxy
Julie McKay
Yana Sorokin
Jessie Olson
Glenn Patterson
Julie Trumpler
Sean Cronin
Chris Carroll
Chris Wiorek
Monica Bortolini
Sean Cronin
Gabe Tuerk
Greg Ames
Paul Hollingshead
Bob Crifasi
Marty Korthase
Chris Carroll

Welcome and Introductions

Chris S called the meeting to order at 2:04, and led a round of introductions.

Presentation by Bob Crifasi: From Desert to Oasis--A Landscape History of the Front Range

Worked as a planner for Denver Water, then managed water portfolio for Boulder County. Also served on Left Hand Ditch Company Board. Developed strong interest in ditch history in the area. Water has been such a large part of the development of the front range, it makes for an interesting story. Based on his new book, A Land Made from Water, available on Amazon. Over recent centuries, water development and riparian exploitation has completely transformed the front range. There is no turning back. Our landscape is a manmade oasis.

Prior to settlement by Anglos, the front range was typical shortgrass prairie. (He showed a print by Elliott of the Hayden expedition.) It had been called the Great American Desert by explorers such as Long. But the area had been occupied by humans since the late Pleistocene, as much as 13,000 years ago, who were engaged in hunting large animals, many of which are now extinct. They were followed by plains Indians. In the 1820s-30s the fur trappers worked this area. So when Anglos got here the landscape had already been altered by human presence. Early resource exploitation included hunting buffalo nearly to extinction, removing grizzly bears, wolves, and most beaver, and reducing populations of game such as deer and elk. After the buffalo were gone, settlers brought in cattle to graze on the prairie. Settlers brought barbed wire and fenced off the land into parcels. They also brought invasive species such as Norway rats. The gold rush brought a huge new influx of settlers and changed the landscape of the mountains. Early mining was frequently hydraulic, involving diversions and big operations to spray high-pressure water on sediments, causing much erosion and deposition. Mercury and cyanide were widely used in concentrating gold and silver. Settlements grew, and forests were cut down for fuel, construction, and railroad ties. They cut down 1/3 to 3/4 of all the trees in Boulder, Larimer, and 9 other nearby counties. Partly in reaction to this, the U.S. Forest Service was created.

Meanwhile farmers were settling on the plains, diverting water and digging ditches for irrigation. They noticed hydrologic changes due to the deforestation, which gave encouragement to the establishment of the Forest Service. The first irrigation ditches served the bottomland along the rivers. Later they constructed longer ditches that moved water farther from streams, up onto the higher bench lands, which opened up much more land for development. Some of this development was done by entrepreneurs for profit. Most direct flow water rights were claimed between 1860 and 1875. When late-summer flow in the creeks was insufficient to continue irrigation that late, they built reservoirs or "artificial lakes" to store water for use in the late summer. The result was a complicated, large system of diversions, ditches, canals, reservoirs, and other infrastructure that re-plumbed the flow of water through the area and converted dry shortgrass prairie to green irrigated oasis, complete with ponds and wetlands, supported in part by seepage from the ditches. These artificial wetlands are protected by Boulder's wetland ordinance, just like natural wetlands. About 18-20% of the riparian vegetation in Boulder Valley is found along ditches. Diversions dry up some reaches of creeks, especially during dry years. Statistically, the low flow at the mouth of South Boulder Creek is equivalent to a 500-year drought every year. The reduced flows have altered stream channels, permitting encroachment by vegetation, and narrowing of the channel. He showed a graph illustrating the reduction in stream width as you go downstream on South Boulder Creek, a pattern that is replicated on other creeks in the area. There are also large projects for reservoirs and diversions for municipal use, and treatment plants that discharge treated waste, which sometimes can exceed natural flows of receiving streams. Gravel mining has transformed riparian zones into chains of ponds filling old gravel pits. 99.9% of impounded surface area is manmade reservoirs. These have created lentic habitat that did not exist before settlement.

Interbasin transfers have brought additional water to some of the creeks.

Natural and human-caused species introductions have brought many new species to the area, and some native species have been lost. A few of these have been re-introduced, such as mink, otter and beaver. Some introduced species are causing big problems, such as Eurasian water milfoil and NZ mud snail.

