

Meeting Summary

Bonita Peak Community Advisory Group

October 28, 2021, 6:30—8:20 PM

Via Computer Conferencing

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

Also in attendance: Sue Morris, Chris Stoneback, Melissa Smeins, Tom Schillaci, Athena Jones, David Heinze, Rob Parker, Ben Martinez, Kirstin Brown, tchaya, Katherine Jenkins, Mark Rudolph, Marcie Bidwell, James Ballew, Lisa Merrill, Chris Stoneback, plus a few others.

Introductions and Announcements.

Peter started off with announcements. The CAG gave a tour of the Bonita Peak site to the La Plata County Commissioners, their county manager and communications director. A new San Juan County Commissioner came as well. They toured several mine remediation sites and discussed the CAG's water quality proposal for upper Mineral Creek. This past month, Peter also has given presentations about the BPMD and the CAG's proposal to several groups including, the San Juan County Commissioners, the Animas River Community Forum, the Southwestern Water Conservation Board, and the Lunch and Learn Series sponsored by the Four Corners WIIN Group.

He also presented to the River Watch West Slope training session. River Watch volunteers sample for metals at 200-300 sites around the state. The Animas Basin was where they started sampling almost thirty years ago from Silverton to down below Durango. The monthly data they collect at six sites from around Silverton to Bakers Bridge has created a very valuable record. Peter discussed with the trainees how important their work is and how we can see changes in water quality over time because of their efforts. He also thanked Lisa Merrill who has been sampling for River Watch around Silverton for many years. The data is available on the River Watch website.

Update of Current EPA On-the-Ground Activities in the Watershed

2019 IROD Work: Several EPA personnel gave updates.

Bandora Mine (South Mineral Creek) - The main adit is collapsed at the entrance. EPA put in a drainage pathway from the main draining adit to keep discharge off the dump pile. They have drilled five holes to intercept the portal behind the collapse to check water levels, but were unsuccessful in hitting it. The Army Corps did some geophysics and were able to follow the adit back about fifty feet, but then lost it. It must take a sharp turn. EPA plans to return to the site next year.

Terry Tunnel (Eureka Gulch) - EPA drilled into this tunnel on the third try behind the closed off entrance and pumped out water. The entrance was opened up, and the tunnel was stabilized back to the first bulkhead. Snow stopped work, so some regrading and revegetation will need to be done next year around the opening.

Anglo-Saxon (Cement Creek) – The mine drainage was routed around the crib wall, and the beaver pond capturing the drainage across the road was mucked out. The sludge material was amended with lime and buried on site. The culvert underneath the road still needs to be repositioned.

Mammoth Mine (Cement Creek) – The lower pond capturing drainage was mucked out. The material was amended with lime and buried on site. The drainage was also rerouted back into the culvert and under a road that crosses the site.

Campground 7 (Animas River near Animas Forks) – This site had high lead levels. DRMS buried it with top soil to reduce human exposure. A lead ingot was found and given to the San Juan Historical Society.

North Star (Mineral Creek not far from Silverton) – The EPA removal program pulled mine waste up from the banks of the creek to a flat area on the site and covered it with soil material. No amendments were added to the material to make it less reactive to acid generation and questions were asked about why not. No one from the removal program was on the call, and no one else could answer the question. At every other mine waste remediation project in the basin, mine waste has either been capped with clay, shale, or geotextile fabric, or amended with lime or other alkaline material to reduce acid leachate and metal mobilization. The North Star would likely be on the Superfund list of 48 mine sites if it wasn't so close to Silverton. Silverton residents were concerned that a Superfund site so close to town might affect housing mortgage rates.

Characterization Work:

USGS worked with EPA on using distributed temperature sensors in the Animas River from Arrastra Gulch down to Silverton. By cataloguing small temperature differences along the cables, one can determine where groundwater inflows come in. USGS also did a tracer study at the same time which can be used to find groundwater inflows as well. Cables were put on both sides of the river at least part of the distance. One advantage of the temperature sensors over the tracer method is that the side of the river from which groundwater is coming in can be determined. USGS will compare the results of the different methods.

EPA drilled wells in the tailings at the Pride of the West Mill at Howardsville to better characterize the material and to better understand the hydrology. They sampled this year and will be resampling in the future.

EPA also drilled wells and sampled transects in several locations between Eureka and Howardsville to characterize tailings that maybe located in the alluvium throughout this stretch of river. They will continue to sample these locations.

Story Map

Athena and Katherine have been working on a story map for the BPMD site. It is now available for review, and they'd like to see what people think of it.

<https://storymaps.arcgis.com/collections/e34d136ea58242f68ec12bd2a04acf8c>

Audience and CAG members asked a number of questions about the 2022 activities, the Mammoth and Anglo-Saxon work, leachate sampling of mine waste, and the site-wide repository design which EPA responded to or will in the future as more information is available.

Div. of Reclamation, Mining and Safety Update on BPMD Goals Two and Three.

