

Meeting Summary
Bonita Peak Community Advisory Group
July 27, 2022, 6:30—8:30 PM
Via Computer Conferencing and
In Person at Silverton Town Hall
1360 Greene St.

CAG members in attendance: Peter Butler, Chara Ragland, Helen Mary Johnson, Susan Livenick, Anthony Edwards, Parker Newby, Brian Devine, Charlie Smith, Terry Morris, Marcel Gaztambide, Alyssa Richmond, and Russ Anderson, Justin Elkins and Ty Churchwell.

Also in attendance: Tom Schillaci, Samantha Wright, Al Basile, Lisa Merrill, Megan Schutti, Athena Jones, Ryan Bennett, Melissa Smeins, John Kaminsky, Edward Bulloch, Taryn Chaya, Sarah Graves, James Hou, David Heinze, Ben Martinez, Mandy Eskelson, Ang Christoff, Rick Fishel.

Introductions and Announcements

Anthony brought up that San Juan County is concerned about sheep and sheep grazing trespassing from BLM land on to private lands. They are especially concerned about sheep erosion on remediated and revegetated mine sites. Anthony asked Ryan Bennett to talk about his private property. One of the sites that was remediated through Superfund and is starting to revegetate, suffered considerable damage by trespassing sheep. Fencing out the sheep is not a viable option. Grazing permits are provided, and maps are not being looked at. This is an issue that has come up before with ARSG according to Peter. Ryan will be talking to BLM.

Other announcements. Christina on personnel: Al Basile is the new EPA communications person with Meg Braughton on maternity leave. He will stay on when she returns. He was in Region 8 for a number of years but also had a stint in Boston. He has a background in fisheries and aquatic ecology. Christina is being promoted in EPA to a section supervisor which will oversee project managers of Superfund sites within Region 8. She will wear two hats, supervising herself, until a new project manager has been hired.

Interesting Issues from CAG Sampling this Spring

Peter discussed the draining adit at the Silver Ledge mine (Mineral Creek) which is located right next to the creek. The flow was measured to be 80 gpm during spring runoff which is much higher than the rest of the year. The drainage contains high concentrations of lead. He showed evidence that there was an old flume that carried the creek around the mine site, which has since disintegrated. The main access to the

mine was a shaft from above. The flume indicates that there may be mine workings directly under Mineral Creek.

Peter also discussed observations from sampling in the Animas Canyon. In the winter, there appear to be frequent ice dams in the river which back up water and deposit metals in the ice along the banks. There are also avalanches that fill the river with debris and essentially do the same thing. These metals may not be picked up again until higher spring flows during runoff. Anthony asks if samples were taken from contaminated ice? The answer is no.

This past spring, CAG members noticed that filtering Animas River water in May during high flow was quite difficult. Lab results showed high iron and lead concentrations. Around Cascade, the loads of these metals were very high: about 49,000 lbs. and 240 lbs. per day respectively. These concentrations were higher than we normally see in the spring, but the CAG happened to sample the day that flows in the river greatly increased for spring runoff. Concentrations of manganese and zinc were comparatively lower, which is not surprising. These metals travel in a dissolved state in the Animas River and are less likely to drop out on the banks in the winter when the river gets dammed.

The CAG has now collected three years of monthly water quality from the Animas River below the confluence with Cascade Creek. Table value standards (TVS) that are not being met are chronic and acute zinc, chronic iron and chronic aluminum. There is a reasonable brook trout fishery and a pretty good macroinvertebrate population in the Animas a ½ mile upstream of the confluence. According to Peter's estimation, zinc TVS are not attainable year-round (would need a 300 lbs/day reduction in spring), but zinc may be attainable with a 100 lbs/day reduction for nine months of the year. Iron TVS not attainable, and neither is aluminum.

Anthony asked about dividing line for fish presence in the Animas River. How far down is dividing line? It might be around Elk Creek or a little further down for any meaningful populations. Occasionally fish are found upstream of Elk Creek. The CAG samples 1/3 mile below Elk Creek. Elk Creek is further down than Deer Creek. BLM says they shocked Deer Creek and found a good population of cutthroat there a week ago.

