

## 2016 Panel Discussion Executive Summary: Where Do We Go from Here?

Panel discussion Wednesday, May 18, 2016 3:35 pm

**Moderator:** Virginia T. McLemore, NM Bureau of Geology and Mineral Resources

### **Panel participants:**

Karletta Chief, Department of Soil, Water and Environmental Science, University of Arizona

Bonnie Hopkins-Byers, New Mexico State University, San Juan County

Kim Carpenter, San Juan County

Rich Dembowski, Chairman, Gold King Mine Citizens' Advisory Committee

Dennis McQuillan, New Mexico Environment Department

Steve Austin, Navajo Nation EPA

*Editor's Note: The following represents a transcription of panelist remarks made at the conference. Remarks were edited for publication by the editor. Some panelists did not review this version of their presentation and the editor is responsible for any errors.*

**Virginia McLemore:** The goal of the panel discussion is to discuss the path forward in terms of science and engineering. We welcome the public to join us in the field to see how we sample and we plan to have another conference next year to follow up.

**Steve Austin:** Seeing similar issues pre and post-spill. We need to figure out what is naturally occurring and what is going on in the system.

We need to check on local geology, historic mining, power plants, coal mining and/or gas development. We need to figure out what these sources are and try to deal with the problems and figure what screening levels we are using and the concentrations.

What is really safe and for what use? Ag use and livestock use.

We will continue to monitor weekly once our

funding gets into place. We want to see what is coming down the river and make sure it is acceptable levels. We need to know how much is from pre-spill and how much is from Gold King.

**Kim Carpenter:** With what's happening with the chemistry of the river, we want to clean up nitrates. From the aspect of SJC point of view, we have been working the last decade to get more structured systems in place and gravity flow system that would eliminate failing septic systems.

We know there is a potential for it to happen again and we want to look at prevention and backup measure

There is data out there that can help us with a perspective of what's going in regard to the nitrates in the river. We have to address all of this issues and the other factors that contribute to the negative effects.

As far as San Juan County and notification planning, we have had a comprehensive plan in place for a long time. We found ourselves notifying the Navajo Nation. I want to start talking collectively. We need to work on the communication side to have scientific and political approach to protect the future generations.

**Karletta Chief:** I believe where we could go is better communication of data and research that is going on around the San Juan River upstream and downstream. A concern I hear from the community includes the lack of communicating the data and research going on. This will help them to understand standards and understand where their water comes from. Also, I would like to see watershed partnerships for the Navajo Nation in terms of making people able to do their own monitoring and practice land management of their own land. A fair water testing day to educate people on collecting samples.

Work to build trust in providing information back to the people.

Also, recognize different perspectives and respecting that and valuing it in the sense that indigenous people use water very differently. Examples include: mud baths, spiritual practices, or sediment put on skin as part of prayer. Recognize that daily life for the Navajo people is very different and incorporate that into exposure assessments.

When we did listening sessions, we said very little and just listened to the community members and that will help with healing. It's about healing as a community and being optimistic about the future.

**Rich Dembowski:** If we are going to be serious about moving forward then we need to understand the pre mining conditions that go back 100's of years, look at how it was then and before/after the Gold King Mine spill. We need to define "normal". In order to achieve that would require a compilation of various engineering standards; health, Ag, sediment, and water quality.

Lurking in the background of the science is an entity. The entity is very poorly defined and over time as additional research comes in to play, the entity will be fed data and will be a constantly changing body of thought.

The mission of the Gold King Mine Citizens' Advisory Committee is to serve as a liaison

between the public and government. We want to convey public concerns to the NMED and ensure that they are addressed. I can assure all that every member of the committee is invested in our mission statement. The committee developed and approved our own bylaws (self-govern) and we honor no master other than the public.

Many questions remain: What's the projected cost of monitoring and cleanup? Will NM benefit from Colorado application for superfund status? If not then do we need to apply?

Development and maintenance of trust is part of moving forward. The elephant in the room is the fact that we don't trust the government and that's unfortunate but it is reality. The key element is giving the citizen a reason to trust and have faith in the government. The EPA needs to be accountable and responsive. We need less road blocks and do more than talk. I suggest Heinrich and Udall need to be proactive and act to cause the EPA to be accountable, transparent, and receptive.

**Bonne Hopkins:** I represent NMSU staff and employees. The big thing is that this emergency is local and there is no one that will be more invested than us here today.

