

Meeting Summary

Bonita Peak Community Advisory Group

December 2, 2021, 6:30—8:20 PM

Via Computer Conferencing

CAG members in attendance: Peter Butler, Chara Ragland, Melissa May, John Ott, Russ Anderson, Parker Newby, Anthony Edwards, Terry Morris, Levi Lloyd, Helen Mary Johnson Charlie Smith, Susan Livenick, and Ty Churchwell. Not in attendance: Levi Lloyd and Brain Devine.

Also in attendance: David Heinze, Rob Parker, Scott Roberts, Jon Kaminsky, Lisa Merrill, Pat Maley, Ian Bowen, Neil Westesen, H. Hansen, Samantha Wright, Ryan Bennett, Athena Jones, Chris Stoneback, Rob Runkel, Taryn Chaya, Rory Cowie, Tom Schillaci, Karen Suchomel, Katherine Jenkins, Ian Bowen, Meg Broughton, Tanya Petach, and Mark Rudolph.

Introductions and Announcements.

Peter welcomed Ty back from sabbatical and announced that Levi has resigned from the CAG since he is no longer working for the City of Durango. No word yet on a new appointment from Durango.

Sunnyside Gold Corporation (SGC) and EPA have a settlement agreement in principle to resolve liability issues. Once a draft is finalized, there will be a public comment period and then the Court will need to issue a consent decree. The Department of Justice will respond to any comments.

Pat Maley with SGC said that they are compiling all the information they have gathered since the designation of the BPMD site, and they will copy the CAG when they send it all to EPA. Anthony asks if this is the end of chapter for SGC's relationship with the community. Pat responds that this will resolve SGC's liability at the site. Anthony thanks SGC for working well with the community, and Pat says they have appreciated the relationship with the CAG and all the other stakeholders. Other CAG members also thank SGC for their good working relationship.

The CAG went before the Water Quality Control Commission (WQCC) in November to discuss its Mineral Creek proposal. WQCC is allowing it to move forward. The main issue is whether or not lead, copper, cadmium, and zinc can meet aquatic-life Table Value Standards in the new proposed segment or if some other site-specific standards should be applied for those metals. The timeline for the proposal is that materials for the public notice need to be turned in to the WQCC office in January. WQCC will approve the notice in February and March is when all the evidence is due. Then other parties can respond in April; rebuttal statements will be due in May, and the hearing will occur in June.

A new paper on the Animas River Watershed water quality has been published: *Effects of hydrologic variability and remedial actions on first flush and metal loading from streams draining the Silverton caldera, 1992–2014* by Tanya N. Petach, Robert L. Runkel, Rory M. Cowie, and Diane M. McKnight. Several authors were in attendance for the meeting and they would love to hear any feedback from anyone. Find the abstract here: <https://doi.org/10.1002/hyp.14412>. Peter has a copy of the whole paper.

EPA's Planned Activities for 2022

Rob Parker with EPA:

EPA is providing a scope of work in 2022 and would like feedback from the CAG as to high priority and low priority to balance their resources. The new infrastructure legislation may provide some funding that was not expected, making it a little hard to determine what resources they may have for the year.

The site goals for the BPMD are: achieve water quality improvement with a focus on mine drainage; stabilize source areas with solid media; and minimize unplanned releases. This year's work can be delineated into six categories:

1. Sitewide repository design and initial construction at the Mayflower Repository. EPA is in the middle of a three-step design process and will have a design finalized by May. Construction will begin by Fall 2022.
2. Continue treatment of the Gold King mine discharge. This includes operating the treatment plant and conducting ongoing maintenance.
3. Continue remedial investigation within OU1, including Upper Animas Reach. This includes a number of mine site samplings (Howardsville, Kittimack/Eureka), Upper Cement data gaps, stormwater characterization, long term monitoring, and initiate sampling in the Animas Forks area (funding dependent).
4. Continue investigation at Mayflower Impoundments (OU2). In 2022 EPA will develop a work plan and implement surface water, ground water and soil sampling. They will likely do additional drilling and well installation. This is all based on work that has previously been done by Sunnyside Gold. They will have a summary report by next winter.
5. Continue investigation at the Bonita Peak Groundwater system (OU3). EPA wants to install wells at Lake Emma area; do an infiltration study; sampling program of seeps and springs, draining adits, and existing monitoring wells. In summer, they will do a stream bed evaluation; and look at Gold King (GK) mine alternatives based on previous summer's horizontal boring.
6. Continue implementing remedial actions pursuant to the 2019 IROD. This is a long list of work at a number of sites and will involve several contractors.

Questions.

Ty asks Rob to clarify about the new infrastructure legislation: is the money appropriated or will that need to be done separately. Rob thinks it was appropriated for remediation but it is not clear yet what work will quality. Ty asks if Sunnyside reaches an agreement, does that money go specifically into the BPMD? Rob says that depends on the signed consent decree but that will likely go to this project.

Marcel asks about the settlement agreement coming in advance of the feasibility studies and if all is not understood, how do they know it is sufficient to cover any unforeseen costs? Rob says he is not sure but a good question.

Anthony says that regardless of settlement, if it takes more funds, there will be more invested in watershed, and if less, then it will be less. There is no set amount of spending that is agreed on. Rob says since it is a national site, they can petition for additional funds.

Peter asks if the infrastructure legislation has money for land management agencies for mine remediation? Rob is not sure. Jon Kaminsky from the BLM Gunnison Field office comments 'yes'.

