



## Board Minutes – February 20, 2018

### **Attendees**

Chris Smith  
Kathy Peterson  
Mark Schueneman  
Rick Kauvar  
Sue Schauffler  
Colleen Williams  
Ken Lenarcic  
Julie McKay  
Yana Sorokin  
Jessie Olson  
Glenn Patterson  
Julie Trumpler  
\*Sean Cronin  
Chris Carroll  
Chris Wiorek  
Tony Curcio, Iron Woman Construction  
Mary Boardman, CDPHE  
Dave Williams, formerly EPA, was part of initial group involved in the listing  
Monica Bortolini (arrived 2:15)  
Sean Cronin called in by phone at 3:00

### **Welcome and Introductions**

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

### **Captain Jack Mine Reclamation Update**

Mary Boardman gave an update on the status of the Captain Jack Superfund Site. It was active from the 1860s to the 1900s, and placed on the NPL in 2003. The Record of Decision for the restoration was signed in 2008, designating CDPHE to be the lead agency. The ROD specified two remedies, one for surface restoration and one for subsurface. The surface restoration was completed in 2012. The subsurface restoration is more involved and is currently underway. It is not a walk-away restoration; there will be constant monitoring for at least 2 years. Goals are

to reduce metal concentrations in Left Hand Creek. Remedy is designed as an in-situ remedy, rather than building a treatment plant outside the Big Five Tunnel. Objective is to submerge the mineralized zone that is rich in acid-generating pyrite (iron sulfide), thereby depriving it of oxygen, and retarding the production of sulfuric acid. Less sulfuric acid means less dissolution of metals. Submerging the mineralized zone means installing a flow-through bulkhead that acts like a dam. They want the backed-up water to have a pH near neutral, so they added crushed limestone upstream of where the bulkhead will be. The tunnel water will be recirculated, from just upstream of the bulkhead back upstream to a point 950 feet upstream, above the crushed limestone behind the bulkhead, to provide extra treatment. There are two recirculation pipes for redundancy.

Extra steps taken after the Gold King mine release, to ensure safety, cost an extra 18 months and \$1 million. Glenn got to participate in a day of the failure analysis process.

(Monica Bortolini arrived)

The bulkhead will be built of concrete, about 650 feet back in the tunnel. At about 900 feet there is a tunnel collapse that acts like another bulkhead. The limestone is between the bulkhead and the collapse. Water released from the bulkhead will flow through the existing retention/settling ponds before being discharged into Left Hand Creek. There is a contingency plan for additional treatment in an external bioreactor if monitoring indicates a need for it. Such a bioreactor would have a rock substrate with an added carbon source to allow naturally occurring bacteria to reduce the sulfate back to sulfide, and make the metals precipitate as metal sulfides.

The bulkhead will be held in place in the tunnel by means of a concrete key filling recesses blasted into the tunnel wall. The tunnel wall is lined with a layer of shotcrete upstream of the bulkhead. The bulkhead was poured on April 12, 2016. It has pressure gauges to monitor the upstream water pressure. Grouting tubes were installed to add grout as needed due to shrinkage of the concrete. The bulkhead is designed to hold a head of 180 feet of head (about 80 psi) upstream of it. If pressure rises, they can use a valve to remove more water from the mine pool, or pump mine pool water directly out of the mine pool. They expect that the flow through the bulkhead will be in the range of 20-140 gallons per minute.

Sensors provide remote information about the system status to Mary's office. Monitoring includes groundwater conductivity, pH, ORP, and level, in several wells upstream and downstream of the bulkhead. There is the capability to obtain water samples from the mine pool. Existing seeps have been mapped and sampled and any changes in these or other seeps will be tracked. Electrical Resistivity Tomography (ERT) will be used to monitor changes in groundwater level and some information about electrical conductivity.

Ertle's house is about half a mile downstream. There is an emergency response plan with a list of numbers that need to be called if a problem arises.

Lowest point in the system with a direct hydraulic connection to the surface is the extraction well just upstream of the bulkhead, which is about 90 feet above the mine pool.

ERT arrays keep track of groundwater flow through a longitudinal section and several cross-sections downstream of the bulkhead. They will look for changes in conductivity, indicating a change in flow or conductance.

