### AGENDA

**Left Hand Watershed Center**  
**BOARD MEETING**  
2-4:30pm, June 18th 2019, Left Hand Water District Office  
6800 Nimbus Road, Longmont, CO 80503  

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<td>Public comments on items not on the agenda</td>
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<td>Left Hand Watershed News</td>
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<td>Follow up from Board Retreat</td>
<td>Jessie/Kathy</td>
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<td>- Mission &amp; Goals</td>
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<td>Projects Update</td>
<td>Jessie Olson</td>
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<td>Adjourn</td>
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**NOTE:** LWOG will make reasonable accommodation for individuals with known disabilities at meeting and events per our non-discrimination notice. Visitors needing accommodation are encouraged to contact any staff member to request such accommodation 48 hours in advance of such event.
6/13/2019

To: Left Hand Watershed Center Board of Directors

From: Jessie Olson, Executive Director

RE: June board meeting agenda items

Meeting Minutes
Draft meeting minutes from May are attached (attachment 1) for review and approval.

Organizational Items
- For those that have not yet done so, we need to re-sign all conflict of interest, confidentiality and whistleblower statements for the New Year. We will have copies on hand for those that have not yet signed.
- We’d like to discuss potential options for our updated mission statement at the board meeting.

Financial Report
Our next quarterly reports will be presented at our July board meeting.

Business Plan & Marketing Update
As discussed last month, our focus this summer is to create marketing materials to help solicit donations grant funders, corporations, and individuals to help sustain and expand our adaptive management, community science, and k-12 educational activities to neighboring watersheds. Money raised will then be used as match to apply for upcoming grants this fall. We’ve created a new handout to describe the AM process to potential agency funders (attachment 2) and we will further simplify and modify for potential individuals and corporate funders.

Project updates

1. Adaptive Management, Stewardship & Monitoring
   - We’re working on putting together a document which integrates adaptive management and our state of the watershed report into a professional report format.
   - This month, we are meeting with agencies in Boulder to discuss expanding our adaptive management tools into Boulder Creek watershed.
   - St. Vrain Creek coalition has agreed that having us expand Adaptive management into St. Vrain is a good idea. I’ve also been meeting with Sean to discuss integration of our adaptive management tool into the Stream Management Planning process.
   - I met with Nicole Seltzer at the River Network about integration of adaptive management tools into her state-wide stream management plan efforts. She is interested in including this information on their newly created stream management planning website.
   - We met with Chris Sturm and EWP consultants to give them a tour of our project sites and discuss the idea of expanding adaptive management tools into the St. Vrain and Boulder Creeks and he was supportive of the idea. Jeff Sickles also connected us with Urban and Drainage Flood Control District
who may be interested in using our adaptive management tools.

2. **Community Science Strategic Plan & Tools**
The “My Watershed” app has been launched! The app includes several datasheets that are directly linked to our adaptive management framework including:

- Catch the Hatch (adult mayfly emergence)
- Run off (photo document high flow)
- Pebbles (pebble counts)
- Pools (pool depth and temp at low flow)
- Low Flow Tracker (photo document dry up points)
- Fish (Record fish kill and fish population observations)

Catch the hatch starts June 15th and continues through July 15th. We had over 30 volunteers attend the trainings and sign up to participate as “data catchers” this summer. We will also provide an update on the project and demonstrate how to use the app at our board meeting. The Community Science Strategic plan is also nearly complete. [https://lwog.org/programs/stewardship/catch-the-hatch/](https://lwog.org/programs/stewardship/catch-the-hatch/).

3. **St. Vrain & Left Hand Stream Management Plan**
The team is preparing for an upcoming stakeholder meeting to be held sometime in July. I’ll forward meeting notices, etc. once they are provided.

4. **DOLA CDBG-DR Legacy Projects**
We are working with Lefthand Excavating and Biohabitats on this design-build project, and Yana is managing the project. Update this month includes:

- All permit applications have been submitted. We are still awaiting review from Transportation and Floodplain, and we have been asked to provide additional information for the Boulder County SWQP which Scott is providing by the end of this week. We anticipate getting the permit the week of June 24.
- We continue to refine the adaptive restoration/experimental aspects of this project, working closely with CU researchers in the experimental design and research methods. We’ve hired CU PhD student Isabel Schroder to oversee installation of the experiment and complete some aspects of the data collection this fall.