Ag return flows, municipal wastewater discharge, reservoirs, and interbasin transfers have changed the hydrology of the creeks, decreasing high flows and increasing low flows. The South Platte went from low flows that were essentially dry, to about 600 cfs. The stabilized flows allowed vegetation encroachment onto the mud islands in the S. Platte.

Early settlers were given the idea that rain follows the plow, and were sometimes duped into buying cheap land for dryland farming, which led to pain in dry years.

So what does all this mean? In humanized ecosystems it may be impossible to separate human and environmental drivers of ecosystem development. Example: the Ute ladies tresses orchid showed up in an irrigated pasture that was grazed. The county shut down grazing, and the ladies tresses almost disappeared. Turned out the cattle were eating thistles that grew up and shaded the orchids. So cattle were allowed back in, except for a short period that was critical for the orchids development. It is often hard to tell the difference between a ditch and a creek—they look and act similarly.

Western civilization likes competing dualities: nature vs. society, conservation vs. development, wild vs. domestic, natural vs. artificial. Bob tends to reject this notion in favor of an integrated system in which humans and nature interact. The ecosystems are not totally natural and not totally artificial, they are hybrids, involving both people and nature. Conservation in hybrid ecosystems is all about values. Recovering the past may be unrealistic; identifying a desired future is realistic. A “hands-off” approach might be detrimental and unrealistic. We need to recognize that these systems are transient, not static. Conservation of hybrid ecosystems requires ongoing management by people.

Conclusions: Ecosystems include people. Our hybrid ecosystems were co-produced by us and nature, and need to be managed by us. They are continually changing. We live in a manmade oasis. There is no going back to the nostalgic past.

Q&A: In the 1860s Left Hand Creek was a thread of cottonwoods along a flashy creek surrounded by shortgrass prairie. In late summer it probably dried up.

What percent of water supply coming into Left Hand Creek comes from the St. Vrain? A: About 75%.

Q: Diminishing flows downstream allow the channel to get smaller and vegetation to encroach. What about channel adjustments to interbasin transfers? A: Yes, those channels evolve as well, becoming larger and causing erosion.

Q: Have the ditches and other stream management changed the course of Left Hand Creek? A: Bob thinks the channel has remained relatively consistent. He has access to old maps that might help.

The Elliott prints are available online from the USGS.

Approval of Minutes

Kathy moved, Ken seconded, to approve the minutes from the March meeting. Motion carried unanimously.

March Financial Statement & Audit Update

Deferred until May due to computer problem at LHWD; will be handled in May along with audit.

41st street revegetation project contractor selection

Jessie provided a handout and described our irrigation and reveg project on the Matsch property, the main parcel in the reach, which was our final stream restoration project in 2017 and was done quickly in 2 months late in the season. During the EWP phase of the project they were unable to plant any container stock due to limitations of irrigation and time. Now we have some remaining funds and can do some reveg work. We got quotes from contractors who can plant and irrigate this summer. The handout presents the 3 quotes. The staff recommends Alloterra based on their warranty and abilities with irrigation. The water will come from the Matsch's share of Left Hand Ditch. We will provide a pump for the Match's existing irrigation system. The Match's will also participate in the volunteer program. LWOG, Match, and the contractor will work with Left Hand Ditch Company on the irrigation schedule. Sean encouraged discussions with the Water Commissioner and the Ditch Company regarding the irrigation plan, especially with respect to temporary application of irrigation water on the second property next to the Match's. Irrigation will cover about 1200 linear feet of stream.

Chris presented a resolution, 2018-02, for board approval of a contract with Alloterra. While the need for such a resolution is not mentioned in our bylaws, we prefer to have such a resolution prior to signing a contract for services. Kathy moved to approve the resolution with the understanding that we will obtain approval from the Water Commissioner and the Ditch Company prior to irrigating. Monica seconded. The motion carried unanimously.

Grants & Fundraising Update Jessie Olson

Jessie has been organizing a status report on our fundraising and grant application activities, covering the second half of 2018 and all of 2019, and matching our income from various sources with expected staff hours spent on various tasks. This helps to identify gaps where we need additional fundraising. We have sufficient funding for the rest of 2018. In 2019 and 2020

we will need about 70K and 118K, respectively, of additional funding. This analysis made Jessie feel confident about our funding status. Some of the needed funding should be unrestricted so that it can cover staff time for additional fundraising and other overhead-type activities. As we are moving away from DOLA funding, we can build cost + 10% arrangements that will help to cover some overhead tasks. The board expressed satisfaction with this overview of our funding and fundraising status.

