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Good Samaritan remediation of abandoned hardrock mines program in the United States

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Abstract

On 17 December 2024, former president of the United States, Joe Biden, signed into law the Good Samaritan Remediation of Abandoned Hardrock Mines Act of 2024. The bill was co-led by a diverse group including Democratic and Republican senators across the western United States and Alaska, and it received unprecedented bipartisan support from the US Senate. The Act is the result of decades of effort and hard work by: political leadership including the Nevada Division of Minerals, the Colorado Division of Reclamation, Mining and Safety, and the Arizona Department of Environmental Quality; key stakeholders from non-government organisations (NGOs) including Trout Unlimited; and industry groups including the Mining and Metallurgical Society of America (MMSA) and the American Exploration & Mining Association (AEMA); all backed by strong local public support. The United States Environmental Protection Agency (EPA) is responsible for administering the Good Samaritan Remediation of Abandoned Hardrock Mines program (Program).

The Act promotes the remediation of abandoned hardrock mine sites by good Samaritans, allowing them to apply to obtain investigative and/or remediation permits and implement remediation projects at eligible abandoned hardrock mine sites. The law grants protection from certain liability risks while the good Samaritan is voluntarily implementing the remediation of an abandoned hardrock mine within the terms of their permit. The Act allows for 15 pilot projects to be undertaken in the span of 7 years, with the intent to demonstrate the long-term viability of the Program and allow for unlimited projects to be completed while also allowing the Program to develop a clear pathway through lessons learnt during the pilot Program.

With the clock ticking, good Samaritan practitioners and supporters are diligently working towards a shared goal of selecting, implementing and demonstrating the success of the 15 pilot projects. This paper and presentation will introduce the Program, present current Program guidance, and consider the challenges and lessons learnt to date.

Keywords: *abandoned mine lands, legacy assets, abandoned mine lands, hardrock mine, good Samaritan, closure planning, closure execution, regulatory approvals*

1 Introduction

The negative public legacy of mining in the United States and globally is one of historical human health and environmental impacts, which has a significant ongoing effect on the mining industry's social licence to operate. This legacy is the result of short-term vision, a lack of concern for impacts to the natural environment and human health, and a lack of adequate regulatory guidance and enforcement prior to the late 1970s.

Obtaining and maintaining a social licence to operate is one of the greatest, if not the greatest, risk facing the mining industry today and the legacy of mining plays a significant role in obtaining that licence. Due to the negative environmental and social impacts, abandoned mine lands (AML), often referred to as orphaned

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mine sites or legacy mine sites, contribute to how the mining industry is perceived, and the ongoing existence of these 'open sores' negatively contributes to the social licence to operate mines. Although it is difficult to quantify and classify AMLs, their impacts in the United States are well publicised. The estimated number of AMLs in the United States varies widely, with all estimates greater than 350,000 AMLs (United States Government Accountability Office 2020), and can be categorised as sites with prospecting pits, adits and shafts, unreclaimed leaching facilities, tailings dams, waste rock piles and plant sites.

On 17 December 2024, former president of the United States, Joe Biden, signed into law the *good Samaritan Remediation of Abandoned Hardrock Mines Act of 2024* (the Act). The bill was co-led by a diverse group including Democratic and Republican senators across the western United States and Alaska, and received unprecedented bipartisan support from the US Senate. The Act is the result of decades of effort and hard work by: political leadership including the Nevada Division of Minerals, the Colorado Division of Reclamation, Mining and Safety, and the Arizona Department of Environmental Quality; key stakeholders from non-government organisations (NGOs) including Trout Unlimited; and industry groups including the Mining and Metallurgical Society of America MMSA) and the American Exploration & Mining Association (AEMA); all backed by strong local public support.

The Act promotes the remediation of abandoned hardrock mine sites by good Samaritans, allowing for them to apply to obtain investigative and/or remediation permits and implement remediation projects at eligible abandoned hardrock mine sites. Good Samaritans are private parties that voluntarily undertake AML reclamation and closure activities at sites they have no responsibility for. The law grants protection from certain liability risks while the good Samaritan is voluntarily implementing the remediation of an abandoned hardrock mine within the terms of their permit. The Act allows for 15 pilot projects to be undertaken in the span of 7 years, with the intent to demonstrate the long-term viability of the Good Samaritan Remediation of Abandoned Hardrock Mines program (Program) and allow for unlimited projects to be completed while also allowing the Program to develop a clear pathway through lessons learnt during the pilot Program. With the clock ticking, good Samaritan practitioners and supporters are diligently working towards a shared goal of selecting, implementing and demonstrating the success of the 15 pilot projects.