5. **Mines, Water Quality Monitoring & Analysis**

- Glenn continues to collect monthly river watch data.
- I forwarded an update from Mary Boardman regarding Captain Jack Mine. Glenn will also provide an update on some concerns he has regarding the update.
- We’ve recently entered into a small contract with the City of Longmont to conduct data analysis of their 10-year water quality dataset.
- We are preparing an application for a Technical Assistance Grant with the EPA to allow us to receive funding to hire technical assistance to ensure oversight on mine cleanup activities. We plan to submit the application at the end of this month.

6. **Fish Passage Feasibility Study and Education Initiative**
No updates on this project this month. Majority of the work on this project will happen in late 2019 through 2020.

7. **SVCC**
We’re continuing to work on developing partnership with St. Vrain community including meeting with schools in Lyons and Longmont to discuss partnerships. At a recent site visit with CWCB, Chris Sturm
agreed to provide additional funding for us to implement additional weed control at Apple Valley projects. We will be working to submit the scope of work to complete these tasks this summer and fall.

8. Forestry Health
We’ve had a few meetings with partners regarding our new forestry health initiatives, including the first meeting with a new Boulder Forestry Health Collaborative group led by the Colorado State Forest Service and Fourmile Watershed Group. We’ve also reached out to major stakeholders separately to schedule meetings such that we can better identify our role and how to integrate adaptive management planning into current planning efforts. We also learned about a meeting that took place with the Boulder County Commissioners, USFS, State Forest Service, and Fourmile watershed group.

9. Center for Sustainable Landscapes and Communities
Sue Schauffler and I have been attending meetings associated with the CU Center for Sustainable Landscapes and Communities and community members in mountains interested in sustainability. Initially, we hope to partner with the Center on our “Watershed Days” event. We are also trying to better understand needs of mountain community and how our organization might help address them. We also learned about a new organization that is forming from the Fourmile Coalition and Roger Briggs called the “Boulder Watershed Collective.”

10. Potential New Projects
We have two potential new opportunities that have been presented to us that we will discuss further at the meeting:

- Completing stream health assessments for the City of Longmont. RFQ will be sent to us later in the month and will be due mid-July. In reviewing criteria established at the strategic planning meeting, this would be meet the first level of criteria as it would essentially allow us to extend adaptive management services within the St. Vrain sub-basin. The work would primarily take place this year and as such we would need to partner with local consulting groups to complete the work in the timeline proposed.

- Chris Sturm contacted us about the possibility of overseeing a project to install beaver dam analogs in Estes and completing pre and post monitoring activities. This has a nexus with our Legacy adaptive restoration project, in that we would be able to use same monitoring methods to assess two different beaver dam installation projects. It also meets the criteria outlined at our strategic planning meeting:
  - Would it leverage our expertise to be of service to others? (yes)
  - Would it serve as an important substantive learning opportunity to apply to our future work in Left Hand Watershed? (yes)
  - Is it a service that we are uniquely suited to provide that helps develop our organization’s expertise and capacity? (yes)
  - Is there staff capacity and funding? (yes)

- We will discuss both projects further at the board meeting, and make a decision of whether or not to pursue with the board.

Boulder County Buyout Properties
We’ve formed a committee to investigate whether it makes sense to accept the offer of the two Boulder County buyout properties. The committee includes Kathy, Chris, Sue and Jessie and we will be visiting the sites with the County on June 27th.

Update on Fundraising and Outreach
- Much of our fundraising/outreach updates are integrated above into the project updates.
• We will be at Niwot Rock and Rails on July 18th and will receive a portion of tip jar proceeds.
• We would like to delay our annual report publication until we have produced our adaptive management/state of the watershed report and firmed up updated mission and goals. We instead plan to have it ready by mid to late summer.
• Our first “Watershed Days” event is set for September 28th! We are hosting a planning committee meeting on Monday, June 17th.

Attachments:
  1. BOD Meeting Minutes
  2. Adaptive Management Handout
Attachments 1
BOD meeting minutes
Attendees

Chris Smith (with proxy for Sean Cronin)
Chris Wiorek
Kathy Peterson
Chuck Oppermann (arrived 3:48)
Jessie Olson
Glenn Patterson
Sue Schauffler (with proxy for Monica Bortolini)
Erica Crosby, DR
Jim Bryant, ex officio
Lauren Hillmer, Greeley
Mark Schuenemann
Paul Niedermiller, Clifton Larson Allen
Julie Trumpler

Welcome and Introductions

Chris S called the meeting to order at 2:05, and led a round of introductions.

