



**GOOD SAMARITAN PROTECTION TO ENHANCE
ABANDONED MINE LAND CLEANUP-
FINDING A PATH FORWARD**

SUMMIT REPORT

JULY 2018

<http://www.mmsa.net/AMLPage.html>

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1.0 EXECUTIVE SUMMARY

“This is the best conference that I have attended in over 20 years.”

*Stan Dempsey, Sr.
Retired President & CEO, Royal Gold*

INTRODUCTION

In the fall of 2016, the Keystone Policy Center and the Colorado School of Mines Payne Institute for Earth Resources convened a *“Summit on Reasonable Expectations in Mine Closure.”* Shortly thereafter, the Mining and Metallurgical Society (MMSA), which was in the early stages of its own planning cycle for an event focusing on Abandoned Mine Lands, initiated a conversation with CSM to explore partnership opportunities that could leverage the respective resources and expertise of each organization. From this dialogue, the concept of a biannual meeting-series to be branded as the “Golden Summits” was proposed to bring diverse stakeholders together to discuss issues of import to the minerals industry and society. CSM would coordinate a fall Summit, and MMSA would coordinate a Summit the following spring.

The complexity of impacts, technical challenges and administrative obstacles presented by Abandoned Mine Lands rank amongst the top issues the minerals industry and impacted stakeholders have long wished to resolve. It was agreed that now was an excellent time for both organizations to collaboratively direct their efforts and provide forums in which all stakeholders concerned about Abandoned Mine Lands can come together to resolve those issues.

The subsequent Fall 2017 Summit, *A Framework to Manage the Environmental Reality of Orphaned and Abandoned Mine Lands*, was convened by the Colorado School of Mines Payne Institute of Earth Resources. The objectives for that Summit were to provide a forum to (1) discuss the status of current abandoned mine inventories, (2) review technology and site best management practices and (3) establish networking opportunities for further collaborations.

Building on the momentum established by the two previous Summits, MMSA directed the focus of the Spring 2018 Summit to build consensus on, and develop an action plan for, the critical language and programmatic components needed in Good Samaritan legislation that will protect those willing and able to voluntarily improve orphaned and abandoned mine sites in the United States. In recognition of its ongoing success in improving wildlife habitat on abandoned mine lands, MMSA reached out to Trout Unlimited to become an additional co-sponsor of the Spring 2018 summit.

SPONSORS

This conference, held on April 26, 2018 in Golden, Colorado was sponsored by the Mining and Metallurgical Society of America (MMSA), Colorado School of Mines (CSM), and Trout Unlimited (TU). MMSA in its leadership role was also able to garner an expanding number of supporters (See Appendix C).

PURPOSE

Identify necessary liability protection from applicable environmental laws that advance closure and remediation of the identified pilot/demonstration projects.

OUTCOME

A diverse coalition of stakeholders working to advance pilot/demonstration project-focused Good Samaritan legislation that enhances (or advances) Abandoned Mine Land (AML) cleanup.

The conference was attended by 111 individuals representing a broad diversity of stakeholders with an interest and expertise in AML, including academia, state and federal government agencies, industry organizations, technical and policy consultants, legal counsel, conservation groups and congressional staff. Ten speakers provided the delegates with an excellent high-level overview of the technical, legal, social and political issues surrounding AML which drove the discussions throughout the day.

This document is a compilation of the information and ideas exchanged during the Summit. It includes both abridged summaries of each session summarized from notes taken by committee organizers, which were subsequently reviewed by the invited speakers and organizing partners. This report, all available presentations and accompanying documents are available on the MMSA AML Summit Web page (<http://www.mmsa.net/AMLPage>).

PLENARY SESSION – LAYING OUT THE CHALLENGES

Laura Skaer of the American Exploration & Mining Association led the early morning plenary panel discussion, which included the following speakers:

- ◆ Jeff Graves, Colorado Division of Reclamation, Mining, and Safety (DRMS)
- ◆ Chris Wood, President, Trout Unlimited
- ◆ Tawny Bridgeford and Amanda Aspatore, National Mining Association (NMA)
- ◆ Dustin Sherer, Legislative Aide to Senator Cory Gardner

Laura Skaer provided an overview of past efforts to provide Good Samaritan protection over the past 25 years. During this period, various interested parties have unsuccessfully attempted to pass national legislation providing protection for parties doing closure and restoration activities on Abandoned Mine Lands in the United States. The purpose of this conference is intended to “break the logjam” on the Good Samaritan issue by facilitating constructive engagement with diverse groups interested in this subject. Funding for projects can come from several sources and is a subject for a future conference or planning session.

Jeff Graves talked about AML work done on sites in Colorado. On some sites, DRMS is involved in the operation and maintenance of a site. They also get involved in cost/benefit analysis, define problems of sites and prioritize sites for AML closure. The key to cleanups was to use appropriate remedies that were realistic and achievable. Partnerships between owners and regulatory agencies are critical.

Chris Wood spoke from the conservation standpoint and described how TU has worked with State and Federal agencies to get the requisite permissions and permits to clean up AML sites. He presented several examples of successful cleanup projects TU has completed in partnership with other conservation organizations, watershed associations, government agencies and private industry. He recognized there is still some considerable trepidation about cleaning up abandoned mines. He added however that after we demonstrate “that we know how to do this and do it well”, Congress should be more comfortable with authorizing legislation and extending the protections permanently. Mr. Wood closed his remarks by saying that TU supports applying “common sense to common problems for the common good” and that “if there was ever a time to get Abandoned Mine Land legislation through, it is now.”

Tawny Bridgeford and Amanda Aspatore, two lawyers with the National Mining Association (NMA) presented legal considerations and challenges faced by their members. Although NMA members are interested in funding and participating in AML cleanup efforts, there must be Good Samaritan protections to proceed. The main issues are related to CERCLA and Clean Water Act protection. The current Clean Water Act is at cross purposes to AML cleanup. The CWA focuses on discharge water quality, primarily from operating or recently closed industrial facilities. AML cleanup projects focus on improving the currently existing situation of water quality discharging from old, historic, pre-CWA mining activity. In AML restoration, the focus of the work is to improve existing conditions. The CWA ignores, and often prevents, partial improvement of water quality discharged from a site.

Dustin Sherer presented the Congressional Perspective. Good Samaritan legislation has been proposed many times and little progress has been made. He indicated we need Good Samaritan protection from the CWA, a scope of success in AML restoration, a definition of success – all written into a single piece of legislation. Sherer stated the issues involve 1) liability protection; 2) definition of success; and 3) define a clear and efficient permit system which meets the concept of “improving water quality”.

MID-MORNING SESSION – ISSUES IMPACTING AML CLEAN-UP

This session was led by Dennis Ferrigno and included legal, political, reclamation and closure, government, and EPA perspectives. Speakers included:

- ◆ Carolyn McIntosh, a Partner at Squire Patton Boggs
- ◆ Kathy Benedetto, Senior Advisor to the Director of the Bureau of Land Management
- ◆ Jeff Parshley, Group Chairman and Corporate Consultant of SRK Consulting
- ◆ Erin Chancellor, Counsel to Administrator, U.S. Environmental Protection Agency

Carolyn McIntosh pointed out that liability has always been a sticking point in AML cleanup. Other issues include determining the Potentially Responsible Party (PRP), CERCLA citizen lawsuits, and issues with state regulations. Her “Takeaway” was that the current System is not simple but small steps are available within the system. Good Samaritan has merit.

Kathy Benedetto talked about how Good Samaritan might affect BLM’s extensive land holdings. Work on BLM lands is prioritized based on safety and human health hazards. The National Park Service should be involved. The USGS is developing a new minerals location database which includes location of mineral deposits, mines, watersheds, and other areas affected by mining.

Jeff Parshley gave an overview of Lessons Learned by Industry in mine closure which included much larger sites in need of restoration. Lessons learned by industry during mine closures include:

- ◆ Every site is different,
- ◆ Large gap between theory and implementation of closure,
- ◆ Closure approaches should be risk-based (closure of normal operations is different from AML activities),
- ◆ Regulations and standards need to be reviewed and updated regularly.

Site factors include biodiversity, site features, stakeholder (both local and remote), land status, water, access, benefit, cost effectiveness, and Good Samaritan input.

Erin Chancellor talked about what EPA can do to work within the current regulatory system to maximize AML closure. She acknowledged that these two processes can be cumbersome and time consuming, and that EPA was working internally to define better paths forward regarding AML site cleanup. Administrative tools available under the 2007 EPA Guidance Document and 2012 memo include comfort letters and CERCLA liability statement agreements (both of which are time consuming processes), covenants with DOI approval to not sue, State voluntary cleanups, and looking at opportunities to improve water quality at sites (“don’t let perfect be the enemy of good”). The 2012 memo was meant to correct some of the pitfalls of the 2007 guideline document; this memo did not go far enough to provide clarity on how to function as a “good Samaritan”.

Erin stated that there are internal initiatives in EPA exploring ways that it, without legislative actions, can address AML working within its existing framework, and that these initiatives had not been developed enough to discuss at this time. She shared this to emphasize EPA’s desire to address AML, welcoming input from diverse stakeholders toward advancing AML clean up initiatives.

AFTERNOON SESSION – BREAKOUT SESSIONS

Ann Carpenter facilitated this portion of the workshop. Nine breakout groups were organized¹ to build consensus on the critical language and programmatic components needed to advance Good Samaritan legislation focused on pilot/demonstration projects. Two key questions helped to drive discussions and outcomes of the breakout groups, including:

- What components MUST BE INCLUDED in the legislation; and
- What components MUST NOT BE INCLUDED in the legislation?

¹ The breakout design was for 10 groups, but two groups were combined.

After the building blocks for the legislation were discussed and as time allowed, avenues for partnership, the ideal process for selection of candidate demonstration sites, and other issues raised by the morning sessions were discussed. After an approximately two hour working session, the delegation reconvened and leaders from each group provided a recap of their discussions. The breakout session results are included in Section 2.3 of this report and a companion spreadsheet is available on the MMSA AML Web site.