In November they tested the system by closing the valve for about a week. They found a few issues during the test. One was the transducer, which had some electrical interference with the higher water level. This has been fixed. They also built in some alarms to detect changes in pressure. They will test the recirculation pipeline in April. Once it's turned on and tested, they will let it run through the winter. Control valves have also been enhanced with installation of a second control valve downstream of the first. They are planning to replace some old timbers in the tunnel.

Monitoring will occur over 2 years. If water quality goals are not met (at base of California Gulch), then after 2 years they might decide to install the additional treatment.

EPA covers 100% of design, 90% of construction, 100% of monitoring for 10 years, then the state covers additional monitoring. Funding comes from hazardous substance response fund, derived from waste disposal fees. So it's not dependent on general tax revenues.

CDPHE occasionally asks Parks and Wildlife to sample benthic invertebrates.

Kathy suggested it would be good for the Board to have a tour of the Superfund site and perhaps several other mine sites in the watershed.

(Mary left and Sean Cronin called in.)

Chris S brought up the issue of the Colorado Milling Company gold mine that may be reopening near Gold Hill. Glenn reported that the mine is on the Boulder Creek side of the divide, about 200 feet down, and would not be a source of water to Left Hand Creek. The mine claims to have a water right to pull water from Left Hand Creek, but this right would need a change of use decree and would need to deal with the issue of diverting water out of the watershed. It would also involve installing a footbridge and pump station on Left Hand Creek.

### **Approval of Minutes**

Chris S asked if there were any comments or suggestions regarding the minutes of the January meeting. Kathy moved, Ken seconded, to approve the minutes. Motion carried unanimously with one abstention by Colleen who was not present for the January meeting.

### **Approval of Financial Statement**

Jessie presented the financial report. Pages 13-16 in the packet are all in one report, pages 17-27 are reports for each project. We are getting caught up on invoicing for the 3 Reaches project, and expect to be reimbursed by contractors about \$100K soon. On the 63<sup>rd</sup> street extension we are awaiting a payment from DOLA. Under the CWCB capacity grant we are awaiting reimbursement of about \$8K. On the 3 Reaches grant we are awaiting payment for retainage, which will help cover payments to contractors. Under regular LWOOG funds, we are working with Catherine to modify the report to separate in-kind from cash revenue. The Stewardship fund received some donations that can be used as match for our grant. The fee-for-service projects with Trout Unlimited and Left Hand Water District have been going well, with the TU project closed out. Chris S moved, Kathy seconded, to approve the financial report. Motion carried unanimously. Sean suggested it might be worth asking the auditors about LWOOG earning an award for successful management of the accounts.

### **Stewardship Phase II Project- Ratification of email vote**

Jessie reported on the email vote for entering into a contract with Lynker for the AMF-Citizen Science project. Ten members of the LWOOG Board of Directors voted to accept the recommendations of the committee, one Director abstained (Julie McKay), and no members objected (Chris Wiorek and Terry Plumber did not respond).

### **Annual Report Update**

Jessie referred to the annotated outline in the packet. The Fundraising and Outreach Committee met last Friday and came up with a suggestion that the Committee should write the report based on this outline, as considered by the Board. Board members are welcome to join the Committee to help with this effort. The existing members are Jim Bryant, Kathy, Sean, Mark, and the staff members, and it meets once per month, scheduled by Meg. Ken Lenarcic mentioned that he is running for Mayor of Jamestown and he does now have an opponent, so he will need to run a campaign, and will be rather busy, but he would still like to be involved.

The report, which will be professionally printed at a cost of about \$700 from the capacity grant fund, will be distributed to funders, donors, and any other interested party.

Jessie went through the outline for the Annual Report:

- Letter from Board President.
- Who we are (from strategic plan).
- Timeline of key dates in LWOOG history.
- Program write-ups, 1 page each, with highlights of accomplishments.
  - Watershed Science—highlight TU project.

Restoration Program—map, list of partners, list of funders, statistics on restoration.  
Stewardship.  
Outreach.  
Volunteer events.

- Strategic plan (Tomorrow's River).
- Financial summary.
- List of donors, individuals and entities.
- Board roster.
- Staff roster.

It was suggested that we highlight the grants we've received near the front of the report, perhaps under Who We Are.

Rick suggested keeping the sentences short and simple.