Kirsten Brown with DRMS discussed surveys done at a large number of sites in support of Bonita Peak Goals 2 and 3. (Goal 2: Stabilize Source Areas - prevent waste rock piles from washing away and stabilize mining waste; Goal 3: Minimize unplanned releases, especially from ponds and mine adits)

DRMS and EPA developed a long list of characteristics to catalogue at each site, including site access, mine drainage, environmental (avalanche, fish, beavers, camping nearby, *etc.*), history, mine workings, ownership, permits, pipes (condition, maintenance), ponds, reclamation, and waste rock (size, location, stability), *etc.* There are 300 data points they collect to document how things may change over time through infrequent events. They also filled in data gaps for water, sediment, and waste rock samples. Many entities participated, giving opportunities for conversation and collaboration, including DRMS, CDM Smith, EPA, Alpine Water Resources (Rory), BLM, USFS, and CAG members.

Notable Observations:

There has been beaver activity at the Tom Moore in the adit. In 2016 you could see the roof of the Porcupine Mine but now the water is so high you can't see inside the mine. OHV's have been causing erosion at Columbus waste rock pile. Waste rock at the Gold King has been disappearing. It may be caused by avalanches. Avalanches took part of the waste pile away from the Paradise portal. The flow from Silver Ledge adit was measured for the first time (the adit was unknown to people until about four years ago). The Sunbank pond is in an avalanche path and that may change the bank stability in the future. The Frisco/Bagley had an unplanned release (9-15-21). This is third time a release has occurred underground in the past 25 years. The entrance is open and clear.

Several people commented that this DRMS effort was a really valuable exercise, particularly in getting people from different agencies to look at sites together.

BLM's Summer Activities.

Melissa Smeins from BLM outlined the agency's work.

Mighty Monarch – BLM collected water from the adit and lined the drainage ditch. Water quality is not too bad with just a bit of elevated zinc. They also decommissioned a couple of roads leading into the mine, and converted one road to a walking trail. The mine site will be conveyed to the Town of Silverton.

Lackawanna – The mine tailings from this site on the banks of the Animas River were moved many years ago, but there were still some hot spots suitable for removal of material. It was trucked to the May Day repository up in Cement Creek. BLM took care not to damage wetlands at the site.

Burrows Gulch – BLM has been tracking water flows at a fen and has been working to facilitate a purchase of water rights for a transbasin diversion that has historically caused some issues in the area. The purchase would retain good quality water in the Animas Basin.

Forest Queen – BLM remove some waste rock and sludge from organic bioreactors that were no longer functioning and took the material to the May Day. The bioreactors were replaced with iron terrace for reduction of aluminum, iron, and manganese.

In 2022, BLM is planning preparation work for 2023 work at several locations in California, Eureka, and Prospect Gulchs. They are also planning maintenance type work in South Eureka Gulch (Midway, Red Willow 1 and 2), the Redcloud (Burrows Gulch), and the lower pond at the Mammoth (illegally placed on BLM land).

Charlie said he appreciated the reports from tonight showing all of on-the-ground work that is getting done.

Draft Proposal for Changes in Use Classification and Water Quality Standards for a Segment in Upper Mineral Creek.

The upper part of Mineral Creek, from Chattanooga to the Middle Fork of Mineral Creek has seen tremendous improvement from mine remediation projects done upstream. Currently, there is no aquatic life use classification on this stretch, even though there is an abundance of aquatic life. The CAG wants those standards to reflect the improved conditions of the water, and has sent an initial proposal the state Water Quality Control Commission for what issues the Commission would consider for a June Rulemaking Hearing. The proposal is a draft, and the CAG will be working on it over the next few months. Even though zinc and cadmium concentrations have dropped by 70% and copper concentrations have dropped by 95%, lead, copper, cadmium, and zinc still exceed aquatic life standards during spring runoff. Other than for zinc, standards are met the rest of the year. The low hardness of spring runoff seems to drive the standard exceedances.

Over a dozen mine remediation projects have been completed upstream over the past twenty years. The most effective project was the bulkheading of the Koehler Tunnel which was emitting higher loads of metals than either the Gold King and Red & Bonita mines.

Funding for the bulkheading came from Sunnyside Gold Corp. Subsequent grouting around the bulkhead to reduce leakage was funded through 319 funds and DRMS severance tax monies.

Administrative Items

- ✓ Meeting Summary – not out yet
- ✓ Early December Meeting Agenda – the CAG won't meet in November but will meet early December (2nd) and then in January on the fourth Thursday.
- ✓ CAG Discussion Time- Peter will send out an email to pick a time.
- ✓ Long-Range Schedule – the December meeting agenda should cover EPA's planned activities for 2022 and the Red & Bonita Bulkhead Test Report.
- ✓ Future Agenda Items? *Macroinvertebrate Data, Mayflower Tailings, Site Specific Plans for Interim Remedial Actions, etc.*

There was some further discussion about being notified and seeing plans for EPA removal actions. The CAG didn't know anything about the North Star work until it was mostly complete.

Charlie asked what the Forest Service had done this summer. Ben Martinez gave a short summary of the work, mostly minor work around the Brooklyn Mine.

8:20 PM - Adjourn