Chris mentioned that the Gates Family Foundation approved our grant application. Typically this foundation is open to considering follow-up grants. Gabe suggested seeking membership from among landowners.

Jessie also mentioned the Fish Passage and Education Initiative grant application for a CWCB Water Supply Reserve Fund grant. As we recently found that the budget should be smaller than originally planned, we are re-scoping the project, and are also looking for additional funds. Part of the re-scoping involves omitting the stream gauging component we were originally considering. Yana described the main objectives of the study: it is primarily an educational initiative about living along a working river. It still includes a fish passage feasibility study pertaining to flows and structures. A subtask would be to develop plans for improving fish passage and habitat. The other task in the grant would cover development of educational materials about living on a working river, hosting a ditch tour, and hosting a workshop on the results of the feasibility study. Sue asked if there is a problem regarding fish passage in the creek, and why we care and who is concerned about it. There are fish at her house on upper LH Creek, but there is a bridge upstream that inhibits passage. Who is the target audience? Perhaps these aspects can be covered in the grant application. Chris S mentioned that the Haldi diversion often blocks fish passage. LHWD might be interested in structural modifications to improve fish passage as well as downstream sediment transport. Monica suggested we define the term working river. Gabe sees this as a template for similar studies that could be done in other watersheds. Chris S encouraged further coordination with Left Hand Ditch Company. Chris Carroll suggested we adopt the term from Bob Crifasi's talk, "hybrid ecosystem", in referring to a working river. In terms of fisheries management, Chris C encouraged us to consider our fisheries goals: push more toward native species? Defragment habitat? Alter temperature regime? There is more grant money available for native fish than for introduced salmonids such as the brown and brook trout that our found in the cooler parts of Left Hand Creek. Chris S encouraged us to consider the need for infrastructure changes such as diversions that can accommodate specified bypass flow. Chris C encouraged us to check with Parks and Open Space as well as CPW on fish populations. Sean thinks the education perspective needs to be emphasized and clarified as a major aspect of the grant. He sees it mostly complementary to the stream management plan activities. He has some concern that the working river discussion might absorb a lot of time as stakeholder's wrestle with their divergent values and term definitions, as happened on the Poudre, and as they wrestle with suggestions as to what should be done about the situation. We should be able to make this work if we do a good job understanding existing conditions and defining the problem. One other grant consideration: Sean is working on the RFP for the Stream Management Plan being undertaken by SVLHWCD. He and Jessie have been talking about a potential role for

LWOG in the plan. Sean has suggested that LWOG could seek to join a team of contractors that is planning to bid on the RFP. We have strengths such as stakeholder rapport and watershed understanding that could be valuable for such a collaboration. Wildland Restoration Volunteers is a good example of a nonprofit that joins such teams. If this were to happen, LWOG would no longer be a stakeholder helping to advise the steering committee, but would express its suggestions through the collaborative team process.

(Chris Carroll left at 4:40 and Greg Ames left at 4:45)

If LWOG were to seek to join one or more consultant teams bidding on the RFP, Chris S would need to declare the potential and abstain from certain votes on the SVLHWCD board, and Sean might have to abstain from certain votes on the LWOG board. The LWOG board expressed general support for this idea, and Jessie will continue to consider it.

Upcoming Outreach Events

Volunteer event on Sunday (Earth Day), 10:00 to 2:00 at Olin Farms, followed by Moroccan Stew. Also, LWOG would love to have help for Boulder Farmers Market on May 5 and Longmont Farmers Market June 2, both from 9:00 to 2:00.

Additional Items

Monica asked whether we will see results of the 2017 landowner survey. Jessie responded yes. She is working up the results and working with the survey team, the committee, contractors, and others to come up with a report on the results. She expects to present the results this summer.

Julie thanked Jessie and Monica for attending the Lower LH Creek flood zone re-mapping meeting. There will be another meeting soon.

Monica said on Monday from 5 to 7 she will be doing a session on Left Hand Creek in Longmont at the Development Services Center in Longmont.

The May board meeting will include a field trip to 63rd Street.

Adjournment

The meeting was adjourned at 4:55 pm.