The common themes and topics discussed included:

- ◆ Cleanup standards/evaluation criteria
- ◆ Approval process/timeline
- ◆ Liability
- ◆ Lawsuits
- ◆ Site selection criteria/process.
- ◆ Terminology
- ◆ Financial assurance
- ◆ Regulatory authority
- ◆ Reprocessing
- ◆ Eligibility
- ◆ Community/stakeholder involvement
- ◆ Incentives
- ◆ Monitoring
- ◆ Site Characterization
- ◆ Funding
- ◆ Other

The following pie charts summarize the composition of the breakout groups by stakeholder affiliation (Figure 1) and the common themes and issues covered in the discussions (Figure 2).

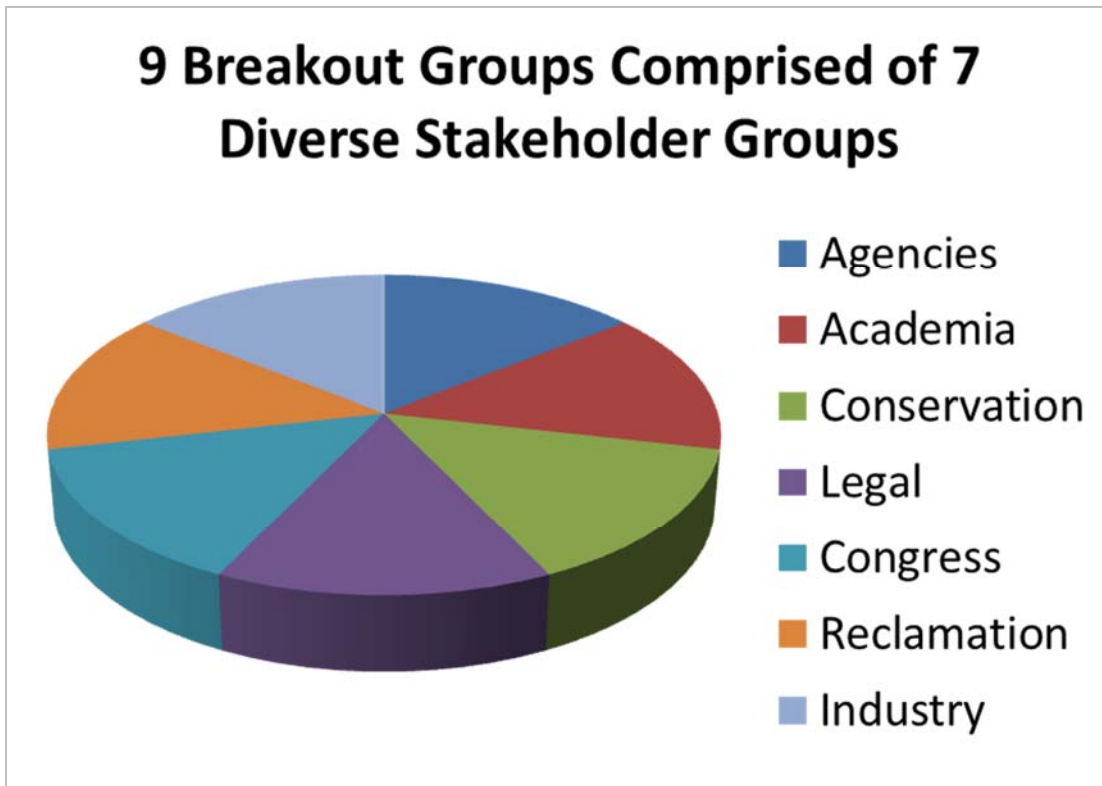


Figure 1: Participating Stakeholders by Affiliation Only. Not Representative of Numbers of Participants

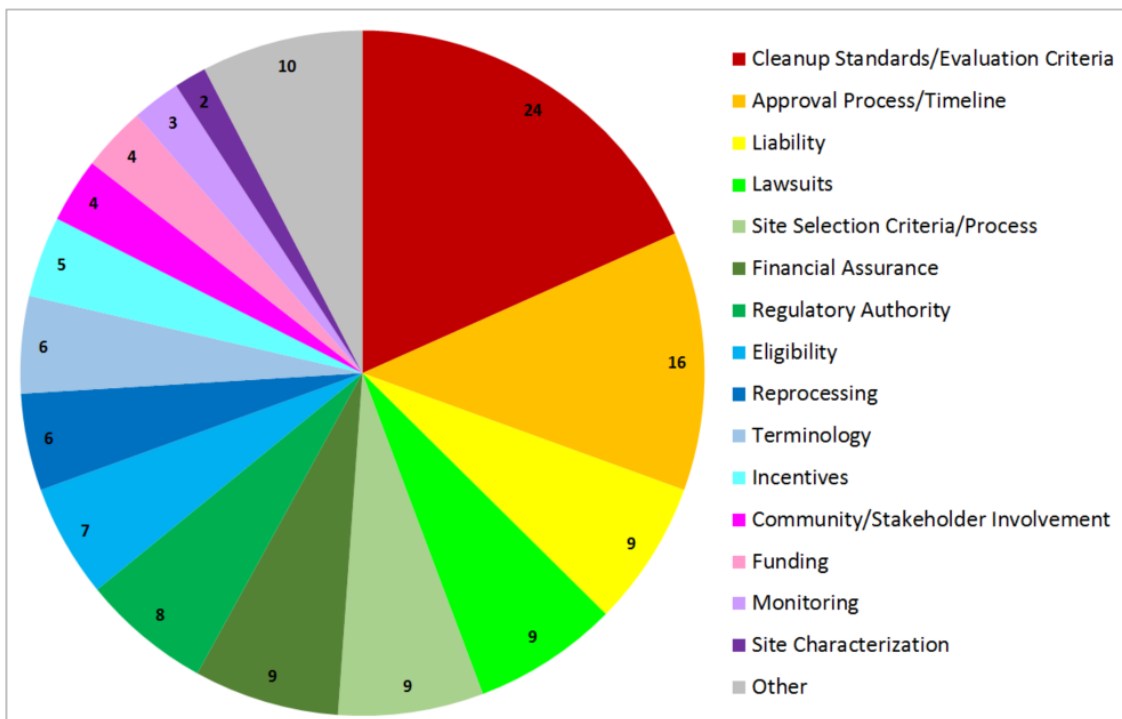


Figure 2: Common Themes and Issues

2.0 EVENT SYNOPSIS

Purpose: Identify necessary liability protection from applicable environmental laws that advance closure and remediation of the identified pilot/demonstration projects.

Sponsors: This conference, held on April 26, 2018 in Golden, Colorado was sponsored by the Mining and Metallurgical Society of America (MMSA), Colorado School of Mines (CSM), and Trout Unlimited (TU).

Outcome: A diverse coalition of stakeholders working to advance pilot/demonstration project-focused Good Samaritan legislation that enhances (or advances) Abandoned Mine Land (AML) cleanup.

The conference was attended by 111 individuals representing a diversity of stakeholders with a vested interest in addressing Abandoned Mine Lands in the United States including academia, state and federal government agencies, industry trade organizations, consultants, mining companies and the conservation community.

This document is a compilation of the information and ideas exchanged during the Summit prepared from a series of notes taken by Paul Jones, Karen Jass, Susan Wager and Dayan Anderson. The document was subsequently reviewed by the conference organizers and speakers for accuracy. This report, the individual speaker presentations and other accompanying documents are available on the MMSA AML Summit Web page.

Welcome:

Michael Blois, President of MMSA, welcomed the participants on behalf of the Summit co-sponsors and recognized members of the organizing committee and the speakers for their time and efforts in preparing this important event. Mr. Blois then provided the delegation with a brief history of MMSA:

The MMSA is a non-profit association of mineral resource professionals whose members represent all facets of mining and metallurgical interests, both domestic and globally. The MMSA was established in 1908 which makes this year our 110th birthday! One of its principal objectives over the years has been to foster helpful cooperation with and between other organizations interested in the mining industry.

The MMSA is not a technical society. However, its membership includes many of the industry's best-known engineers and executives. The Society typically concerns itself with fundamental principles and with problems facing the industry in such areas as legislation, economics and education, as well as environmental concerns, labor relations, and health and safety. From time to time, representatives of the Society testify before legislative bodies and provide advice to federal agencies.

The MMSA administers a "Qualified Professional" membership classification. Regulations previously developed by security commissions have established a "qualified person" designation as a mode of investor protection against the promotion of ill-defined properties being used as a

means to raise funding from the general public for exploration and mining ventures. The Society's program, established in 2006, is currently recognized by security regulators in all Canadian Provinces, Australia and South Africa. It provides for independent certification, by a professional organization with a strong code of ethics, for individuals who prepare mineral property reports.

2.1 PLENARY SESSION – LAYING OUT THE CHALLENGES

Session Moderator

Laura Skaer

Session Objective

Identify Social, Political and Legal Issues Impeding Closure and Reclamation of AML Lands.

ENHANCED PATHWAY TO AML CLEANUP

Laura Skaer - Executive Director, American Exploration & Mining Association

Ms. Skaer moderated the first morning session. She began by thanking CSM and Trout Unlimited for partnering with MMSA in sponsoring the Conference. Ms. Skaer provided a clear definition of Abandoned Mine Lands as those lands mined and abandoned over 50-100 years ago with no current Potentially Responsible Party (PRP) identified to complete their restoration. She highlighted these are the “historic mines that built America” and they were constructed when society was different, long before environmental protections were put in place.

Ms. Skaer provided a summary of the 25-year political background to the concept of Good Samaritan (Good Samaritan) protection under the Clean Water Act of 1972. During this period, numerous unsuccessful efforts have been attempted by various interested parties to pass national legislation providing protection for parties doing closure and restoration activities on Abandoned Mine Lands in the United States. She identified three categories of AML sites:

- ◆ Some AML lands are just unsightly,
- ◆ Some have public safety issues,
- ◆ Some have water or other issues impacting the environment.