1.1 Program

The Program is administered by the United States Environmental Protection Agency (EPA). During the Program's first year, it laid the foundation for future voluntary clean-ups through the development of good Samaritan resources, the cultivation of partnerships, the proactive engagement of hundreds of interested stakeholders and more. As the Program enters its second year (2026), the EPA is focused on further defining the process and receiving and processing applications for projects with the goal of permitting them for execution in 2026 and beyond.

1.2 History

Prior to the passing of this bill into law in December 2024, federal legislation in the United States to address AML reclamation was limited to coal operations and did not include aggregate, mineral and hardrock mines. This lack of legislation resulted in a wide variety of standards and government authorities overseeing and providing guidance for reclamation efforts, a lack of direction for reclamation projects and inadequate funding for reclamation efforts – ultimately resulting in little to no action to address the vast number of AMLs and the significant environmental and human health impacts created by those AMLs. Funding and actions for hardrock AMLs are typically addressed at the state level; however, these actions are focused on public safety, and the projects typically consist of securing structures, adits, and shafts. Although current coal-focused AML remediation legislation has been successful, legislation directed at hardrock AML reclamation has been proposed for over 20 years at the federal level until the passing of the Act in December 2024.

1.2.1 Good Samaritan bills

Good Samaritan legislation aims to promote hardrock AML reclamation by protecting good Samaritans that want to take on AML reclamation projects from liability, promoting 'actual and significant benefits' and

creating a clear and consistent process to do so across the United States. This legislation, in general, is intended to address the lack of authority over hardrock AML reclamation, consistent reclamation standards and funding; identify and characterise sites; and facilitate the design and execution of reclamation projects.

One of the most impactful aspects of the good Samaritan legislation is the protection of good Samaritans from future liability. Without protection, an individual, NGO or company taking on reclamation projects would also assume full and enduring liability for the site, needing to meet federal and state standards immediately. This risk has prevented good Samaritans from conducting hardrock AML reclamation projects.

The second most impactful aspect of good Samaritan legislation, which is in direct response to the risk of long-term liability, is the goal of achieving "actual and significant environmental benefits" (United States of America 2024) for these projects (either in part or in full). This approach is currently being taken at multiple hardrock AML reclamation projects being conducted under the *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA), which reinforces that the goal is to realise significant environmental improvement from current conditions. This means that a project may not meet state, tribal or federal standards for operating mines.

The Gold King mine near Silverton in southern Colorado is an example of this approach. Managed by the EPA and federally funded, this legacy underground gold mine was abandoned in 1923. In August 2015, while excavation was progressing above the old adit, pressurised acidic- and metals-laden water began leaking, releasing approximately 11 million litres of water stored within the underground mine into Cement Creek, a tributary of the Animas River. This site is an example of the challenges presented by hardrock AML reclamation in the United States and the significant risks that accompany reclamation activities without adequate investigation and funding.

1.2.2 Cleanup of Inactive and Abandoned Mines Act

In 2006, Ken Salazar, Senator for the state of Colorado, sponsored Senate Bill 1848 (S. 1848) and introduced the *Cleanup of Inactive and Abandoned Mines Act*. The bill was intended to encourage partial or complete remediation of AMLs, provide appropriate protections for good Samaritans under applicable environmental laws, generate actual and significant environmental benefits, create an efficient permit process, avoid permitting for ongoing for-profit businesses which specialise in multiple good Samaritan projects that are designed to be permitted outside otherwise applicable federal, state and local environmental laws, and to further innovation and cooperation among the federal government, state governments, private individuals and corporations to accelerate conservation and environmental restoration.

S 1848 was reviewed by the Senate Committee on Environmental and Public Works, along with similar Acts such as the *Good Samaritan Clean Watershed Act* (House Bill 5404), but it was not enacted.

1.2.3 Good Samaritan Remediation of Orphan Hardrock Mines Act

In 2018, Scott Tipton, United States Representative of Colorado, and Cory Gardner, Senator for the state of Colorado, jointly sponsored and introduced the *Good Samaritan Remediation of Orphan Mines Act* House Bill 7226 (HR 7226) and S 3727. This bill, very similar to S 1848, was intended to promote the remediation of hardrock AMLs by establishing the authority, as well as a permitting process, at the federal level to manage projects to provide for protections for good Samaritans executing the projects and provide funding. HR 7226 differs from S 1848 by proposing 15 pilot projects to be funded by federal grants, essentially making this bill a pilot program for hardrock AML reclamation that is solely federally funding. If proven successful, HR 7726 would be followed by long-term legislation that would likely be open to alternative funding options, similar to the SMCRA. Both HR 7226 an S 3727 were not enacted.