Public comments on items not on the agenda

Jessie would like to add an item pertaining to acceptance of property from Boulder County related to buyouts after the flood.

Presentation of 2018 Audit—Paul of Clifton Larson Allen

Paul referred to the handout (audit report) and cover letter. The firm rendered an unmodified opinion (good news) and received great cooperation from LWOG. Their one recommendation was to provide a little more specificity regarding liquidity (money that can be readily spent). We do not need to make any other adjustments in our accounting procedures. For 2018 we did not need any adjustments or corrections to ensure compliance with federal grant tracking requirements.
The Gates Foundation funds carry a donor restriction to spend the rest of the grant funding on the purpose of the grant by the grant deadline.

At the end of the report (pages 12 and 14 is a note about the federal grant funding, discussing the requirements that LWOG met.

As a small organization with only a few people handling the financial information, it continues to be important to follow our guidelines regarding financial management. Outside accountant and regular board oversight help a lot in this regard.

Sue moved, Mark seconded, to accept the audit report and submit it to the proper authorities. The motion carried unanimously.

**Update from DRMS—Erica Crosby**

DRMS has a new logo—visible on her slides. Erica brought along some door hangers that identify the agency and its basic functions, that can be used to communicate with landowners.

DRMS, a part of DNR, handles reclamation of both hardrock and coal mining areas. Much of their funding comes from federal coal mine assessments, some from oil and gas severance tax, some from a cost-sharing agreement with Boulder, CO. Active mining permits carry requirements for reclamation. Her role deals with inactive mine sites, those that were abandoned prior to reclamation requirements. Her section began in 1980. There are over 23,000 inactive mines that present safety hazards, mostly from hardrock metal mining, in Colorado. Some have been death traps. 1300 miles of impacted streams. They identify hazards, design appropriate closures, reclaim and safeguard hazards and environmental problems. They can use coal money on hardrock sites.

They work with EPA and CDPHE on Section 319 water quality projects. Some projects are related to bond forfeiture due to inadequate permit reclamation. They also work with coal mine fires, bulkhead construction (including Captain Jack/Big Five), and cultural/historic preservation of selected mine sites. They do cultural surveys as part of NEPA, and they sometimes stabilize historic sites that are worth preserving and need stabilization for safety. They do a lot of outreach with youth and environmental groups regarding safety and environmental issues.

She showed a map of Colorado showing the many mines they have built closures for. In Boulder County they have closed over 1,000 mines, mostly hardrock, but some coal. Many are in Left Hand Creek Watershed. They have to search for many of these mines. Some locations come from historic maps, some come from geophysical and/or remote sensing techniques. Lidar (from FEMA sources) has been a very helpful tool for this. When they locate a mine that needs closing, they make it a project and secure grant funding from OSM, BLM, USFS, Boulder County, Severance Tax, etc. They also have to secure consent from landowner. Then they take care of NEPA work, threatened and endangered species, bat surveys, etc. They contract out
construction using competitive bidding—whole process may take 3 years. Landowner is responsible for continuing maintenance.

BLM asked DRMS to look carefully at the Fourmile Fire area as a safety measure for firefighters. They found 367 openings and spent over $1M on closures. Closure work was done in concert with stream and road restoration. They also worked a lot on Emancipation Hill in 2018, and Lee Hill after the fire. Three of these sites are in LH Creek watershed near Rowena. There is not a single comprehensive inventory of all the mine sites. Several entities such as BLM, USFS have partial maps.

She showed a map of several sites such as Evening Star that are also in LH Creek watershed. Some are Bluebird, some are on Porphyry Mtn.

They are planning a future project in the Jamestown area, mostly north of town. Some of these are uranium sites that are on a list made by DOE. DOE has been deemed responsible for uranium mines as they were the only buyer. DOE is working with states to review old receipts for uranium purchases to help identify mining sites, primarily on public lands. Bluebird, Ladybug, and Fairday had some uranium. Chris mentioned that uranium levels in sludge from the Spurgeon plant for a year and a half after the flood were high enough to require special handling. Pre-treatment (settling) helps to remove it. Now levels are back to pre-flood levels.

Yellow Girl, above Jamestown between Bueno and Porphyry, is part of the 2015 draining mine inventory done with CDPHE after Gold King, which found 150 draining mines statewide. Erica and CDPHE reached out to LWOG (Glenn and Colleen) to help identify draining sites. Pending good Samaritan law, it was deemed risky to do too many bulkheads. But Yellow Girl still merited help. They took water and soil samples. It had Al, Cd, Pb, Fe. EPA thinks this could be a potential project. Would be a minimal restoration project. It’s on private land. LWOG used to sample the adit for River Watch.