She highlighted that the purpose of this conference is to help “break the logjam” on the Good Samaritan debate by facilitating constructive engagement with all stakeholders genuinely interested in “getting the ball across the finish line.” She encouraged the delegation to (1) stay focused on liability relief and (2) identify language that will ensure that watersheds and communities impacted by these historic AML sites can be improved. She asked that other issues such as royalties and funding should be set aside, or “put in the parking lot” for a future day. Referencing the famous line from the movie *Field of Dreams*, “If we build it they will come,” Ms. Skaer stated that once we get the disincentives and legislative barriers out of the way, the funding will come as partners emerge from the woodwork once the demonstration sites have been selected.

STATE GOVERNMENT CONSIDERATIONS FOR AML CLEANUPS

Jeff Graves - Director, Office of Active & Inactive Mines, Colorado Division of Reclamation, Mining, and Safety

The first speaker was Jeff Graves, Director, Office of Active & Inactive Mines, Colorado Division of Reclamation, Mining, and Safety (DRMS). Mr. Graves discussed State Government Considerations in AML closures, including a background on the history of such closings in Colorado. The DRMS regulatory program in Colorado began in the late 1970's for coal mines and in 1980 for non-coal properties and is a separate responsibility to that of the AML properties. Jeff is involved with the "inactive mine reclamation program" on mines operating before 1980. (There was a distinction between coal and hardrock.)

No one state agency in Colorado is responsible for the whole effort on closure of AML properties. DRMS conducts site characterizations, develops remedies for the site, does expectation and achievability analysis, evaluates risk for individual sites and partners with other agencies and groups in closure of AML sites. On some sites DRMS is involved in operation and maintenance of a site. It also gets involved in cost/benefit analysis, define problems of sites and prioritize sites for AML closure. In all this work the background of the site and the nature of erosion and contamination is important. In particular, the important considerations are prioritizing a site for closure, the background of the site, and the potential for disturbance of the environment. The DRMS works with the Colorado Department of Public Health and Environment on water issues related to AML closure.

Mr. Graves used the Saints John AML site in Colorado to illustrate the DRMS work in selecting and closing an AML site. The Saints John property, a former base metal mine, was generating 3 pounds of zinc per day in the outflow from the partially wetland property.

AML sites cleaned up were not bonded by the State. At the Saints John AML Site, the DRMS and the project partners restored wetlands, capped the area, consolidated spoils and revegetated tailings. They used appropriate remedies that were realistic and achievable. Goals were to reduce zinc loading and risk of additional water contamination. This was a non-point source. Partnerships are critical and involve corporate landowners, leverage funding, lead stakeholders, utilization of expertise. Another goal is to diversify project ownership.

CONSERVATION GROUP PERSPECTIVES

Chris Wood - President, Trout Unlimited

Mr. Wood made the second presentation to the assembled group. He began by identifying Trout Unlimited (TU) as a 300,000-member organization of individuals in the U.S. interested in fly fishing. He humorously pointed out that "anglers are an optimistic and patient group of people" with the fortitude to stand in freezing water as they "cast feathers at river ghosts." According to the EPA, he added, an estimated 40% of the streams in the western US are affected to some degree by AML and TU has been applying this same patience and optimism to the Abandoned Mine Lands problem since 2003. TU has testified before Congress numerous times and worked with Senator Ken Salazar on legislation that made it past the Environment and Public Works Committee in 2006. TU also worked with the EPA on providing protection from CERCLA (Superfund) liability under both the Bush and Obama administrations.

Good Samaritan Protection to Enhance Abandoned Mine Land Cleanup – Finding a Path Forward

Summit Report

For one site in Utah during the Bush administration, it took TU two years to acquire the necessary approvals from the appropriate federal agencies to restore the site and only eight work days to do the work in the field. Federal agencies involved in the project included the EPA, Department of Justice, and the Office of General Counsel. In granting TU the authority to reclaim this site, the EPA absolved TU of 80% of the liability of the site. The EPA told TU this was “the best deal we had ever given a Potentially Responsible Party (PRP)” – but TU was not a PRP – only a volunteer organization cleaning up the site.

Mr. Wood briefly highlighted seven successful AML cleanup projects that Trout Unlimited has been involved with: five hardrock sites in the Western United States and two abandoned coal sites in Pennsylvania. He pointed out that with Good Samaritan legislation, they and others would be able to do much more.

- ◆ American Fork Creek – Pacific Mine in Utah. The project received awards and now supports trout fishing.
- ◆ Morris Creek in ID. 14,000 tons of mine tailings were cleaned. Children planted trees. This site is now a migratory fisheries site.
- ◆ At the Kebler Creek site in Colorado, TU worked with the EPA and the State to restore 80 acres of tailings along with 340 structures in 6 miles of creek. The stream now has wild fish living in the creek.
- ◆ Leavenworth Creek near Georgetown Colorado, 54,000 cubic yards of tailings were removed from 2,500 feet of channel and flood plain to improve water quality.
- ◆ Clear Fork Creek in Montana plus 6 other projects. Fish will respond to change in the streams. They are resilient.
- ◆ In Pennsylvania, TU has been involved in passive treatment of streams in several areas, including Bob Creek. TU worked with NGOs to restore and reclaim 160 acres. Now the stream is naturally reproducing brook trout.

Trout Unlimited has testified on several bills in Congress during the Bush and Obama administrations, working with several Representatives and Senators in an attempt to develop some form of Good Samaritan legislation for a small number of sites (5-10). He recognized there is still some considerable trepidation about cleaning up abandoned mines. He added however that “if we can model that we know how to do this and do it well”, Congress should be more comfortable with authorizing legislation and extending the protections permanently. He suggested the permitting mechanism spelled out in the bill proposed by Congressman Gardner, Senator Bennett and Representative Tipton in the last Congress might be an appropriate model for pilot project-focused legislation. He also suggested that “Tail 3” of Representative Lamborn’s Bill (H.R. 3843) could also serve as an acceptable permitting structure from TU’s perspective.

Mr. Wood also offered the following specific program elements and language that TU would like to see in a pilot project-focused Good Samaritan legislation:

- ◆ Regardless of the permit structure selected, the process should be simple;

- ◆ A permit system is needed that allows for significant improvements in water quality, the implementation of “Best Design Management Practices”, and appropriate monitoring;
- ◆ Good Samaritans should NOT be exposed to liability if the project fails to achieve the required criterion for a given pollutant;
- ◆ Provisions allowing for adequate public notice and comment;
- ◆ Bill should clarify that private landowners who are not responsible for abandoned mines on their property, but who are willing to help should be eligible for liability coverage.
- ◆ Projects should meet applicable state water quality standards to the “maximum extent practicable under the circumstances”
- ◆ The implementing agencies should understand that “under the circumstances” involves working often in the high-elevation, remote, and difficult to access areas.
- ◆ The bill should provide protection from future liability from the CWA and CERCLA when Good Samaritans have completed their permitted activities.

Even if water quality is improved 80%, those making the improvement could still be liable, under the Clean Water Act (CWA) provisions to clean to CWA standard. The work of cleaning up these projects isn’t challenging but more could be done if we get the legislation right.

Mr. Wood took the opportunity to recognize those who have partnered with TU over the years including the EPA, the Forest Service, BLM and States of Colorado, Montana, Utah and Pennsylvania. He also recognized the funding support TU has received from Tiffany & Co, Newmont, Freeport-McMoRan, Kinross and other mining companies.

He closed by saying “conservation is the application of common sense to common problems for the common good” and he could think of no issue that fits this definition of conservation better than cleaning up abandoned mines. He added that “if there was ever a time to get Abandoned Mine Land legislation through, it is now.”

PRIVATE SECTOR / INDUSTRY CONSIDERATIONS

Tawny Bridgeford - Deputy General Counsel, Vice President of Regulatory Affairs, National Mining Association, Washington DC

Ms. Bridgeford shared that the National Mining Association (NMA) was here because this is an issue of great importance to its members that include both minerals producers and other mining trade associations. NMA has worked on this issue for decades and NMA members want to be a part of the solution. She added that NMA members have been very successful in cleaning up historic facilities on lands they own and operate. She also noted NMA members have successfully funded the work of others, as Chris referenced in his presentation, but NMA members would like to do more than cleaning lands they control and funding projects; they are ready to put “their technology, their resources, their expertise and equipment to work on sites they have never owned or operated or had previous involvement with.” NMA members have the money, resources and no-how and want to help address these legacy sites from over 100 years ago. Unfortunately, she shared that NMA

members have not found a way to do this under existing laws which Amanda will cover in her discussion of the liability concerns under CERCLA and the CWA. She recognized that the EPA over the years has tried to fix some liability concerns under CERCLA with their administrative policies and settlement agreements, but NMA members have not found a way to successfully use those mechanisms on the ground.

She pointed out that NMA also engaged in the conversations around the Salazar bill that Chris mentioned, and agreed it served as the “high water mark” where industry, conservation groups and states came together to support a piece of legislation that everyone hoped would lead to real work on the ground. Unfortunately, there has been a legislative stalemate ever since. When Laura and others brought this demonstration project idea to NMA, they eagerly jumped on board and agreed such an approach could get communities, states, and federal partners really interested and show the general public this problem can be solved by groups like TU, as well as mining companies, and that by working together significant progress could be made that would benefit communities and watersheds in the West.

Ms. Bridgeford then shared what NMA members would like to see in Good Samaritan legislation, many of which were in agreement with the positions of TU:

- ◆ **Eligibility** – Mining companies should be allowed to be part of the solution. They have the technology, expertise, know-how, money, and resources and industry wants to put those to use. She added that industry understands the gravity of the situation in the West and wants to be part of a solution that will improve watersheds and communities adversely impacted by legacy sites. Industry wants to fix and correct the missteps of the past before the advent of modern environmental laws and regulations. She added that most of the proposed legislation out there has allowed mining companies to participate.
- ◆ **Reprocessing** – In recognition that many companies operating today are adjacent or in close proximity to historic tailings, waste rock, underground mine workings, or mine structures. NMA would like to open a conservation that would consider allowing companies to reprocess waste rock tailings that still contain valuable metals and minerals that could be turned into a useful product. The waste generated from that reprocessing could then be deposited into existing engineered and permitted facilities currently regulated by state and federal agencies.
- ◆ **Permitting and Authorization** – Ms. Bridgeford agreed with Chris that a simple permitting and authorization process is needed but offered such a system must still be robust enough to ensure the demonstration projects proceed appropriately and result in an environmental benefit that everyone agrees upon for each project. Ultimately, the permitting program needs to be site-specific and require a work plan and a remediation plan that fits the site.
- ◆ **Appropriate Standards** – Recognizing that some sites will never be able to achieve strict water quality standards, she posed a few questions that might be considered in the afternoon discussions. Should the standard be “maximum extent practicable” or should it be “significant” or a “measured increase?”
- ◆ **Liability Protection** – She reiterated that liability issues tied to existing legislation is the number one reason why industry was here today. She noted that although some progress has been made with CERCLA, CWA is still a “large hammer” and obstacle preventing the

industry from getting more engaged and directly participating in the cleanup of abandoned mine lands.