2 Good Samaritan Remediation of Abandoned Hardrock Mines Act of 2024

The Act represents a significant federal effort to address the longstanding environmental and public health problems caused by abandoned hardrock mining sites across the United States. These sites, often relics of mining activities dating back over a century, continue to release toxic metals and acidic drainage into waterways, soils and ecosystems. In many cases, the original mining operators no longer exist or cannot be held financially or legally responsible, leaving a substantial gap in remediation responsibility.

The Act establishes 15 pilot projects administered by the EPA to facilitate voluntary clean-up efforts by qualified third parties referred to as good Samaritans. These entities may include state and local governments, tribal organisations, non-profits and private parties that are not linked to the original mining operations. To qualify, good Samaritans must not have owned or operated the site, contributed to the contamination or otherwise be legally liable for the pollution.

A central barrier to AML remediation has been the risk of legal liability under federal environmental laws such as the CERCLA and the *Clean Water Act*. These laws can impose strict, and sometimes perpetual, liability on any party that undertakes clean-up activities, even if they were not responsible for the initial contamination. The Good Samaritan Act addresses this issue by providing limited liability protections for permit holders, ensuring that good Samaritans are not exposed to enforcement actions, penalties or clean-up costs beyond the scope of their permitted work.

Under the Act, the EPA is authorised to issue up to 15 good Samaritan permits over a period of approximately 7 years, making the Program a controlled pilot initiative. These permits allow participants to conduct investigation and remediation activities at eligible abandoned hardrock mine sites while operating within defined regulatory conditions. The Program also streamlines certain permitting requirements, reducing administrative burdens and encouraging participation. Projects undertaken must demonstrate tangible environmental benefits such as improved water quality, reduced contamination risks or enhanced ecosystem conditions compared to pre-project baselines.

Eligibility for sites under the Program is limited to abandoned or inactive hardrock mines where no viable responsible party is available. The Act specifically excludes sites that are currently active, were operated after 11 December 1980, listed on the Superfund National Priorities List or already undergoing remediation efforts. This ensures that the Program focuses on neglected sites that would otherwise remain untreated due to legal, financial or logistical constraints.

In addition to establishing the permitting framework, the Act allows for the creation of a remediation fund supported by federal appropriations and non-federal contributions, such as donations or cost-sharing agreements. This funding mechanism is intended to support project implementation and long-term operations where necessary.

2.1 Goals and opportunities

The program's core goal is to break the liability logjam that has left hundreds of thousands of abandoned hardrock mines untreated, while its central opportunity is to prove through these 15 pilot projects that voluntary clean-ups can materially improve the environmental conditions currently impacted by hardrock AMLs at scale. The Act and these 15 pilot projects not only seek to meet this core goal and demonstrate the viability of the Program for an unlimited number of projects but also to create the pathway for this Program and future projects, considering no guidance was developed prior to the Act.

2.1.1 Goals

The goals of the projects within the Program can be simply stated as to achieve 'measurable progress'. Projects must demonstrate measurable progress towards achieving applicable water, soil and sediment quality standards, and other improved environmental or safety conditions or reductions in threats to soil,

sediment or water quality, or from baseline conditions. The EPA recognises that AML remediation projects, like any other natural resource project in the United States, involve many stakeholders to be successful. Beyond this primary objective, goals for the Program include encouraging the collaboration of regulators at the local, state, federal and tribal level, industry partners, NGOs, and the local communities.

2.1.2 Opportunities

The opportunities resulting from the Program are diverse and are founded on the accessibility of hardrock AMLs throughout the United States that, due to liability concerns, have gone untouched. This accessibility afforded to any good Samaritan not only allows for measurable progress towards environmental and human health at the site and surrounding area, but empowers local, state, tribal and federal agencies as well as NGOs, industry and communities to have a positive impact and tackle areas of specific concern for that stakeholder. Furthermore, the Act does not require rule making; the Act requires guidance. Therefore, the EPA is realising the opportunity to develop guidance for a flexible and efficient process from the permitting application through project execution to close-out, including:

- working closely with state and federal partners to identify and address information needs
- holding pre-application meetings with interested parties to discuss eligibility requirements, the cooperating person(s) (good Samaritans and team members), project descriptions, financial assurance and community engagement/interest
- developing a detailed flow chart illustrating the steps in the permitting process, including the separate good Samaritan and investigative sampling permit tracks, as well as approval leads for different land ownership scenarios.