DRMS also plans to work on coal mines in Boulder County, for subsidence and openings, along Cherryvale Road near Marshall. There is an underground fire here, and they may be able to seal some vents where air gets in to the fire.

End of presentation. Q&A:

Jessie asked how LWOG might be able to partner with DRMS. We can share our WQ data, and let them know if we find open mines.

Chris asked whether LWOG could be notified when DRMS and CDPHE find draining mine sites in our watershed. Erica described her outreach activities.

Jim asked about priorities. Erica said priorities include coal mines, coal fires, openings near residential or recreational areas.
Glenn asked about water quality impacts and possible projects. Since Gold King, DRMS has backed off of trying to deal with water quality due to lack of good Samaritan law—state could wind up with too much liability. She knows that some draining mines impact streams, but until law gets passed, they cannot do much on water quality. But they can help with Porphyry-type restoration involving isolating waste rock from hydrologic cycle. That is the type of project that could be done at Yellow Girl. But they don't treat water coming from draining openings.

There are some active mines in the watershed around Gold Hill and Jamestown. The operators are supposed to monitor for any water quality impacts. LWOG could help operators with this.

There is some interest in developing a tax on hardrock mining that could help to fund restoration projects. The tax on coal mining is set to expire in 2021. Mining association would like to see the coal mine tax continue. DRMS can use coal money on safety projects but not environmental. Funding for environmental work comes from 319 (EPA) or other sources such as USFS, Boulder County, etc.

Erica is willing to provide additional periodic updates to LWOG.

Approval of Minutes

Chris moved, Kathy seconded, to approve the minutes from the April meeting (retreat); motion carried unanimously.

Boulder County Land Transfers

When FEMA buys out properties, the property titles must be transferred to a local owner, not a government. There are 44 such properties in the County, currently under POS. Two are of interest to us—one in Streamcrest just west of Hwy 36, and one along James Creek, part of Reach 16, downstream of Jamestown, just downstream from Jennifer Webb. This one abuts USFS property and used to serve as an access point for OHVs. Neighbors don’t want these properties to become recreational access points. Jessie and the Board suggest that we recon the sites and look into pros and cons of potential ownership. Jessie would like to have a site where we don’t need to secure consent of the owner. There would be insurance and access ramifications, too. Access to the Streamcrest site would have to be through the Greenbrier.

Chris, Kathy, Sue, Jim, and Mark will serve on a committee to investigate the pros and cons.

Follow up from Board Retreat

(Chuck Oppermann arrived)
Jessie brought up the issue of the organization’s name. One option from the Board retreat, “The Watershed Center at Left Hand Creek”, now appears to be too long and sounds like the name of a subdivision. This leaves Left Hand Watershed Center as a preferred option.

Jessie has looked into the legal requirements pertaining to a name change—LWOG could remain our legal name, but we would add a “doing business as” clause with the new name.

Kathy moved, Sue seconded, that we change our name, from a DBA perspective, to Left Hand Watershed Center. The motion carried unanimously.

Chuck asked about trademark and copyright steps. Jessie said we have bought a domain name of “watershed.center” and we are taking care of the additional steps, too.

We will discuss mission and by-laws at the June meeting. We will also discuss the updated decision matrix and interactions with St. Vrain and Fourmile groups.

Jessie and Chris showed mock-ups of how the new logo might look. The group expressed preference for one that shows the same image we now use, with “LEFT HAND watershed center” on two lines to the right of the image.

**Fundraising & Outreach Update**

Mark Schuenemann, Terry Plummer, and Jessie will participate with the River Network on a video about completed river restoration projects. The video will feature the Ranch stream segment.

Our Watershed Days event is scheduled for Saturday, September 28 in Longmont. Several additional groups will participate in data collection, followed by a party in Longmont. This year will be a smaller event, ramping up to a larger event in 2020.

We are also planning a “Catch the Hatch” citizen science event at Left Hand Brewery on June 1 and June 6, with training on how to participate in data collection. A CU professor will discuss the importance of the hatch data.