- ◆ **Selection of Demonstration Sites** – Stakeholders probably have very differing ideas on what types of sites a Good Samaritan permit should cover. Should permits only focus on source control, passive treatments systems or allow for removal of waste material? Should sites be selected based on safety concerns? She suggested that ultimately the scope of the project is going to drive the structure of the permitting program.

Amanda Aspatore - Vice President, Water Law & Policy, National Mining Association, Washington D.C.

Ms. Aspatore focused her discussions on the Clean Water Act. She outlined three key components including:

- ◆ The CWA is a stringent statute with civil and criminal liability, and a strict permitting (NPDES) process to adhere to for active industries since CWA inception. Its focus is on penalizing point-source polluters, not remediating sites with historic, pre-CWA water quality issues. The Clean Water Act is focused on “water quality” of active industries, not on what caused the diminution of water quality or remediation, especially when considering past historic sites that pre-date CWA.
- ◆ Water quality criteria were aspirational in nature when CWA was first implemented, with “fishable and swimmable” goals outlined. Water quality criteria are periodically updated and are considered more stringent than 20 years ago. Water quality criteria do not take into account cost or practicability to achieve. Companies or individuals interested in cleaning up sites must adhere to ALL requirements of CWA, many of which are not applicable on AML sites.
- ◆ Need to develop Good Samaritan protection that allows for all companies, individuals, entities interested in AML clean up to advance work—where perfect does not become the enemy of good, allowing for improvements to water quality at AML sites without triggering CWA liabilities.

In reality, the current Clean Water Act is at cross purposes to AML cleanup. The CWA focuses on discharge water quality, primarily from existing or recently closed industrial facilities that postdate CWA inception. AML focuses on improving water quality at old, historic, pre-CWA orphaned (no potential responsible party—PRP) mine sites. In AML restoration, the focus of the work is to improve existing conditions. The CWA ignores, and often prevents, partial improvement of water quality at AML sites.

Companies are frustrated. They are very aware of the impacts and want to be part of the solution. Citizen lawsuits, used to enforce existing CWA provisions are also a concern of industry.

Amanda also stated that legislation is needed to allow for AML clean up and to provide the protections to advance improvements. In support of this position, she then quoted the 4th Circuit Court recent action (regarding West Virginia and its coal AML sites): “Congress has determined that a permitting scheme is the crucial instrument for protecting natural resources. It is for Congress to

weigh the consequences of the laws it enacts. In passing the NPDES scheme, Congress considered the cost and decided the benefits were worth it. If Congress somehow struck the balance wrong, it is for Congress to correct it”.

CONGRESSIONAL PERSPECTIVE

Dustin Sherer - *Legislative Aide to Sen. Cory Gardner*

Mr. Sherer indicated that if advocates of Good Samaritan legislation look back to 2000, the problems at that time are the same as today – i.e., no Good Samaritan progress has been made. He indicated we need Good Samaritan protection from the CWA, a scope of success in AML restoration, a definition of success – all written into single Good Samaritan legislation. That is, language is needed which allows cleanup of AML but protects the entity doing cleanup from liability under provisions of the CWA.

Mr. Sherer discussed that in the House of Representatives there were three (3) committees involved which causes serious problems in moving the legislation. On the Senate side, only one committee is the current focus for the Good Samaritan issue. He asked the following questions: *What water quality standards apply to Good Samaritan* and *What is Success?* He indicated that the Citizen Suit Provision was the major impediment to Good Samaritan. Third Party Protection is a KEY issue. Those in opposition to Good Samaritan fear it is a “back door” attempt to gut the CWA – which is not the case at all. A better designation of legislation might be “Environmental Restoration”.

Mr. Sherer stated the issues involve 1) liability protection; 2) definition of success; and 3) define a clear and efficient permit system which meets the concept of “improving water quality”. This should not be an arduous process for simple projects. Criteria for a Good Samaritan system need to be laid out specifically. A project can’t be written out in detail in legislation, flexibility is needed.

Legislation must have CWA liability protection and flexible parameters. Define a range of criteria that define success.

2.2 MID-MORNING SESSION – ISSUES IMPACTING AML CLEAN-UP

SESSION MODERATOR

Dennis Ferrigno

SESSION OBJECTIVE

Address Social, Political and Legal Issues Related to Enhanced AML Clean-up.

LEGAL ISSUES

Carolyn McIntosh - Partner, Squire Patton Boggs (US) LLP.

Ms. McIntosh divided her discussion into three sections: 1) What is the current background; 2) Define the current maze of systems, and 3) How we can advance the ball.

“The Background” – Liability has always been a sticking point in AML cleanup: a) CERCLA, b) CWA, c) maybe RCRA, d) other state and federal liability issues, and e) issues such as NEPA, cultural issues and the Endangered Species Act. In each of these issues, there are broad definitions related to the specific issue at hand. Other issues include the Potentially Responsible Party such as current and past owners of the property; operators and contractors on the property, “arrangers”, “transporters” and others. Examples include the US Government, state governments, hazardous waste issues on the site, etc.

CERCLA citizen suits are the big issue. CERCLA is a broad statute designed to “rope in” liable parties. Provides for Citizen Suits and recovery of litigation fees. Pathways need to be developed to move forward on CERCLA 119 and 101(39). Considerations must include contractors doing AML work. Brownfield exclusions may present a pathway.

CWA Liability – unpermitted discharge must be addressed. Definitions and effects of “discharge”, “pollutant”, “point source”, and “Waters of the U.S.” need to be addressed.

Other issues needing better definition include addressing state effluent limitations, state certification, non-point source issues, and areas of discharge. Citizen Suit provisions are a serious impediment and can apply to individuals, states and federal agencies. The CWA Section 319 is the most used pathway forward as it applies generally to a watershed basis. RCRA Section 3005 related to treatment, storage or disposal of solid waste needs consideration.

Ms. McIntosh referred to the Canyon Resource Kendall Mine in Montana as an example of an active water treatment situation. Her “Takeaway” on the issue was that the current System is not simple but small steps are available within the system. Good Samaritan has merit.

AML / GOOD SAMARITAN POLITICAL ISSUES

Kathy Benedetto - Senior Adviser to the Director of the Bureau of Land Management, Department of the Interior

Ms. Benedetto discussed the Bureau of Land Management’s (BLM) concerns with Good Samaritan as it might affect BLM’s 245,000 acres of landholdings across the US which contains about 100,000 mining related features on 50,000 AML sites. Of those sites 6,300 have been mitigated to some degree covering 8500 acres of water related features.

Work on BLM lands is prioritized based on safety and human health hazards. Some of the BLM AML activities have been fostered and supported by the Western Governors Association Policy Resolutions in 2016-2017 related to AML activities. The BLM guidelines include: 1) site access; 2) work authorization; 3) determine PRP’s for site; 4) BLM surface management Regulation 1981 using Good Samaritan parties.

Other issues discussed included: 1) National Park Service involvement; 2) USGS development of a new Mineral/mine Deposit database which includes location of mineral deposits, mines, watersheds, and other areas affected by mining. In addition, Ms. Benedetto referred to Secretary Sally Jewell’s testimony on 12/9/15 where she recommended it was not feasible to clean up to standards that did not exist prior to mining of the sites.

EXAMPLES OF SUCCESSFUL RECLAMATION AND CLOSURE (PROCESSES AND RESULTS) TO GUIDE CANDIDATE SITE SELECTION

Jeff Parshley - Group Chairman and Corporate Consultant, SRK Consulting North America

Mr. Parshley gave an overview of Lessons Learned by Industry in mine closure which included much larger sites in need of restoration. He discussed what industry has learned from successes and failures in such work. Closures can be very complex and involve stakeholders, standards used, and land use planning involved. He indicated the US mining industry has over 30 years’ experience in coal and non-coal closure activities. Some of this experience is good and some bad. Likewise, the experience has included changes in both regulation and closure activities.

Early modern closure began in the mid-1990’s. In some modern mine closures, the amount of bonding was inadequate causing a rapid response by regulators related to permits and bond amounts. In about 2004 this caused a “Grumpy Cat” syndrome of “You touch it, you own it” from regulators. Today’s mine design has become a “design for closure” effort from the beginning of mine planning.

Lessons learned by industry over this period include:

- ◆ every site is different;
- ◆ Large gap between theory and implementation of closure,
- ◆ closure approaches should be risk-based (closure of normal operations is different from AML activities),
- ◆ regulations and standards need to be reviewed/updated regularly.

On AML sites the factors involve landscape disturbance 70%, safety 20% and environmental issues 10-20%. Other issues discussed include hazardous underground openings, highwall issues, open pits, acid rock drainage (ARD), and leaching.

Site factors include biodiversity, site features, stakeholder (both local and remote), land status, water, access, benefit, cost effectiveness, and Good Samaritan input.

The objective in closure is you must meet defined water quality standards, improve environmental conditions, stabilize the site, improve the safety of site, and preserve historic structures on the site.