One of the greatest opportunities this Program presents is for the reprocessing of ore stockpiles, waste rock, tailings etc., which opens the door to numerous critical minerals and beneficial uses for what are currently environmental liabilities. Reprocessing under the Act does not allow for-profit generation for the good Samaritan; however, all profits generated will be allocated to the United States Good Samaritan Mine Remediation Fund for use on future projects and to provide financial assurance (Section 2.4.4).

2.2 Challenges

This being a pilot program, the EPA is demonstrating the use of this law for the first time and is, in many instances, learning as it goes. There are challenges implementing a law with little legislative history and no judicial history. Each term needs to be carefully considered before rendering the interpretation of key terms, especially for the numerous places where the law leaves definitions and interpretations “as determined by the Administrator” (United States of America 2024).

2.2.1 Schedule

The Program is a priority for the current administration. The goals are to exceed the deadlines set in the law, i.e. 7 years to issue all 15 pilot permits. The EPA has set more aggressive goals that would have all 15 pilots permits granted by the end of 2028, with 1 to2 granted for the 2026 construction season, 5 to 7 for the 2027 construction season and the remainder in 2028. Also, the EPA is working with good Samaritans on investigative sampling permits, which also have a limit of 15 granted at a time. These goals are greatly accelerating the development of the Program for 15 successful pilot permits, introducing a short time frame for application, permitting, execution and the demonstration of success.

The law also requires close coordination between the EPA and other federal land managers; specifically, the Department of the Interior and the Department of Agriculture and their Bureaus. When a proposed project is on public lands, or on a combination of public and private lands, close coordination and joint understanding of the law is paramount. It can be challenging to ensure consistency between the 3 primary implementers of the law and, in communication with potential good Samaritans, the EPA has organised a workgroup to keep all government parties updated and working together to ensure smooth implementation of the new law.

2.2.2 Funding

The good Samaritan law, as initially passed, did not appropriate funding for good Samaritans wishing to take on pilot projects; however, it is anticipated that funds for projects will come from a variety of sources, e.g. grants, private funds and donations or pro bono work to support the good Samaritan. This funding approach introduces challenges for larger-scale projects and potential adjustments to projects as the result of changes at a site. Additionally, Congress did include a requirement for the development of a Good Samaritan Special Account. The account would be established in the Treasury of the United States as the Good Samaritan Mine Remediation Fund. The law also requires an account for each federal land management agency that authorises a good Samaritan to conduct a project on federal land under the jurisdiction of that federal land management agency under a good Samaritan permit and for an EPA account. These accounts can consist of:

1. amounts provided in appropriation Acts
2. any proceeds from reprocessing deposited under the law
3. any financial assurance funds collected from an agreement described in the law
4. any funds collected for long-term operations and maintenance under an agreement
5. any amounts donated to the fund by any person.

2.2.3 Guidance versus rule

The law requires the EPA, as the primary implementers of the pilot program, to issue implementing guidance or rules. The EPA made the decision to not issue rules within the 180-day window established under the law but may issue rules in the future as needed. However, the EPA has begun to issue guidance to assist in implementing the program. The first guidance that was published for a 30-day notice and focused on financial assurance is available on the EPA's Good Samaritan webpage (https://www.epa.gov/cleanups/good-samaritan-remediation-abandoned-hardrock-mines-program). This guidance may be updated as pilot projects are granted to address situations not yet contemplated. Additionally, the EPA is working with federal land management agencies on a comprehensive guidance for the program. The EPA anticipates this guidance will be published for public comment in late 2026 or early 2027. It will serve to clarify key terms, expand on the statutory language, and explain the processes needed to meet both the National Environmental Policy Act (NEPA) requirements and the good Samaritan permit requirements under the law. Providing clarity, specifically for newly defined terms, e.g. 'measurable progress', 'low risk' and 'ability to financially comply' (United States of America 2024), is very important to reduce reworking in the permitting process and provide direction to applicants. The EPA recognises that this is a pilot program, and flexibility is important to finding the best and most efficient paths to implement the new law.