Anthony asks about the non-attainability of TVS in April to June? Would treatment at Gladstone help? Peter doesn't think so. Gold King is currently being treated. The other three big sources of zinc add up to a little under 100 lbs/day of zinc. Chara asks about treating Cement Creek during this time period. Peter says when Sunnyside treated Cement Creek during low flow, zinc concentrations were only slightly lower than if the four main adits were all treated.

Anthony asks when zinc comes from Gladstone. Peter says its year-round, but the adits have a greater impact on concentrations during low flow. The zinc load from adits can vary throughout the year. Some adits, like the Red & Bonita have a pretty steady load.

The Gold King varies during the year. Flows are high in early fall. It appears to take several months for spring runoff to work its way out of the portal.

Helen Mary asks about zinc in low and high flows. Are total zinc loads dropping during spring runoff or is it just being diluted? Generally, zinc loads go up substantially during runoff, but because of dilution, concentrations do go down. However, hardness concentrations also drop during high flow, making zinc concentrations more toxic. That's the reason why looking at hazard quotients is important.

EPA Update on Summer Activities

Updates: Athena discussed Response Actions under the 2019 IROD.

Mammoth Tunnel on Cement Creek: a channel was constructed around the upper pond down to lower pond to help dry out the upper pond. The upper pond is on BLM land, and the lower one is on private. EPA is not clear where the water goes after it goes into the lower pond. They are doing some more investigations.

Sunbank Group Mine: they channeled the drainage around the waste dump and excavated ponds that captured the drainage.

Terry Tunnel: they removed the larger pond and are controlling the runoff. They will hydro seed the large flat area in front of the tunnel. There is a question about gating the area to keep vehicle off the revegetated area. EPA says they'll look into it.

North Star: a huge amount of waste material has been moved away from Mineral Creek. The site is not on the NPL because of its proximity to Silverton. They've moved much more material than originally anticipated.

Russ asks if these actions are improving water quality, or are they being done to reduce non-planned releases? Can the metal load reductions be quantified? How are they improving water quality? It looks like they should from pictures. Athena says that some sites may show water quality improvements. They take upstream and downstream samples before and after the work has been completed. Any improvements will be modest. Maybe in a year they may see more improvements. Some of the actions are also just stabilization.

James Hou discussed OU3 Characterization Studies.

There are some upcoming Ross Basin and Lake Emma infiltration studies. Overall, they are trying to put together a hydrologic budget for the OU3 area. They are also doing a seep and spring study to examine stream gains and losses, especially in Grand Mogul area. There is potential interaction between this area and Sunnyside workings.

There is quite a bit of discussion about the components of developing a hydrologic balance model and if measuring some of these components is even feasible.

7:25 – 7:45 PM Effectiveness of Bulkheads at Gladstone

This item was postponed for a later meeting.

Itinerary for August 25th Tour

In the morning, participants will meet at 8:30 in Silverton and go to Lake Emma. The main goal of the tour is to give people an understanding of the scope of OU3 since there will be a lot of discussion of it this fall. The tour will then go to Mayflower tailings. There will be an early lunch in Silverton, then we will proceed up Cement Creek to the Yukon and Anglo Saxon. Then we will tour the treatment plant and preview the conceptual model of hydrology in the Gladstone area. Next we will go up towards the Mogul to better understand where the Red & Bonita is in relation to other mines that could be affected by closing its bulkhead. We will also stop at the Natalie/Occidental to see the adit drainage diversion channel there. Return to Silverton around 3:00 and then maybe go to Silver Ledge.

Administrative Items

- ✓ Meeting Summaries. Charlie makes a motion to approve. Susan seconds. All approved.
- ✓ CAG Discussion Time. Park in Durango around the 11th. 5 pm at Pioneer Park.
- ✓ Long-Range Schedule.
- ✓ Future Agenda Items? *Macroinvertebrate Data, Drilling Locations in Lake Emma, Site Specific Plans for Interim Remedial Actions, etc.*

8:25 PM Adjourn