DISCUSSION FOR GOOD SAMARITAN INITIATIVE

Erin Chancellor - Counsel to Administrator, U.S. Environmental Protection Agency; Former Texas Commissioner of Environmental Quality

Ms. Chancellor talked about what EPA can do to work within the current regulatory system to maximize AML closure. She acknowledged that these two processes can be cumbersome and time consuming, and that EPA was working internally to define better paths forward regarding Ms. Chancellor stated that the current EPA supports making progress on all AML site cleanup issues. moving the whole AML issue along. Administrative tools available under the 2007 EPA Guidance Document and 2012 memo include comfort letters (which take considerable time) and, CERCLA liability statement agreements (both of which are time consuming processes), covenants with DOI approval not to not sue with DOI approval, State voluntary cleanups, and looking at opportunities to improve water quality at sites (“don’t let perfect be the enemy of good”)., and water quality on a case-by-case situation. The 2012 memo was meant to correct some of the pitfalls of the 2007 guideline document; this memo did not go far enough to provide clarity on how to function as a “good samaritan”.

Ms. Chancellor stated that there are internal initiatives in EPA exploring ways that it, without legislative actions, can address AML working within its existing framework, and that these initiatives had not been developed enough to discuss at this time. She shared this to emphasize EPA’s desire to address AML, welcoming input from diverse stakeholders toward advancing AML clean up initiatives.

2.3 AFTERNOON SESSION - BREAKOUT DISCUSSIONS

Session Moderator

Ann Carpenter

Session Objective

Build Consensus on Best Paths Forward.

Delegates broke into nine working groups to build consensus on the critical language and programmatic components needed to advance Good Samaritan legislation focused on pilot/demonstration projects. Avenues for partnership, the ideal process for selection of candidate demonstration sites, and other issues raised by the morning sessions were also discussed.

Following is a summary of statements made during the breakout sessions. The participants were divided to facilitate cross-fertilization of ideas amongst the diverse stakeholders present (Figure 1, Appendix C).

The participants were asked to answer two questions:

- 1) What components MUST BE INCLUDED in the legislation; and
- 2) What components MUST NOT BE INCLUDED in the legislation?

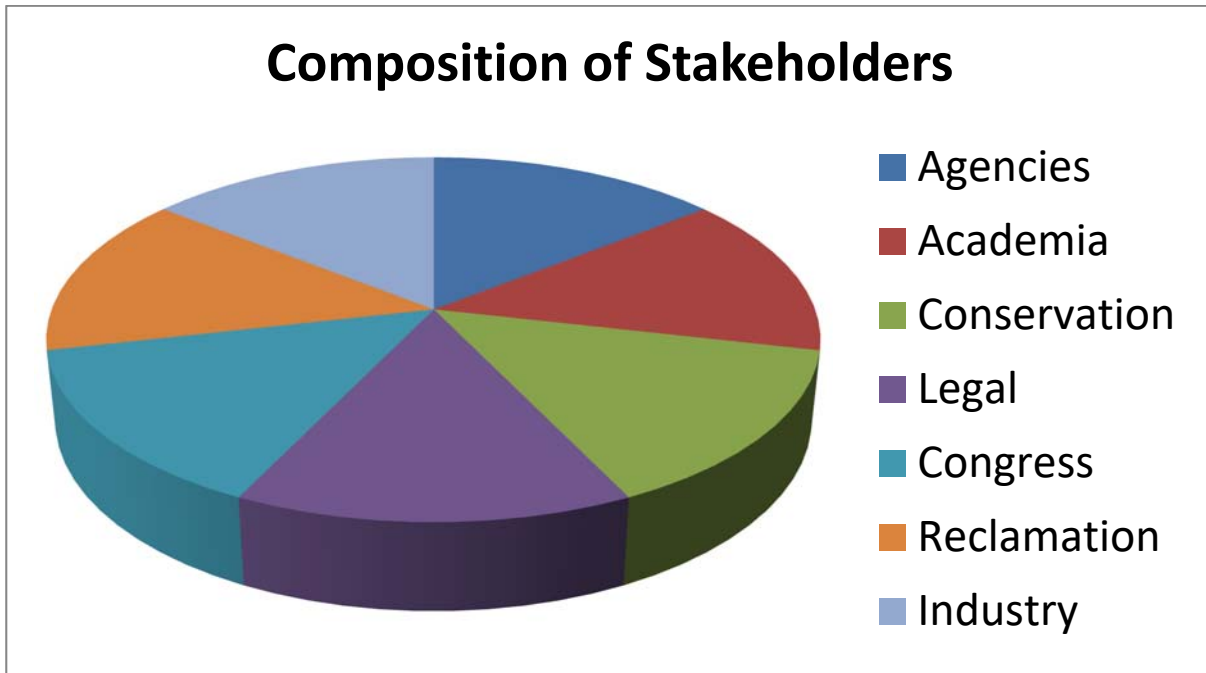


Figure 3: Participating Stakeholders by Affiliation Only. Not Representative of Numbers of Participants

The delegation reconvened in the late afternoon to share their results. As each group presented their responses to the two questions posed, the ideas were entered into a “live spreadsheet” displayed on the projector for the audience to review and correct as needed.

Each idea presented was subsequently assigned to one of sixteen themes or topical categories. Next, the common themes were ranked by frequency, except for the category “Other” which is listed last to capture all remaining ideas and concepts not reflected by the other fifteen themes.

Finally, in each category, a line was created for each unique concept discussed in that topical category. Ideas that were most similar in concept and intent were grouped as shown in the worksheet that accompanies the summit documents available on the MMSA Summit Web site. The original work product and phrasing submitted by each group is documented on the respective tabs within that worksheet.

Generally speaking, categories with fewer rows listed in Table 1 suggest a greater convergence of thought. In contrast, categories with more rows of information suggest a greater richness of discussion took place that identified important nuances within those respective topical categories. Each idea was subsequently grouped into the following common themes that emerged from the nine breakout discussions:

- ◆ **Cleanup standards/evaluation criteria** – All nine breakout groups broached the issue of evaluating what “success” should look like for AML-cleanup projects.
- ◆ **Approval process/timeline** – Seven groups made suggestions on how granting approvals to work on AML projects might look, and how the timeline of such might be improved to enable and incentivize more Good Samaritans to come forward.
- ◆ **Liability Concerns** – Six groups raised concerns about the liability a prospective Good Samaritan faces under current environmental regulations.
- ◆ **Third Party Lawsuits** – Eight groups identified that providing a Good Samaritan with protection or exemption from Citizen Lawsuits was a necessary component of any potential legislation. One group suggested there should however be a provision that allows for lawsuits only in cases of “gross negligence or intentional acts of harm.”
- ◆ **Site Selection Criteria/Process** – Five groups made suggestions on how candidate sites for a pilot/demonstration project might be identified and selected.
- ◆ **Terminology** – Four groups discussed the importance of terminology used in project-focused Good Samaritan legislation. One group even suggested the “Good Samaritan” term be eliminated as a means to possibly shed some of the “baggage” that has accumulated with the numerous unsuccessful legislative attempts over the past two decades to address Abandoned Mine Land issues.
- ◆ **Financial Assurance** – Five breakout groups discussed financial assurances with suggestions ranging from eliminating any long-term bonding requirements that might impact the ability of some Good Samaritans to come forward to suggestions that financial assurances should be reasonable with clearly defined release mechanisms (not to exceed three years). Two alternatives were also proposed to provide some assurances to the agencies and public that

work, once initiated, could still be completed. These included the (1) consideration of a “Financial Worthiness Test” in lieu of bonding and (2) a requirement that before any work begins, Good Samaritans must place sufficient funds in an escrow account to cover the project which could be transferred to others to complete the agreed-upon tasks if problems arise.

- ◆ **Regulatory Authority** – Seven groups commented on where the regulatory authority should rest in regards to issuing or authorizing Good Samaritan permits.
- ◆ **Reprocessing** – Four groups touched upon reprocessing and remining of historic mine waste and tailings.
- ◆ **Eligibility for Liability Protections** – Four breakout groups discussed who should be eligible for liability protections.
- ◆ **Community/Stakeholder Involvement** – Three groups recognized that engagement with all stakeholders and communities impacted by a site must somehow be part of the permitting process.
- ◆ **Incentives** – Five groups discussed possible incentives that should be integrated into Good Samaritan legislation to encourage and enable more Good Samaritans to come forward. These included consideration of offsite mitigation credits as proposed by the Lamborn Bill, allowing for reprocessing to offset project costs, and fast-tracking permits.
- ◆ **Monitoring** – Several groups were in support of site monitoring for a short period (3-5 years, mentioned by a few) to ensure improvements were sustained
- ◆ **Site Characterization** – Mention in a few of the breakout groups for some level of site characterization so that improvements could be achieved, compared against, and monitored.
- ◆ **Funding** – Discussions around funding were ‘left in the parking lot’ for the purposes of this first AML Summit. General thoughts are that there is funding available from public, private and other sources to get improvements at AML sites.

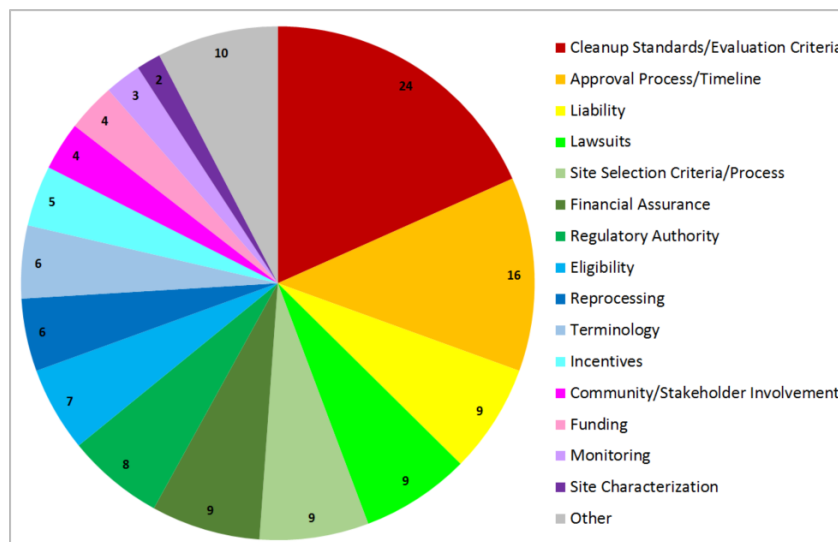


Figure 4: Common Themes/Issues

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TABLE 1 –Summary of Issues and Topics Discussed in the Breakout Groups