2.3 Roles and responsibilities

2.3.1 Regulators

The EPA is the lead for the good Samaritan Program implementation. Pursuant to the law, the Administrator of the EPA shall:

- consult with prospective applicants
- convene, coordinate and lead the application review process
- maintain all records relating to the good Samaritan permit and the permit process
- in the case of a proposed project on state, tribal or private land, provide an opportunity for cooperating persons and the public to participate in the good Samaritan permit process, including
    - carrying out environmental review and public comment procedures
    - a public hearing, if requested

- enforcing and otherwise carrying out this section.

The EPA has begun meeting with prospective good Samaritans and has had dozens of productive 'pre-application' meetings. In these meetings, good Samaritans are able to ask questions about the process and about their projects before they apply. This will lead to a more efficient permitting process, eliminating reworking and reducing review times. As required by the law, the EPA will lead compliance, oversight and, if necessary, enforcement efforts for the good Samaritan permits. Additionally, the EPA is coordinating very closely with federal land management partners in the DOI, USDA and their Bureaus and services on Program development.

2.3.2 Federal land management agencies

The law also sets out a lead role for federal land management agencies depending on which public lands the proposed project will be implemented on. The lead Federal Land Management Agency (FLMA) is responsible for carrying out the necessary environmental review and public comment procedures, and a public hearing, if requested. In addition, the FLMA, in coordination with the Administrator, will enforce good Samaritan permits issued for projects on land owned by the United States.

2.3.3 State agencies/tribal governments

State agencies and tribal governments have a consultation role under the program, and the EPA has been engaging with them on the development of the overall program. The process for consultation on a permit starts as soon as practicable, but not later than 14 days after the date on which the Administrator receives an application that is complete and meets all applicable requirements. This timeline demonstrates the importance the EPA and the Act have placed on progressing applications quickly, and the expectation of importance by state and tribal agencies. After that determination, the Administrator shall provide notice and a copy of the application to:

- each local government with jurisdiction over a drinking water utility, and each Indian tribe with reservation or off- reservation treaty rights to land or water, located downstream from or otherwise near a proposed remediation project that is reasonably anticipated to be impacted by the remediation project or a potential release of contaminants from the abandoned hardrock mine site
- each federal, state and tribal agency that may have an interest in the application.

After the application is sent to a listed entity, the EPA will follow up with the entity to answer any questions or explain application contents. Additionally, the EPA knows that state, tribal and local entities have significant interest in and knowledge about projects, and welcomes input, so we makes the best-informed decisions in granting good Samaritan permits.

2.3.4 Good Samaritans

A good Samaritan can be an individual or group, with respect to historic mine residue, who/which:

- is not a past or current owner or operator of the abandoned hardrock mine site or a portion of the site at which the historic mine residue is located
- had no role in the creation of the historic mine residue
- is not potentially liable under any federal, state, tribal or local law for the remediation, treatment or control of the historic mine residue.

The good Samaritan plays an important role as the person who:

- applies for the permit
- is granted the permit
- implements the permit conditions.

2.3.5 Cooperating persons

The Program also creates another category of persons, a cooperating person, who is an entity cooperating with the good Samaritan to implement the project. Similarly to a good Samaritan, the cooperating person cannot be an owner or operator who was/is responsible for the site, had a role in the creation of the historic mine residue or was/is a federal agency. One example of a cooperating person might be the landowner, e.g. a private party who is granting access to the site for the good Samaritan and federal agency overseeing the project.

2.4 Program navigation

The EPA has created a good Samaritan Mine Cleanup webpage to assist with navigating the Program and application process. On that page is a Q&A on eligibility, one of the most critical elements to entering the program. By following the Q&A, a potential good Samaritan can determine if their site is eligible and whether they are eligible as a good Samaritan. As the EPA continues to have pre-application discussions with potential good Samaritans, we are finding new and unique eligibility questions that need to be answered. Each-potential project will be different and may warrant a pre-application discussion to determine if we have addressed eligibility concerns before the good Samaritan applies for a permit.

The EPA also recognises that some of the information being submitted in response to the NEPA Environmental Assessment requirements is the same information required for a permit. Therefore, to avoid duplication and make the review more efficient, we encourage applicants to reference duplicative information, e.g. the good Samaritan only need submit one site map and can reference that map in other instances where a site map is required.

Once the good Samaritan submits an application, the EPA (and FLMA, where applicable) will review the application to determine completeness. If additional information is required, the EPA will work with the applicant to identify the information needed to ensure a complete application. After determining that an application is complete, the EPA (and the FLMA, where applicable) will review the information to determine if the application satisfies the statutory requirements. This step also may require additional information from the good Samaritan before the application can be moved to the next step. At the point the Agency determines that the application meets the statutory requirements, it will publish the application for public notice and comment. After the comment period closes the EPA will review all comments and create a Response to Comments document. As a final step, the Administrator (and if necessary, the FLMA) will grant the permit or deny the application.