Chris S suggested that we all keep in mind additional fundraising opportunities and pass them on to Jessie.

Tony is with a Colorado Nonprofit Loan Fund, through the Denver Foundation, that makes loans to nonprofits, especially for bridge loans, to help with funding pending receipt of future expected funding.

### **Project Updates**

63<sup>rd</sup> St extension is in final stages of permitting and should start in early March. We are having a walk-through with landowners Friday, including a meeting at the Haystack Golf Club. Trees are being marked, and project boundaries are staked. Landowners will receive hard copies of the signed agreements.

41<sup>st</sup> St project is in the process of EWP close-out. We still have money and time available on this project through our DOLA grant, amounting to about \$100K, and we have been able to extend the project through July 2018 to cover additional planting on the Matsch property, and installing irrigation.

The next phase with the existing projects is the Adaptive Management Framework project with Lynker and Lauren Brown of LV Brown Studio Graphics Design, who is a watershed scientist and an illustrator and did a great job on the sustainable crossings report. We expect that she will do a good job with the conceptual model. The AMF will guide our post-restoration monitoring efforts, some of which are funded by CWCB. We have had several meetings with the Lynker team to get this project going.

Enginuity sent us a report analyzing the 81<sup>st</sup> St project in terms of comparing pre and post project conditions. This analysis shows that post-project conditions are similar to pre-project. Our initial goal was not this ambitious, as it would have involved too much excavation, but we

have gotten close to the pre-project conditions anyway. This should help to alleviate concerns of two of the landowners. Chris W mentioned that this report backs up the idea that the restoration project was designed to allow the creek to evolve, that so far the evolution has been within the design standards, and we have a good baseline for future comparisons.

A question arose as to whether LWOG has the as-built drawings for the projects. The answer is yes, we do, in our files and can provide them to anyone who requests them. They are not on the web as they are large documents. They are also part of permit close out documentation required by Boulder County and are publically available there too.

Julie reported that the County is expecting to receive the draft Colorado Hazard Area Mapping Project (CHAMP) maps by the end of the month for Lower Left Hand, which will help to verify assumptions made here. Public meetings will be held the second week of April.

We have 10 more design-build projects being planned as part of a new DOLA grant, and should receive our contract in April.

### **Fundraising & Outreach Committee Update**

During this past month we sent in 4 grant applications and attended an additional fundraising meeting.

CWCB Water Plan

Clif Bar

Gates Family Foundation

City of Boulder and Boulder County Research.

Gates Family Foundation reported that they liked our proposal and we are invited to follow up with the board. In April we should hear more on this, the Clif Bar grant, and the CWCB Water Plan grant. We should hear by end of February on the City and County Grant.

We also met with the Longmont Community Foundation. They will let us know in March or April.

Jessie also met with Josh at Left Hand Brewery, which might have an interest in being a partner in fundraising. We could help them get involved in environmental interests. They typically select a group to be a beneficiary of a fundraising event that generates about \$3K.

(Tony left)

Glenn reported that he and Yana met this morning with Dr. Ellen Wohl and two grad students from CSU who are interested in collaborating with LWOG on a CSU Water Center grant for up to \$25K, most or all of which would go to CSU. The project would involve monitoring and research related to monitoring of some of our restoration projects, and feedback on our Adaptive Management Framework.

Monica asked whether we have the required match for our recent CWCB grant for adaptive management. Jessie reported that we still need \$2,500 from Longmont. We do have the rest of the required match, as soon as we receive a \$10K check from a corporate donor. Some came from Colorado Gives Day, which raised \$8K. Monica also asked about matching for the CWCB water plan grant. Hoped-for funding from DOLA will likely not be forthcoming, so we will probably scale back our tool development plan to fit within existing match. We could also conceivably do some additional fundraising.

The Fundraising and Outreach Committee also considered potential benefits of a sole-source contract for a citizen-science app. Julie T's son works for Lucent LDF and perhaps could help contact them.

Sean applauded Jessie's contact with Left Hand Brewery. Even if we don't benefit from one of their fundraisers, they may donate beer.

Regarding the CWCB Water Plan grant, Sean suggested we inform Chris Sturm about our grant application in case he would like to comment on it within CWCB.

The pint night at Twisted Pine apparently raised about \$250.

### **Adjournment**

The meeting was adjourned at 4:20 pm.