Jessie handed out a table showing funding needs and activities by service area. This reflects the funding needs that we have been hearing about, and potential marketing taglines we could use to help seek funding opportunities to help meet these funding needs. We are considering expanding the adaptive management stewardship plan implementation to include Boulder Creek and St. Vrain Creek. The expansion to Boulder Creek may depend on what happens with other groups that are also looking at Boulder Creek. We are already working on an a forest health adaptive management plan for CWCB, with potential involvement by the USFS. For water quality we would like to be able to fund tracking of mine reclamation, water quality reporting, and a new metals loading study. For restoration, we would like to work on “stage zero” monitoring of a segment with room for channel migration, as well as monitoring of
beaver ponds. For outreach and education, Jessie has heard from several schools where teachers or administrators would like to work with us on integration of watershed science into their curricula. Lyons would like to present their water quality data to us. Perhaps CWC, Gates, and Walton Foundations could help fund this, along with Community Science. In addition to Lyons, Jessie has been in touch with Longmont Montessori and a school in Niwot. Some landowners appear to be interested in contributing some matching funds to an effort such as this.

Kathy suggested that a future update of this table could include a column with information about where the funding could be coming from.

**Additional Issues from the Board**

Chuck remarked on the large quantity of dead timber still hanging around the creek up in the canyon, and its potential for moving downstream. Recently he found a log near the Strath Bridge that probably moved downstream from somewhere. Jessie and Chris mentioned that debris that obstructs a bridge opening should be reported to the County so they can remove it for safety reasons. Sue agreed that there is a lot of dead timber along the creek upstream of Rowena. Jessie mentioned that large woody debris can be beneficial for habitat, water quality, sediment control, and stream geomorphology. Chris said his experience with the County has been that when the debris moves to within a certain small distance of critical infrastructure such as a bridge, the County will remove it. Jessie also mentioned that we will be studying this issue as part of our adaptive restoration project.

**Adjournment**

The meeting was adjourned at 4:35 pm.
Attachment 2
Adaptive Management Handout
MANAGING TO THE FUTURE:
Adaptive Management at Scale in Colorado

By scaling key elements of Left Hand Watershed Center’s Adaptive Management Plan regionally, we can assess watershed health at a meaningful scale to advance watershed science and improve stewardship. Below we summarize the key elements in the adaptive management cycle that can be scaled to achieve these benefits.

Management Goals and Conceptual Model

Our adaptive management goals are rooted in the desired future state of our watershed. We characterize this state by assessing ecological condition and represent this illustratively in a conceptual model. The conceptual model approach is used not to set precise boundaries but to inspire deeper and more critical thinking about what may be possible and desirable. The illustrative approach is also a powerful outreach and education tool.

Monitoring and Assessment

We use this framework to assess trajectory towards goals that stems directly from hypotheses described above. Key components of the framework are described below, with one example provided for each.
What Sets This Framework Apart?

- It’s **Holistic** – It addresses ecological conditions but accounts for all watershed functions as drivers.
- It’s **Actionable** – On-the-ground management actions are incorporated directly into the monitoring plan.
- It’s **Flexible** – New data sets can be incorporated seamlessly by modifying hypotheses. Performance standard or management triggers can also be modified to accommodate unique project goals. Data collection methods can also be adjusted for different systems or watershed needs.

**Example Monitoring and Assessment Results**

- **Hypothesis** Aquatic insect health will improve each year
- **Performance Standard** Indexes are increasing or remaining above designated thresholds each year
- **Management Trigger** Indexes are declining or remaining below designated thresholds each year
- **Management Action** Assess functional drivers, monitor water chemistry, or manage flow

**Advance Science and Guide Stewardship**

Performance Standards and Management Triggers are informed by the latest science and are improved with each iteration of the adaptive management cycle. Management Actions, which lead to stewardship projects, are guided by this comprehensive and prioritized framework based. Below we describe the steps to this process.

1. Standards and triggers are identified based on the latest science.
2. Some standards and triggers are qualitative because less data is available.
3. Standards and triggers are improved as new data is collected.
4. Actions can suggest on-the-ground projects or additional data.
5. Community gets engaged in monitoring.

These aspects of the process enable advancement of watershed science and guidance of stewardship projects in the context of management goals and holistic watershed health.

**Community Engagement** is necessary for adaptive management because people are part of our watersheds. Watersheds in the Front Range generally involve “working rivers” that provide important ecological, economic, and recreational benefits. To plan and manage our working rivers our community needs to be informed, engaged, and invested in the selected approach. We are accomplishing this as part of our Community Science Program. This involves using the “My Watershed” mobile app for tracking watershed health and partnering with local schools.

**Community Monitoring**

- Run Off
- Pebbles
- Pools
- Low Flow
- Fish
- EWP Inspection