The EPA is currently working to develop additional guidance that will address the oversight and implementation phases of a pilot project.

2.4.1 Eligibility

To qualify as a good Samaritan under the program, a person or organisation must meet the criteria outlined in Section 2.3.4.

In practice, this means eligible participants are typically third parties such as non-profits, state or local governments, tribal entities or private organisations that are unconnected to the original mining activity.

For a site to qualify as a project under the Program it must meet all of the following criteria:

- be an abandoned or inactive hardrock mine (non-coal)
- have no viable responsible party available for clean-up
- not be currently undergoing remediation and not on the Superfund National Priorities List
- not be an active or recently active mining operation.

2.4.2 Funding

The EPA, in close coordination with the Office of Management and Budget, established the good Samaritan Mine Remediation Fund within the United States Treasury, as required by the Act. This foundational step will allow the good Samaritan Program to receive funds through appropriations, reprocessing proceeds, financial assurance mechanisms, donations, and certain long-term operation and maintenance agreements. The EPA and federal land management agencies will be able to better develop annual resource plans thanks to this important mechanism.

2.4.3 Permitting process

There are 2 project tracks under the program: the investigation permit and the remediation permit. Investigation permits allow for the characterisation of an AML with the intent of converting the investigation project to a remediation project. Investigation projects are not required to become remediation projects; rather they allow the good Samaritan to conduct a characterisation of the site sufficient to support a remediation project while also providing protection for the good Samaritan and allowing the EPA and other agencies to provide direction on the characterisation activities.

The permitting process under the Program loosely follows a typical natural resource permitting project. Early-and frequent engagement is at the centre of the process, which begins with a pre-application meeting with the EPA. An application is submitted to the EPA for consideration and review focused on the eligibility of the good Samaritan and the eligibility of the site. Once those criteria are met, the application is reviewed for completeness and the project's ability to achieve measurable improvements is assessed. Investigation projects that meet the criteria may be approved immediately following this review.

Once an application for a remediation project has been approved by the EPA, it initiates engagement with other agencies (including local, state, federal and tribal) and identifies a lead agency. If no FLMAs are identified, the EPA will lead the permitting process and the project through execution. If one or more FLMA/s is/are identified, one will be selected to lead the project through execution. The permitting flow chart is presented in Figures 1 and 2.

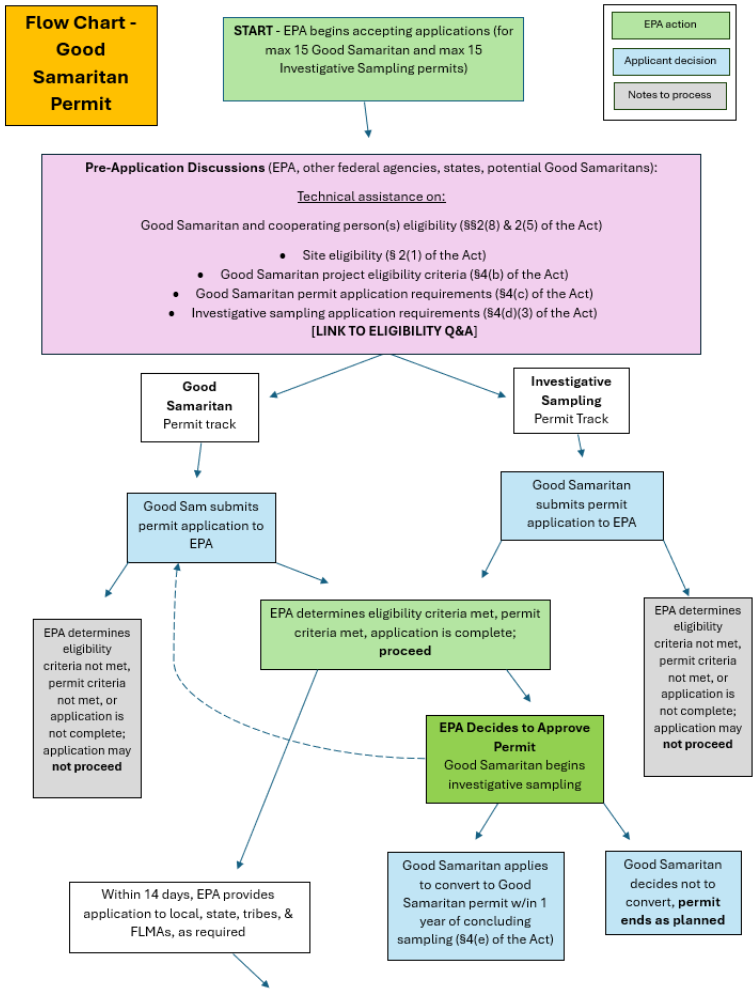

Figure 1 United States Environmental Protection Agency (EPA) Good Samaritan Project flow chart