We can see Ag was put at the forefront of this emergency and that's rare. Usually farmers have to fend for themselves. We do have to preserve the legacy of Ag in this state. It is important to tradition, culture, and heritage. We need to focus on maximum contaminant levels and we need to establish levels that are acceptable for us. We want to be able to say according to the max levels and the data we have, it is safe to irrigate. We can't assume that we know all questions and answers. We need to keep an open mind and respect the emotions related to the spill.

We look at livestock as a concern and are watching monitoring levels. Also, we are looking at the ecosystem and we may lose ecosystems if we don't irrigate.

We need a holistic perspective and need to continue working together and focus on future generations and protect Ag legacy.

**Dennis McQuillan:** It's important to communicate with the public and be honest about the good, bad and the ugly. This conference has done a good job of identifying data gaps. We put together the exposure and risk dashboard. It explains exposure

pathways. This whole process is data driven as we take samples and then decide where to go next.

EPA soil numbers have been mentioned and those are not appropriate for recreational standards. The NMED will not stand for that number. We have some gnarly tech issues that need to be addressed but we are going to use good science and subscribe to peer review and collaborate.

**Question from the audience:** What is the best way for outside researchers to build trust with Navajo communities in order to better communicate scientific results that may impact those communities? For example, bacteria pollution in the San Juan River.

**Karletta Chief:** Working with Navajo experts, getting support of Navajo community leaders having Navajo consultants, working with Navajo Students and partnering with Navajo scientists to give advice and guidance to the researchers.

Make sure you have approval regarding environmental and human subjects. This takes a lot of time, discussion, and outreach to respond to their questions.

**Steve Austin:** You have to work with tribal government but you won't gain the trust of the locals if you don't work with the chapter officials. The local people need to be involved in the community meetings. It takes a lot of time to gain trust.

**Question from the audience:** What was the population of the area studied before 1935 when tailings were being dumped in rivers? Our perceptions and expectations have greatly changed in the intervening years. We have a much larger populations that is more concentrated in large towns and cities whereas before ranchers, farmers, and miners were more dispensed. Before vaccines, antibiotics, and safety regulations. People were more resigned to accidents, illness, and death but today modern technology and machinery has made pollution a much greater problem and modern communications have made awareness of problems greater and more immediate.

How can we resolve these existing problems without blaming "the other" as we are all involved?

**Kim Carpenter:** Historically when Silverton was at its peak there was quite a bit more people.

The area was plagued by disease that wiped out the population in the twenties. There will be evolutions of decline population and evolutions of increased populations. The biggest thing about it who is here, what we need to do better to collaborate throughout the entire corridor

With regard to population: we need to understand the presence of the Navajo Nation in terms of data collection, sharing and then get the minds together and lay down the issues at hand of determining what are the important numbers and what is acceptable?

**Rich Dembowski:** We need to evaluate how our societies have changes over the last 100 years. The growth of oil and gas which is now bad affect our society from Silverton and downstream. Resource extraction. We will evolve from economic system

We will experience change over the next 100 years that will focus on economies. We will lose people but we will also gain others.

**Paul Montoia:** Regarding the first question, I think it's all the communities in general. The public does not have a good light of EPA.

What I would like to see is the NMED commit to setting up a meeting with officials from EPA regions 8, 6 and 9 because we hear we're not getting the true story, so if we could pull all those people together for a community discussion that would be beneficial and should be one of the goals that we could set here today.

**Question from the audience:** Gold King Mine spill has and continues to have national attention. As a concerned San Juan County citizen, what is EPA doing in the following areas:

1. Spill remediation along the entire waterway
2. Time frame to commence and finish remediation

**Dennis McQuillan:** To respond to Paul's comment, the EPA held three public meetings in CO but we need a meeting for stakeholders in NM and we have asked EPA if they could hold a superfund meeting in Farmington or Aztec and have not receive a response. We are stakeholders

down here and we need to make sure we are heard.

Regarding remediation, there are no proposals to go in and remove solids that are in the river bed. There is a data gap when it comes to the 880,000 lbs. of metals and the distribution is not well defined. We have hot spots with high levels of lead and that needs to be mapped and identified that we have discussed. Nobody has cleaned any sediment in the river to-date.

**Question from the audience:** Why was it not dammed back up as soon as possible? Why allow continual seepage? We have concrete that sets up in the ocean. Why are we not using it? There is a water system created in India that pull clean water out of the air. Why are we not filtering the river?