1.0 Cleanup Standards/Evaluation Criteria		G1	G2	G3/6	G4	G5	G7	G8	G9	G10
1.1	No Net Harm/Do Not Harm/Do No Harm/No net degradation of water quality		•	•	•				•	
1.2	Site-specific standards/project-specific standards/Best Management Practices (BMPs) for each site	•			•	•			•	
1.3	Net benefit/net improvement/% improvement/improve water quality/"Better, not perfect"	•	•	•			•	•		•
1.4	No prescriptions/no prescriptive numeric standards/no prohibitive quantitative standards	•	•	•		•	•	•		
1.5	Allow qualitative standards (e.g., capping, biorecovery, re-established species)		•				•			
1.6	Good Samaritan has to be held to regulations (standards) in place when permit is issued to protect against future changes		•							
1.7	No post-closure care and maintenance			•						
2.0 Approval Process/Timeline		G1	G2	G3/6	G4	G5	G7	G8	G9	G10
2.1	Simple/streamlined/accelerated process	•			•					
2.2	Permitting program that has an exit strategy/Expiration date of permit		•							
2.3	The permitting program needs a timeline in which it has to be processed (VCUP is great but approval takes too long).		•							
2.4	Provision that application requirements are commensurate with the level of project. Keep flexibility		•							
2.5	45-day public comment period		•							
2.6	Single-tiered permit approval		•							
2.7	Protection from unreasonable approval delay (approvals should occur within 180 days)		•							
2.8	Time dependent approval depending on project size (time constraints on approval process, scalability)			•						
2.9	Closure plan that is noticed to public with a timely/appropriate comment period					•				
2.10	Protection of approval process from judicial review to avoid delay					•				
2.11	Want AOC process more streamlined, less emphasis on "comfort letters" that aren't comforting to anyone								•	
2.12	"Baby" Engineering Evaluation Cost Analysis (EECA) process								•	
2.13	Notification process for agencies								•	
2.14	Ability to transfer permits (or "authorization") to new operators if needed									•
2.15	No ambiguous process/timeline					•				
3.0 Liability Concerns		G1	G2	G3/6	G4	G5	G7	G8	G9	G10
3.1	Liability relief for Good Samaritan	•	•	•		•		•		
3.2	Liability remains if actions degrade site	•								
3.3	Get rid of joint/several liability			•						
3.4	Liability protection must be in perpetuity/No perpetual liability		•		•					

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4.0 Lawsuits		G1	G2	G3/6	G4	G5	G7	G8	G9	G10
4.1	Protection/Exemption from Citizen Lawsuits	•	•	•	•	•	•		•	•
4.2	Provision would allow for lawsuits only in cases of gross negligence or intentional acts of harm	•								
5.0 Site Selection Criteria/Process		G1	G2	G3/6	G4	G5	G7	G8	G9	G10
5.1	States will have primacy to select site/projects	•								
5.2	Sites/projects must not have a viable identified PRP	•								
5.3	Cap on pilot project should not exceed \$2M so as to ensure we are staying within concept of a "pilot"		•							
5.4	Clear indication that pilots are point source specific		•							
5.5	Should focus on pilot - scope should stay narrow					•				
5.6	Define scale of project requirements (cost, size, impact)					•				
5.7	Want ability to address the entire site							•		
5.8	Pilot should include at least one point-source H2O not requiring long-term treatment so we can demonstrate it can be done								•	
5.9	Have each western state/tribe nominate a site to put into pilot program. We would require county/local support of site.									•
6.0 Financial assurance		G1	G2	G3/6	G4	G5	G7	G8	G9	G10
6.1	Reasonable Financial Assurance			•	•	•				
6.2	Release period and defined release mechanism (not to exceed 3 years)			•						
6.3	Financial assurance should be determined by the state and require operation and maintenance plan.				•					
6.4	Put money required to complete project in escrow account upfront so others can finish if problems arise (substitute for bond).									•
6.5	No Long Term Bonding/No Financial Assurance		•	•						
6.6	Proposed Financial Verification or "Financial Worthiness" test as a form of security instead of formal bonding		•							
7.0 Regulatory Authority		G1	G2	G3/6	G4	G5	G7	G8	G9	G10
7.1	State Primacy/Allow for Delegation to States	•	•		•	•	•			•
7.2	Project approval by 'lead agency'/Single regulatory agency for Federal AML Site					•		•		
8.0 Eligibility for Liability Protections		G1	G2	G3/6	G4	G5	G7	G8	G9	G10
8.1	Eligibility of operator			•						
8.2	Contractors performing work						•			
8.3	States, Federal Agencies, Tribes				•					•
8.4	Private Landowners				•					
8.5	Those Who Write Checks									•
8.6	"Entire universe" of participants involved in the site should be protected									•

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		G1	G2	G3/6	G4	G5	G7	G8	G9	G10
9.0	Reprocessing									
9.1	Reprocessing AML Waste without restrictions or criteria on what happens to proceeds	•								
9.2	Ability/option to reprocess waste from old sites (would require additional/appropriate permitting)		•							
9.3	No "on-site" processing and disposal of material/residues - Good Sam assumes liability once material taken off site				•					
9.4	If Good Sam wants to do "on-site" processing/remining, it should go through normal permit process and assume liability instead.				•					
9.5	Reprocessing (critical/strategic minerals)					•				
9.6	Provide reprocess incentives (e.g. reprocessing projects could be eligible for fast-tracking of permits)							•		
10.0	Terminology									
10.1	CHANGE THE NAME (drop "Good Sam" term)! AML Reclamation Partnership Act (ARPA).	•								
10.2	Agreement NOT permit	•								
10.3	Regulatory authority approved "authorization"			•						
10.4	"Authorization" instead of "permit"					•				
10.5	Maybe rethink word Abandoned...maybe "Orphaned"					•				
10.6	Need to define abandoned mine --> Pre-surface mining regs, no identified PRP. Judgement proof - innocent landowner									•
11.0	Incentives									
11.1	Incentives for partners to participate, (partners determined on a site by site basis)	•								
11.2	Incentives such as mitigation banking (companies, contractors and conservation groups can participate)						•			
11.3	Provide cost incentives OR limited liability - if habitat restored, good Sam can get mitigation banking credit							•		
11.4	Provide reprocess incentives (e.g. reprocessing projects could be eligible for fast-tracking of permits)							•		
11.5	Language similar to Lamborn Bill that allowed for offsite mitigation credit									•
12.0	Community/Stakeholder Involvement									
12.1	Community involvement	•								
12.2	Stakeholder involvement (all)			•						
12.3	Encourage multi-stakeholder process through an external Foundation						•			
12.4	Establish stakeholder groups (e.g., CWA 208 watershed groups that are empowered to make calls on behalf of impacted watersheds)						•			

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13.0 Funding		G1	G2	G3/6	G4	G5	G7	G8	G9	G10
13.1	Nevada Trust Fund model (which uses permit fees to address safety issues of AML sites)						•			
13.2	Matching funds from States						•			
13.3	NPS and FWS and USFS have foundations, BLM is setting up theirs now.									•
13.4	Encourage multi-stakeholder process through an external Foundation						•			
14.0 Monitoring		G1	G2	G3/6	G4	G5	G7	G8	G9	G10
14.1	Applicant would define time to complete the project and what would be done for monitoring in the permit application		•					•		
14.2	To address uncertainty, allow for post-completion monitoring						•			
14.3	No perpetual monitoring requirements		•							
15.0 Site Characterization		G1	G2	G3/6	G4	G5	G7	G8	G9	G10
15.1	Site-specific characterization of current condition (NOT full scale baseline)			•						
15.2	Approval of site characterization					•				
16.0 Other Ideas and Questions		G1	G2	G3/6	G4	G5	G7	G8	G9	G10
16.1	"Failure to comply" provision		•							
16.2	No civil penalties		•							
16.3	Cannot override extractive requirements			•						
16.4	Sunset the legislation over a certain period so it can be revised or eliminated if it does not work						•			
16.5	Technical advisory group (academia, QPs)						•			
16.6	AMLs as of document date							•		
16.7	If available, tie to existing legislation							•		
16.8	Must address trust issues. Folks struggle with each party not trusting the others (agency, industry and NGO)								•	
16.9	Avoid any language/reference to NEPA process				•					
16.10	No open-ended obligations					•				

APPENDIX A – SESSION DISCUSSIONS AND QUESTIONS

Time was reserved at the end of each session for questions. Following is a summary of questions and issues discussed at the end of the presentations. The slides for some of the presentations are available on the MMSA AML Conference Web page (<http://www.mmsa.net/AMLPage.html>).

QUESTIONS AND DISCUSSIONS FROM THE PLENARY SESSION

- Question: **Adrian Brown** (Reclamation Consultant) stated CERCLA focused on getting the cleanup of industrial sites done. CERCLA a) Did not see the need for a permitting system; b) Just get it done – focus is on Superfund sites. Does CERCLA allow doing the work with an AOC (Agreement on Consent)?

Response: **Dustin Sherer** explained that work cannot be done on superfund sites without a permit. Good Samaritan legislation is trying to develop a system for cleanup of properties which are not on Superfund sites.

- Question: **Tawny Bridgeford** (National Mining Association) asked “Why did it take TU two years to permit, and how was it done?”

Response: **Laura Skaer** suggested discussing this in the afternoon session. Could approach with an umbrella statute for liability.

- Question: **Doug Young** (Keystone Policy Center) stated that we have many examples of success; what is the issue as to “point source” problems, feel the issue is a liability problem (Citizen Lawsuit protection) – how do we get Citizen Comfort?

Response: **Chris Wood** – Feels we need CERCLA & CWA variation language. Also, AML problems are generally 80% dry sites, 20% draining adits.

- Question from the floor: What are the metrics for success? What could be accomplished with legislation?

Response: **Jeff Graves** – State of CO uses metrics of quality and quantity for partial success. Think outside the box in measuring success. Partial improvements are possible.

Response: **Dustin Sherer** – Provide upfront flexible scope of what you intend to do.

- Question from the floor: There are categorical exclusions in NEPA. What measurements plus impact on environment could be defined?