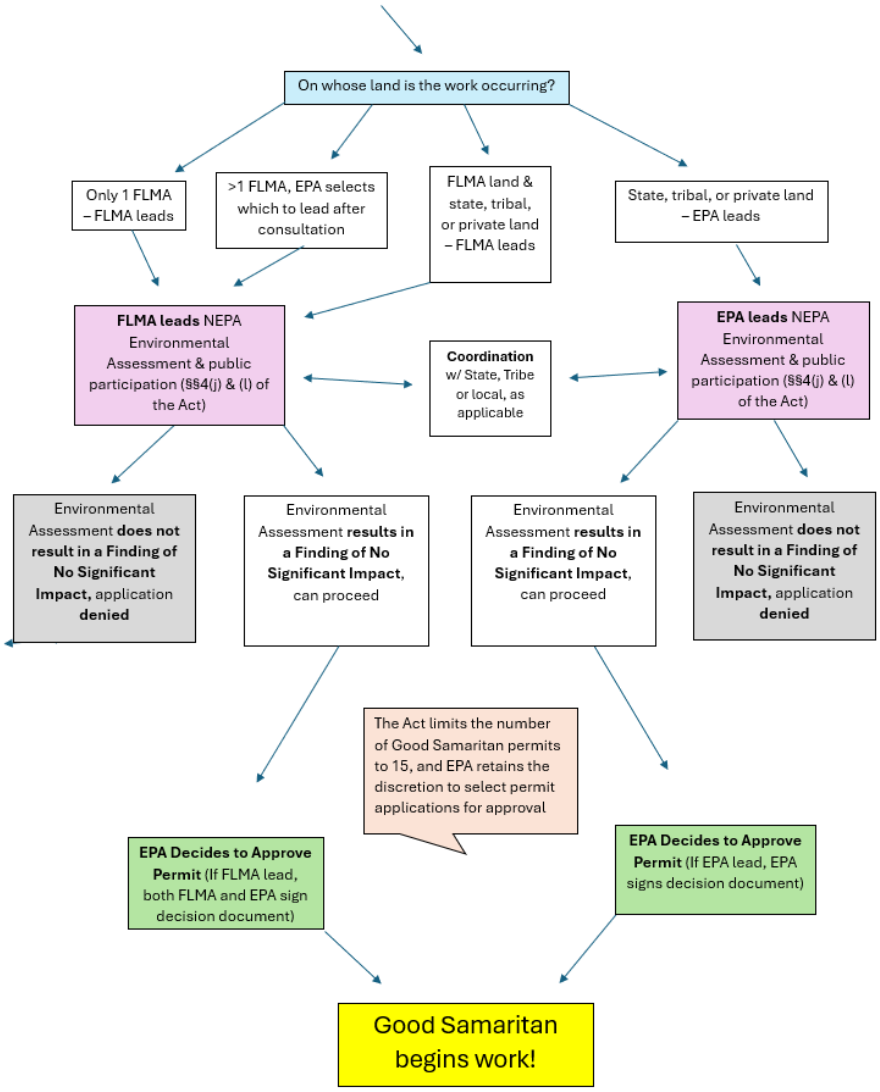

Figure 2 United States Environmental Protection Agency (EPA) Good Samaritan Project flow chart (continued)

2.4.4 Financial assurance

It is the responsibility of the good Samaritan to demonstrate that they have adequate funds to complete the project and the financial assurance required under the law. Specifically, the applicant must have the financial resources to complete the project described in the good Samaritan permit application, including any long-term monitoring, operations and maintenance that the Administrator may require the applicant to perform under the good Samaritan permit. Otherwise, the applicant can establish a third-party financial assurance mechanism, such as a corporate guarantee from a parent or other corporate affiliate, letter of credit, trust, surety bond or insurance to assure that funds are available to complete the permitted work, including operations and maintenance, and to address potential contingencies. These mechanisms must establish the Administrator or the head of the Federal Land Management Agency as the beneficiary of the third-party financial assurance mechanism. Additionally, the mechanism must allow the Administrator to retain and use the funds from the financial assurance mechanism in the event the good Samaritan does not complete the remediation under the good Samaritan permit.