Peter asks about a streambed evaluation in OU3. Where is that? Rob replies it is in the Grand Mogul area. Ian says they are looking at mine waste in the streambed.

Susan asks about contracting with local contractors for next year. Rob replies that they are looking at options with current contractors.

Peter asks where will there be long-term monitoring. Will it be at gauging stations where there are already long-term data sets. Rob will look into that.

Charlie asks if they will initiate construction on the repository for Gladstone sludge next year? Rob says they are doing ok at Gladstone, but they are working to alleviate any pressure on sludge management.

Russ asks about the Mayflower site-wide repository: some geotechnical work was done this year and what were the results? And was there feedback on the comments we submitted? Rob did not write a response to the CAG comments, but says he was thankful for feedback, and it will be incorporated. At a future meeting, they can provide an update on the repository. Russ asks about the stream bed elevation and where can he find more information? Ian says it is in infancy and contract is not awarded.

Peter asks about stormwater events and big slug of metals with rainstorm. How do they capture that? Does it have substantial environmental or biological impacts? The Gold King spill of 2015 had little impact, and stormwater events tend to be smaller. Is this really an important issue if biological impacts are small? Rob says they will do the investigation piece first – 'what the impact is' is an important determination.

Discussion of the Results of the Red & Bonita (R&B) Bulkhead Test from 2020.

Ian Bowen with EPA: The first goal was to look at what engineering issues might arise – leaks, etc. They also wanted to look at any influence on adit flows, seeps and springs.

Monitoring was conducted during five events from June to November: first, when water was raised to 50' and held there for one week; then when it was at peak elevation of 184' (unable to get to the proposed 200' level); then during drawdown and finally after drawdown was complete. Monitoring results identified key locations for future monitoring. All water that was released from behind the bulkhead was run through the interim water treatment plant.

Bulkhead is located about 275' from portal. The chart showing water elevation behind the bulkhead over time suggests that equilibrium was not reached. Peter pointed out that

looking at the chart, equilibrium might be lower than 200' elevation which is where the Adams adit is located further upslope.

The test appeared to be successful and no engineering improvements are planned for the bulkhead. A future test is recommended for at least one year in length. It generally takes several years for bulkhead closures to stabilize.

Scott Roberts with Mountain Studies Institute and Rory Cowie with Alpine Water Resources discussed their analysis of water quality impacts related to the test:

During the test, they looked for water at emergence points such as draining mines or seeps and springs, or dry mines or new surface water. They discussed how they tried to attribute this water to the test closure versus typical hydrologic variability.

They looked at a subset of the 225 seeps and springs that they have sampled and 6 mines in the Cement Creek drainage. Daily discharge has different variability in different non-bulkheaded mines. Some respond to snowmelt (Natalie/Occidental), but others do not (R&B and Gold King). It did not appear that the test affected any nearby mine discharges. Nor were there any significant changes in in water levels in wells drilled into and above the American Tunnel.

There were a few seeps and springs where they did see a change in chemistry. Zinc concentrations were higher at some locations, but still within the range of variability over several years. For seep 62, in the R&B iron fen, they did see an increase in lead concentration above the 5-year average. Currently, the R&B flow discharge spews over the entire fen area, and they would like to get the water off to the side to preserve the integrity of the fen.

Dry mines stayed dry, but they did find 25 sites of new surface water expressions. These are located within R&B waste rock and near the fen, along roadcuts, and in previously mapped ferricrete (indicating historic surface expressions). The significance is that some water could have been rerouted to pre-existing pathways from before the existence of the R&B. Most were observed when the test reached 140-155'. They also saw that zinc load diminished downstream in Cement Creek and the Animas River during the test when compared to data taken during previous years with similar stream flows.

Questions:

Tom Schillaci asks about treating the Natalie/Occidental at the treatment plant. Rob says the EPA response action is only for treating the Gold King. Peter notes that the metal concentrations are not high at Natalie/Occidental but it produces a high volume of water. That makes it significantly more expensive to remove a pound of metal from this mine as opposed to the highly concentrated Gold King discharge.

Charlie asks when will more long-term tests take place? Rob responds that they want to get wells into OU3 before they do further test, so earliest would be 2023.

Marcel thanks them for the work. It seems to have pointed to great places to look forward.

Jon Kaminsky asks if the fill curve of the mine pool behind the bulkhead could be modeled using equations similar to the drawdown curve used with wells. Ian replies that they do not have a model or plans to do the analysis that Jon suggests.

Marcel asks if this study is available online. Ian says the draft final version is waiting for his comments, and then they will get it shared, probably by January. Peter asks if the presentations can be sent to CAG to put on the website. Katherine will edit and send to Peter. Rory will cut to the slides that were presented today. Tonya is working on another paper that will be published by middle of next year.

Administrative Items

- ✓ Meeting Summaries: Melissa makes a motion to approve the October summary. Chara seconds. All are in favor. John says that Chara is doing an amazing job and thanks her for doing the notes. Peter agrees with John and says the notes are even more detailed than the summary, as he typically shortens them. September meeting notes were sent out late. Melissa makes a motion to approve the September summary. John seconds. All are in favor.
- ✓ CAG Discussion Time. December 8th, next Wednesday. 6:30.
- ✓ Long-Range Schedule
- ✓ Future Agenda Items? *Macroinvertebrate Data, Mayflower Tailings, Site Specific Plans for Interim Remedial Actions, Report on Red & Bonita Bulkhead Test, etc.*

Would also like Rob's presentation. He will provide.
Happy Holidays to all. Next meeting is in late January.

8:35 PM

Adjourn