Response: **Chris Wood** – No Categorical Exclusion – how would process be designed?

- Question from the floor: Do legislators understand most sites already are “Dead Streams”?

Response: **Dustin Sherer/Chris Wood** – Set up a project for a simple result, try to raise no one’s hackles.

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Response: **Kathy Benedetto** - Categorical exclusion can be done.

Response: **Adrian Brown** – consideration is needed for natural background conditions.

Response: **Amanda Aspatore** - Take CWA off the table.

- Question from the floor: Are there ways to get exemption?

Response: There are ways to address background. If standards programs could work with groups, there are ways to do it. There is a reluctance to decrease standards. Stringent standards don't have any relation to human safety.

Other statements

- Statement from the floor was made that Colorado is an exception – Most states get in the way of AML cleanup. BC (British Columbia, Canada) is far ahead of the US in progress on AML cleanup of sites. Bring AWAR's to CWA. (AWAR= Advance Work Authorization Request)
- **Trish Oeth** (Colorado Department of Public Health and Environment) – Have examples in Colorado where we can clean up AML sites.
- **Ms. Skaer** – Get legislation first, Funding will come.
- **Ms. Carpenter** – What about state statutes? Is this an issue – Can we use Colorado as an example?
- **Mr. Graves** – Colorado uses Federal Standards as basis of consideration.
- **Ms. Aspatore** – CWA standard difficult and expensive to use in cleanup efforts.

QUESTIONS AND DISCUSSIONS FROM THE MID-MORNING SESSION

- **Question from floor:** – Made a general statement that all agencies should get together to solve AML problems without further legislation. **Kathy Benedetto** response - there is still a need for Good Samaritan legislation if non-government entities get involved.
- **Jeff Parshley** – Some NGO's business model is to use Citizen Suits as a fundraising tool.
- **Jim Hesketh** (Viva Gold Corp) – Re Kendall Mine in Montana, Citizen suit brought on CWA involved issues related to underground mining in the late 1880's, and early batch heap leach activities in the 1980's. Citizen suit for water routes and pollution. Commented on no baseline for background water quality.
- **Mr. Hesketh** also mentioned his progress at Kendall in doing small steps with a posted bond on each step being a concept that worked. Such a program “put to bed” most of the environmental group's concerns.

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- A brief discussion occurred on a concept of moving a project along by bonding each small area separately, do the reclamation, then get release and move to next small area.
- **Individual** – Need to do sites with a definite plan and responsibility.
- **Dennis Ferrigno** – Made the statement that most reprocessing of tailings was done in foreign locations.
- **Doug Young** (Keystone Policy Center) – Indicated that AML work is done with high risk and turns a Good Samaritan permit into an NPDES permit.

QUESTIONS AND DISCUSSIONS FROM THE AFTERNOON SESSIONS

Additional Comments noted after Group 10 presentation.

- TU hasn't touched water on any site.
- Better, not perfect.
- Re-mine – no place on the front range to take material to recover metals.
- Mine dumps – get water off the pile.
- Attempting to treat activates CWA.
- For the pilot project, avoid re-mining.
- AOC = agreement on consent
- 2015: HR 3843 – proposed legislation.
- What happens to longer term operations & maintenance component – replacement?
- Pilot – have a sunset time.
- Causes of actions are limited – not a complete waiver of liability – for certain conditions of what the Good Samaritan promised.
- Can only reauthorize a federal program for 7 years
- Amend/use CERCLA mechanisms instead (not the CWA since WOTUS not resolved)
- Don't amend CERCLA or CWA, but for a very limited purpose Good Sams are exempt. Could be done BUT the exemption will be perceived as an "amendment"
- CERCLA provides Good Sam protection on Superfund sites. Expand it to cover other GOOD Sam sites. Could this work to affect other statues? NMA did explore this but doesn't think it can be used more broadly
- If reprocessing is requested/considered, subject to review of claims to respect any valid and existing rights

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- Start legislation from something existing. E.g. Pennsylvania
- Water Flow considerations – (much greater back East)

APPENDIX B – TERMINOLOGY AND DEFINITIONS

Acronym	Meaning
AMD	acid mine drainage
AML	Abandoned Mine Lands
AOC	Administrative Order on Consent
ARD/ML	acid rock drainage/metal leaching
ARPA	AML Reclamation Partnership Act (H.R. 2937?)
AWAR	Advance Work Authorization Request
BLM	Bureau of Land Management
BMP	Best Management Practice
CCWF	Clear Creek Watershed Foundation
CDPHE	Colorado Department of Public Health and Environment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act (also known as Superfund)
CMC	Colorado Mountain College
CSM	Colorado School of Mines
CWA	Clean Water Act
CY	Cubic Yards
DRMS	Colorado Division of Reclamation, Mining, and Safety
EE/CA	Engineering Evaluation Cost Analysis
EPA	Environmental Protection Agency
FWS	Fish and Wildlife Service
GS, Good Sam	Good Samaritan
MMSA	Mining and Metallurgical Society of America
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NTF	Nevada Trust Fund
NFF	National Forest Foundation
NGO	Non-governmental organization
NMA	National Mining Association
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
O&M	Operations and maintenance cost
PRP	Potentially Responsible Party
QP	Qualified Professional
RCRA	Resource Conservation and Recovery Act
SHPO	State Historical Preservation Office
Superfund	See CERCLA
TSCA	Toxic Substances Control Act of 1976
TU	Trout Unlimited
USFS	U.S. Forest Service

Acronym	Meaning
USGS	U.S. Geological Survey
USMIN	USGS mineral deposit database project
VCUP	Voluntary Cleanup and Redevelopment Program (Colorado)
WGA	Western Governors Association
WOTUS	Waters of the U.S.
WQ	Water Quality

RCRA Definitions*

- Disposal
 - Discharge, deposit, injection, dumping, spilling, leaking, or placing of solid or hazardous waste into or on any land or water so that it or any constituent may enter the environment, including ground water (RCRA §1004(3))
- Solid Waste
 - Garbage, refuse, sludge, other discarded material, including solid, liquid, semisolid or contained gaseous material, excluding domestic sewage (RCRA §1004(27))
- Hazardous Waste
 - A solid waste or combination of solid wastes that because of quantity, concentration, physical, chemical or infectious characteristics may cause an increase in mortality or serious, irreversible illness or pose a substantial hazard to human health or the environment when improperly managed (RCRA §1004(5))
- Storage
 - Containment of HW that does not constitute disposal (RCRA §1004(33))
- Treatment
 - Any method, technique or process to change the physical, chemical, or biological character of any HW to neutralize or render the waste nonhazardous, safer to transport, amenable to recovery or storage or reduced in volume (RCRA § 1004(34))

*The RCRA definitions are taken from Carolyn McIntosh’s presentation.

APPENDIX C – SUMMIT PARTICIPANTS

Adrian Brown Consultants, Inc.
AECOM
Alloy, LLC
American Exploration & Mining Association*
Americas Tailings Inc.
Applied Intellect
ATKINS NUCLEAR SECURED
Auric Systems
Avid Water Technology
Backcountry Hunters & Anglers*
Behre Dolbear Group, Inc.
BLM
Bureau of Land Management
Bureau of Land Management, Colorado State Office
CAF & Associates*
Carver Schwarz McNab Kamper & Forbes LLC
CDM Smith
CDPHE Water Quality Control Division
Centen Metals LLC
Clear Creek County
CO Dept of Law
Coeur Mining*
Colorado Department of Public Health and Environment
Colorado Geological Survey
Colorado School of Mines
Colorado School of Mines Mining Engineering
Colorado Water Quality Control Commission
Colorado Water Quality Control Division
Committee on Natural Resources
Consultant
CU Boulder Anthropology
Dempsey & Co.
DOI OSMRE
Duraroot LLC
Enhanced Earth Technologies
EPA
Freemyer and Associates
GCSU
Global Water Center, University of Nevada
Goldcorp / Peñasquito
Golder Associates
Grand Slam Club / OVIS and California Wild Sheep Foundation

H-2 Enterprises, LLC
IMCC
J. M. Beck & Associates Mining Consultants
Jacobs
Karin Olson Hoal Consulting, LLC
Keystone Policy Center
KSN Mineral Process Associates LLC
Micon International*
Montana Department of Environmental Quality
Mosch Exploration & Mining, LLC
Mountain Studies Institute
Newmont Mining Corporation
NOVAGOLD
Orbuch Consulting, LLC
OSMRE
Pioneer Technical Services, Inc.
Ramboll
Repetto Consulting LLC
RES (Remote Energy Solutions)*
Research Services LLC
Resource Capital Funds
RJR
SEA
Sovereign Management Group Ltd.*
SRK Consulting*
Stuart A. Sanderson, LLC
Swift River Environmental Services, LLC
TAKRAF USA*
Tecolotes de la Noche Consulting
The MMSA
Theodore Roosevelt Conservation Partnership*
Trout Unlimited Inc.
U.S. EPA
U.S. Forest Service
U.S. Geological Survey
University of Nevada, Reno*
US Fish and Wildlife Service
USDA
USDA Forest Service
USGS Mineral Resources
Viva Gold Corp
Western Governors' Association
Weston Solutions, Inc
Windward Consulting LLC*

* Supporting Partner

APPENDIX D – SPEAKER AND COMMITTEE BIOS

Amanda Aspatore, Vice President, Water Law & Policy, National Mining Association, Washington DC.



Amanda Aspatore is the Vice President, Water Law & Policy at the National Mining Association (NMA) in Washington, DC. Ms. Aspatore represents the mining industry on environmental and administrative legal, regulatory, and policy issues, with a focus on those arising under the Clean Water Act and Safe Drinking Water Act. Ms. Aspatore’s portfolio also includes environmental justice, public lands, and finance issues. Ms. Aspatore serves on the Steering Committee of the Waters Advocacy Coalition and has received certification from the U.S. Environmental Protection Agency’s Water Quality Standards Academy. Prior to joining NMA, Ms. Aspatore was a law clerk in the Twelfth Judicial Circuit of Virginia and at the U.S. Department of Transportation. Ms. Aspatore is a graduate of the William and Mary School of Law, where she served on the Environmental Law and Policy Review. Ms. Aspatore obtained her undergraduate degree at Washington and Lee University, where she completed a double major in political science and philosophy.