3 Goals for project execution

With the program's foundation in place, the EPA plans to shift in 2026 to rolling out the first phase in a 3-phased approach to Program implementation. This phased approach will allow the EPA to test and build the Good Samaritan Program, relying on a few initial projects from which the Agency can learn through experience, issuing additional guidance as needed.

The EPA anticipates that over the coming years the pilot projects will illustrate the success of the good Samaritan clean-up approach across different ecosystems, states, management scenarios, clean-up processes and media. These projects may demonstrate how voluntary resources can be leveraged to provide additional opportunities for clean-ups at abandoned hardrock mines sites, saving federal funds. The EPA looks forward to working with good Samaritans to reduce the threats to human health and the environment posed by abandoned hardrock mine sites across the United States. The Program is envisioned to progress in 3 phases; however, the phases are not mandated. As the Program progresses, the EPA will monitor each project and provide updates to the public via the Good Samaritan EPA website.

3.1 Phase 1

While with any new Program unanticipated obstacles could emerge, the EPA plans to work through those to review and grant up to 3 good Samaritan pilot permits to begin fieldwork in 2026. The selected pilot projects will most likely be well characterised by past sampling, use a low-risk remediation strategy and represent straightforward opportunities to demonstrate how measurable progress can be achieved by good Samaritan clean-ups.

3.2 Phase 2

The EPA envisions the second phase building on the experiences from phase one by expanding the selection of pilot projects to address more complex but still low-risk scenarios. Five to seven permits are anticipated, with a goal of having some projects located at least in part on federal lands. These projects would require expansion of the NEPA review role to include federal land management agencies, with which the EPA will coordinate closely.

Because projects in this phase are expected to be more complex, they may use good Samaritan investigative sampling permits and permit conversion.

3.3 Phase 3

The EPA has set an ambitious goal to have all 15 pilot projects approved and underway by summer 2028, depending on the availability of good Samaritan project applicants. The remaining permits granted in this last phase may include sites and projects that involve coordination among multiple parties or reprocessing.

3.4 Current good Samaritan projects

At the time of this article, the EPA has begun a review of 10 pilot permit application from the good Samaritan law, including investigative and closure projects, and 9 states have begun engagement with the EPA. We are hopeful that in September 2026, the time of the Mine Closure Conference in Melbourne, Australia, at least one remediation project will be presented.

4 Conclusion

As the Good Samaritan Remediation of Abandoned Hardrock Mines Program (Program) enters its second year, with only 5 years remaining to identify, permit, execute and demonstrate success, the future looks bright. The United States Environmental Protection Agency (EPA) is fielding applications and continuing to develop guidance in collaboration with local, state, federal and tribal agencies, industry partners, non-government organisations (NGOs) and communities. While it has been time consuming to develop

guidance considering the collaborative efforts made by the EPA in developing direction, the Program's core goal to prove (through these 15 pilot projects) that voluntary clean-ups can materially improve the environmental conditions currently impacted by hardrock abandoned mine lands (AMLs) at scale is achievable.

Guidance continues to be developed and refined to support more complex projects in Phases 2 and 3 and introduce efficiencies to the permitting process. As Phase 1 projects progress into execution and demonstration of success, lessons learnt will lead to further improvements and efficiencies. There is no lack of eligible AML sites and to date, interest by good Samaritans has included a wide variety of stakeholders, regions and commodities; however, indications are that obtaining funding for these 15 pilot projects, depending on the scale, may be a challenge. Multiple projects currently in the permitting process are intended to be completed in Phase I and it is the authors' intention to present at least one of the Phase I projects at the Mine Closure Conference.

The successful demonstration of this Program has the potential to significantly improve environmental conditions at and surrounding hardrock AMLs throughout the United States. Furthermore, the approach and goals developed by the EPA for this Program have already facilitated collaboration between stakeholders one would typically view as adversarial, which has impacts beyond the remediation of hardrock AMLs, including for local communities, industry, NGOs, and local, state and federal agencies in the western United States. Finally, this Program will allow the mining industry to tackle the negative legacy of historical mining at scale, which is the ultimate goal after decades of effort and multiple bills, and is now the remit of the EPA and those who have been supporting and promoting this initiative.

References

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