**Dennis McQuillan:** EPA did install a water treatment plant on emergency basis.

**Rich Dembowski:** As an engineer, I write and certify spill plans which are required by the Clean Water Act. Did the EPA have all these plans that they require the rest of us to have? What actions were taken? You're required to have a log under the Clean Water Act, so where is their log? They have refused to disclose any data regarding these things.

Come to my meetings and hear your neighbors talk about EPA coming onto their property without concern for ownership, taking samples, then unwilling to share information with landowners. It is that elephant in the room, folks.

**Gilbert Yazzie from Shiprock, NM:** It's happened in the past and the grassroots Navajo won't understand the technical info. Technical info needs to be brought down to the level of the people.

**Karletta Chief:** I rely on Navajo geologists that have been at the forefront of translating technical terms. There is challenges in explaining parts per million (PPM) in Navajo so when I presented samples, I worked with the Navajo geologist to translate my research. They have standardized Navajo medical terms.

**Steve Austin:** We presented our results in Shiprock and we had a co-worker translate the technical information.

**Dennis McQuillan:** How to visualize PPM: What if you plant a row with 1000 irises with 1000 rows?

That's a million iris's and you pull out one and put in one poison ivy.

**Delia Bell from Farmington:** I live in northern CO and I am a friend with a representative in CO that could help you if you want me to be in contact with him. Randy Baumgardner CO State Senator. I would be happy to give you his contact info.

**Question from the audience:** Colorado has been feeling the effects of chronic mine drainage for many years. This blowout is the first time that the effects have been felt so far downstream. It was suggested yesterday that superfund will address chronic loading but is unlikely to address the possibility of future min blowouts. What role should downstream jurisdictions take in advocating for research and/or remediation to prevent future mine blowouts?

**Kim Carpenter:** There has been significant blowout in the 70's that was devastating to this area. I think it is not effective for everyone to stand aside and hope this doesn't happen again. This will happen again and were talking about drainage that will last more than a couple of weeks. People have to get involved. We need to fight for what we have instead of fighting for what we want. What else is being polluted? People downstream need to get involved. Were also dealing with other issues so I encourage every jurisdiction to get involved and speak up. The Southwest is very difficult and were basically forgotten as a result of not being on the East Coast.

We would not carry the voice we had if there were not others standing beside us. This event was a local emergency that stemmed assistance from other agencies. The county is concerned for our friends.

**Rich Dembowski:** The army spends time planning and rehearsing. I don't believe you can always prevent but you can do everything possible to minimize an event.

You depend on training for a plan when reacting. When someone breached that dike, it was an "awe shucks" situation. The guys there probably were not trained on a spill plan. We are continually cited by the EPA if we don't have our own plans and training. We need to ensure that everyone is aware of what needs to be done when there is another disaster.

**Dennis McQuillan:** The citizens needs to hold the government accountable. Make sure we are doing the right thing.

**Darrell Clark from Farmington, NM:** This GK incident is not our first, it has happened in the past. The cumulative effect of all this stuff leaches minerals into our rivers is zilch. There is fish in the river, there is wild life just like there was before. We need quit letting them cause an uproar and listen to them.

**Duane (Chili) Yazzie from Shiprock, NM:** *Daily Times* reported there is 4.5 million gallons of mine waste coming off the mountains into the rivers on a daily basis. Is this an exaggeration?

**Kim Carpenter:** I can't confirm that is a correct number but that is occurring. There is theory that the American Tunnel is leaching into the GKM but that has not been confirmed. The big thing is that there have been a number mines that have been leaking.

I have seen mine heads that are seeping and this has been going on for years and years and has gotten worse. This is why EPA was looking at the remediation process; trying to filter out minerals that were released in the sludge. I can't tell you a number but there are a number mines that are seeping.

**Dennis McQuillan:** The mines have been leaking for a long time. They installed bulk heads to control the seepage to plug up lower levels. It caused groundwater in mountains to rise 1,000 ft. Now there is substantial pressure. Installing the bulk heads was a good thing but now we have additional work to do. We need a holistic solution and look at the entire watershed because some of the issues transcend. We will look at the entire health of the watershed and fix it holistically. It will require a lot of collaboration between jurisdictions

**Ronnie Ben with Navajo Nation EPA:** We went to the site with Dennis's counterparts and the contractors were there with EPA staff. The contractors wouldn't say anything about sampling, filters, or disposal. There were a lot of unanswered questions. I will continue with experts to do a variety of technical things to look at inspections.

Based on our knowledge to better prepare a lot of these sites and put in some BMP's. In the summer, we would like to return to the site and see how we can assist.