Kathy Benedetto, Senior Advisor, Bureau of Land Management



Kathy is a professional geologist with extensive Congressional and legislative experience spanning 23 years with nearly 13 years as professional staff on the Natural Resources Committee, U.S. House of Representatives. While her career has brought her to Washington, D.C., her credentials were forged in the American West. Kathy received her degree in geology from Oregon State University at Corvallis and went on to work in that field in as a consulting geologist throughout the Western and Southeastern U.S. As her work brought her into the government affairs arena, she became interested in various laws and regulations affecting mineral development and ultimately, how those laws affect access to public lands. Kathy’s research as a geologist has been published in professional journals and she has been recognized by the American Institute of Professional Geologists, most recently with the John T. Galey Sr. Memorial Public Service Award. She has also received honors from the National Mining Hall of Fame and Museum, and the Northwest Mining Association (now the American Exploration & Mining Association). Her role with the House Natural Resources Committee makes Kathy a natural fit to serve as Senior Advisor at the BLM, where she has worked since she arrived with President Trump’s transition team in January 2017.

Tawny Bridgeford, Deputy General Counsel, Vice President of Regulatory Affairs, National Mining Association, Washington DC and

Tawny Bridgeford is the Deputy General Counsel and Vice President of Regulatory Affairs at the National Mining Association (NMA) in Washington, D.C. Ms. Bridgeford has represented the mining industry since 2004 on legal, regulatory and policy issues under the Comprehensive Environmental Response, Compensation, and Liability Act, the Emergency Planning and Community Right-to-Know Act, the Resource Conservation and Recovery Act, and the Toxic Substances Control Act. Ms. Bridgeford has also expanded her portfolio over the last several years to include chemical security and air quality issues. Ms. Bridgeford currently serves as the Vice Chairman of the North American Metals Council. Ms. Bridgeford also manages NMA’s lobbying and ethics compliance. Prior to joining NMA, Ms. Bridgeford was a law clerk at the EPA’s Office of General Counsel. Ms. Bridgeford is a 2004

graduate of the American University's Washington College of Law. Ms. Bridgeford obtained her Bachelor of Sciences at Cornell University in 1999, where she majored in Natural Resources.

Erin Chancellor, Counsel to the Administrator, U.S. Environmental Protection Agency

Erin came on as Counsel to the Administrator at U.S. EPA in late January 2018. Her workload generally focused on abandoned mine lands and Superfund issues. Prior to joining the EPA, she spent the last two years serving as Special Counsel to the Chairman of the Texas Commission on Environmental Quality. Prior to working for the Chairman, Erin began her legal career as a Superfund attorney at the Texas Commission on Environmental Quality. Erin also serves on the Executive Committee of the State Bar of Texas Environmental & Natural Resources Law Section.

Jeff Graves Director, Office of Active & Inactive Mines, Colorado Division of Reclamation, Mining, and Safety

Jeff Graves, Director of the Colorado Inactive Mine Reclamation Program for the Division of Reclamation, Mining and Safety. Has been with the state of Colorado for 17 years designing and implementing abandoned mine reclamation projects throughout the state. Has a Bachelor of Science in Geology from the University of Colorado, and a Masters of Engineering, in geological engineering from the Colorado School of Mines.

Carolyn McIntosh, Partner, Squire Patton Boggs (US) LLP

Carolyn McIntosh counsels clients on complex environmental compliance matters and environmental, natural resources and commercial litigation. She has decades of experience in the extractives industry sector, including copper, gold, silver, iron, potash and lithium mining operations and asset purchase, lease and sales transactions—in the US and internationally. Her work includes due diligence, environmental compliance, leasing, permitting, reporting, remediation, financial assurance bonding, endangered species impact evaluation, and closure. Carolyn's public lands experience includes mineral leasing, claim staking, right-of-way acquisition, regional management plan development, mineral material sales, and NEPA and ESA issues. Carolyn is a partner with Squire Patton Boggs (US) LLP in Denver, Colorado, and serves as a Trustee of the American Exploration & Mining Association and a Trustee-at-Large of the Rocky Mountain Mineral Law Foundation.

Jeff Parshley Group Chairman and Corporate Consultant SRK Consulting North America



Mr. Jeff Parshley is a SRK's Global Chairman and a Corporate Consultant with more than 35 years of environmental and closure experience in the mining industry including closure planning and closure cost estimates. In addition to planning and analysis work for mines, he has also been involved in the management of several abandoned mines and implementation of actual closure works at several mines in the western United States. He has worked with legal and policy aspects of mining projects since his early career, regularly works on World Bank and IFC compliance projects and is also one of SRK's most experienced mine closure strategists and regulatory specialists. He has contributed to the development of several regulatory guidelines for mine closure and closure cost estimating and assisted a number of clients develop corporate standards and guidance documents for closure planning, implementation and cost estimating. Jeff is a regular mine closure and closure cost estimating instructor for in-house workshops conducted for a number of mining companies and several U.S. government agencies.

Dustin Sherer, Aide, Sen Cory Gardner

Dustin Sherer will serve as Gardner’s Legislative Assistant and will work on energy, environment, lands, forestry, agricultural, and water policies. Dustin is a Pueblo, CO native who has worked on natural resources and environmental policy on both the House and now Senate side of the Capital. He currently serves as Senator Cory Gardner’s Legislative assistant for Energy and Natural Resources, Agriculture, and Water policy.

Chris Wood, President, Trout Unlimited

Chris came to Trout Unlimited in 2001 after serving as the senior policy and communications advisor to the Chief of the Forest Service. Prior to that he worked in the fish and wildlife program of the Bureau of Land Management.

CONFERENCE FACILITATORS AND COMMITTEE MEMBERS

Dayan J. Anderson, M.S., MMSA(QP), Senior Mining Engineer, Micon International Ltd.



Ms. Anderson is a minerals industry professional with over 20 years of diverse experience in mine operations, integrated mine and reclamation planning, reserve estimation, permitting, stakeholder engagement and sustainability. She has spent the past 13 years with nonprofits doing citizen science and habitat restoration work on public lands. She currently serves as GIS Manager and Habitat Crew Coordinator for the Society for the Conservation of Bighorn Sheep and as a board member of the Southern California Mountains Foundation. In conjunction with her graduate studies, Ms. Anderson conducted research that is currently being integrated into the California Department of Fish and Wildlife’s adaptive management plan for desert bighorn sheep occupying landscapes impacted by mining. Ms. Anderson is a certified California Naturalist, Councilor-at-Large with the Mining and Metallurgical Society of America, and an International Fellow with the Leadership for Environment and Development (LEAD Canada) program.

Ann Carpenter, President, Remote Energy Solutions; SRK Associate



Ann is a mineral development professional with over 35 years of experience. She has global experience in corporate and business development including mergers and acquisitions, property and corporate valuation, and strategic planning and implementation. She has project development expertise, integrating permitting, feasibility studies, and sustainability measures. Her government and legislative affairs experience provides a diverse perspective of key development challenges.

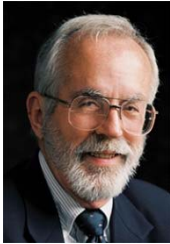
Dennis Ferrigno - Executive Consultant



Dr. Ferrigno has been an industry leader for over 40 years in the Mining, Energy, Power, and Hazardous Materials Demolition & Decommissioning sectors. He has held US federal appointments as advisor to the Secretary of Commerce, Energy and State Government. Dennis has held senior executive roles with Fortune 500 companies with Profit & Loss/ Operations responsibility with managing projects with over \$2 B/year in contract work. He has been integral in Merger & Acquisition, Investment Banking Development support

and financing projects through World Bank; IFC, and EBRD. He is a member of MMSA and holds his QP certification through MMSA in accordance with Canadian NI43-101 Qualified Person requirements.

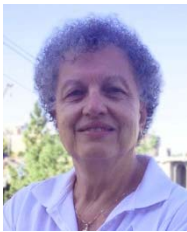
Paul Jones, Sovereign Management Group Ltd.



Paul C. Jones' professional and corporate experience spans more than 55 years in the mining industry in areas of base and precious metals, copper, coal & lignite, uranium, industrial minerals and building stone in over 20 countries worldwide. He has served as a President and/or Director of several public exploration and mining companies in the U.S., Canada and elsewhere during his career. In semi-retirement he serves currently as an Adjunct Professor in the Mining Department at Colorado School of Mines. Jones has been a member of the Society of Mining Engineers since 1958 and a member and officer of the Mining and Metallurgical Society of America where he received the 2005 President's Citation for his activities as Chair of the Governmental Affairs Committee. In February 2004 Mr. Jones received the William Lawrence Saunders Gold Metal from the American Institute of Mining, Metallurgical and Petroleum Engineers "in recognition of his service to the public and the minerals industry in legislative and political as well as technical matters, exemplified by his role as chair of the Summitville Task Force." He is a member of the Society of Economic Geologists and a member of several state, regional and national mining organizations where he has served as an officer and director.

He is a past Chairman of the Board of the National Mining Hall of Fame & Museum and the CMA Education Foundation. Mr. Jones has a Bachelor of Mining Engineering Degree from the University of Minnesota, is a Registered Professional Engineer and Qualified Person under Canadian National Instrument 43-101.

Laura Skaer, Executive Director, American Exploration & Mining Association



Laura Skaer is the Executive Director of the American Exploration & Mining Association (AEMA) (formerly Northwest Mining Association), a position she has held since December, 1996. Under her leadership, AEMA has grown to be the largest membership-based mining industry trade association in the U.S. She has thirty-eight years (17 in oil & gas; 21 in mining) of management, operations, legal and government affairs experience in the natural resource industries on private and public lands throughout the west. She has testified numerous times before various congressional and state committees on mining, environmental, public lands, oil and gas, and national, state & local tax issues; and has spoken at numerous conventions and technical meetings. In December 2013, she was named one of 100 Global Inspirational Women in Mining by Women in Mining UK.