



Due Diligence in the Sierra Nevada Gold Country:

NEW TOOLS TO REMEDiate CALIFORNIA'S ABANDONED MINE LANDS



Willow Creek flowing around a legacy debris control dam in
Tahoe National Forest

Due Diligence (Definition): reasonable steps taken by a person to satisfy a legal requirement, especially in buying or selling something; or a comprehensive appraisal undertaken by a prospective buyer, especially to establish its assets and liabilities and evaluate its commercial potential.

Remediation (Definition): the action of remedying something, of reversing or stopping environmental damage from mining.

Oxford Dictionary

EXECUTIVE SUMMARY

Gold Rush communities celebrate their mining past but are largely unaware of the lasting impacts of that era. For more than 100 years public and private investors have purchased and developed land for public uses seemingly unaware of the presence and implications of the physical and chemical hazards found on abandoned mine lands (AMLs). As a result, residents of the Sierra Nevada's Gold Country – the state's headwaters - are living on top of and surrounded by abandoned mines. The toxic metals discharged by legacy mines continue to flow down river and deposit into the San Francisco Bay Delta where water is diverted to serve farms and cities as far away as Fresno and Long Angeles.

National and state leaders have recently **called for increasing the pace and scale of mine remediation**, but precisely *how* to do this has been unclear - until now. In this report The Sierra Fund (TSF) describes how to transform the legacy of the Gold Rush from widespread pollution into economic innovation and restoration of the landscapes and communities of the Sierra Nevada – and indeed the entire state. *Improved due diligence protocols as part of acquisition and development projects on abandoned mine lands is key to building market and public confidence to invest in these landscapes – and therefore increasing investment in abandoned mine remediation.*

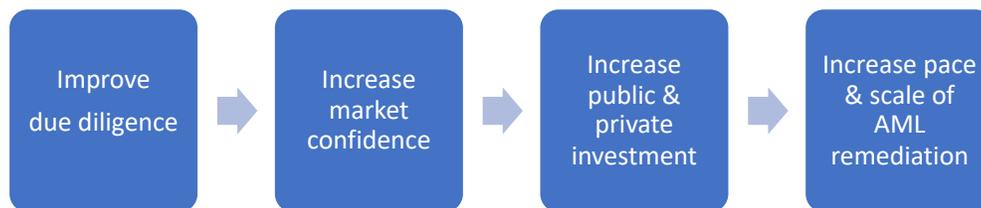
This report summarizes the **impacts of 19th century legacy mining** on the health and environment of 21st century California. It **reviews the current practices** of assessment, appraisal, acquisition, and project management that must be corrected. **Case studies in the report** underscore the need to improve due diligence during acquisition and development of AMLs. **Steps**

that can be taken immediately to protect public health and restore significant lands, forest, and rivers by galvanizing the cleanup of legacy mines **are described**. It proposes two overarching actions to increase the pace and scale of mine remediation:

Action #1: Improve Due Diligence Protocols on AMLs

TSF is calling for improved assessment prior to activities on AMLs and areas downstream of these legacy mine lands. This will build public and private market confidence to invest in these landscapes – and increase public support for and private investment in abandoned mine remediation.

How Improved Due Diligence Incentivizes Pace & Scale of Mine Remediation



Current practices fail to incorporate the history of what happened on the land as part of the assessment and appraisal process. This report describes a new approach to “due diligence” when considering acquisition or development projects on AMLs. This new methodology prevents mistakes during acquisition and project permitting and minimizes expensive complications. It clarifies liability for chemical and physical hazards and identifies appropriate end-use(s) before acquisition and permitting even begins. It provides Tribal organizations with new opportunities to secure and restore important cultural resources. It incentivizes rivers, forests and meadows impacted by legacy mines to be remediated and managed. The report outlines the elements of TSF’s Due Diligence Protocol:

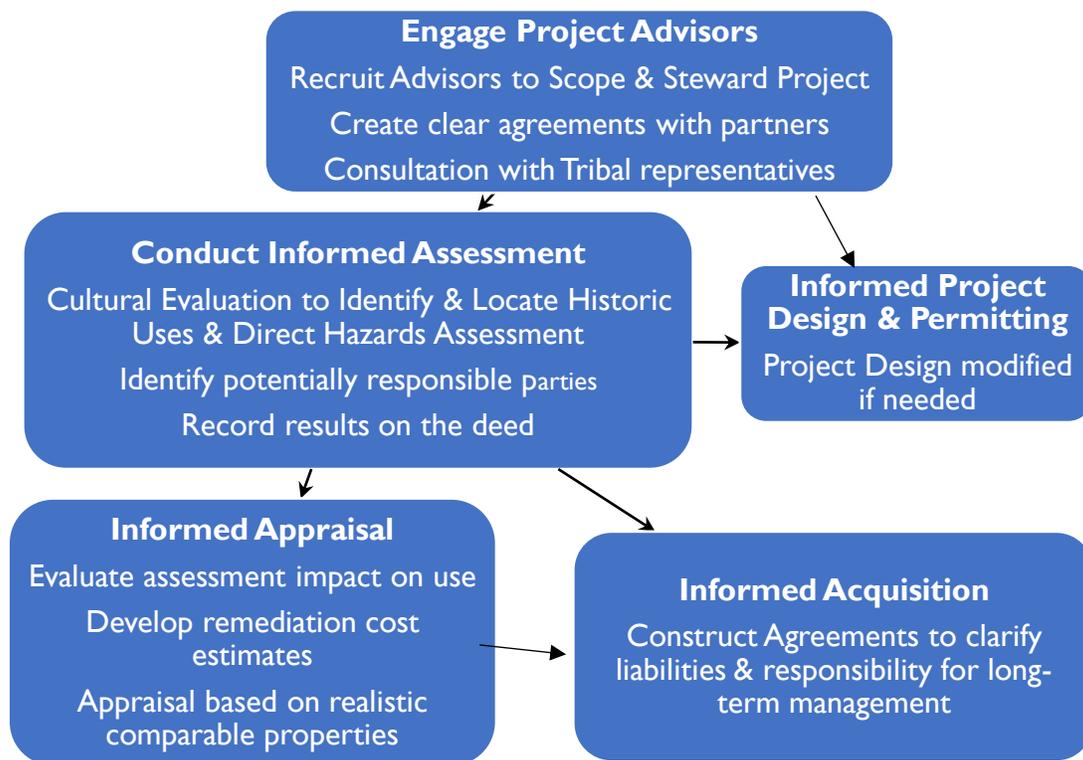
Cultural Evaluation to Inform Assessment: TSF’s approach to Informed Assessment of an AML property starts with a clear understanding of what happened previously on the site such as documenting what mining techniques were used, and mapping where rock was crushed, or mercury was used in gold recovery. Identification of mine features and understanding of site operations from the *Cultural Evaluation* must direct and inform environmental sampling and analysis associated with the *Hazards Assessment*. This includes any pre-mining cultural resources that may still be present. Best management practices and technologies for assessment are described.

Collaboration with Stakeholders: Because lands with abandoned mines are damaged, complex properties, they require expertise to assess and manage. Engaging partners with appropriate skills makes the project more successful. Consulting historic Tribes whose ancestral lands are within the scope of the project *early in the process* is an important step to ensure cultural resource protection and engender cooperation. Their knowledge and engagement is vital to any effort to imagine and implement new opportunities for this landscape where now there are AMLs. When working with non-profit or tribal organizations, a clear and specific agreement early in the process spelling out expectations and responsibilities must be a top priority.

Informed Appraisal Reflects Realistic Potential Uses: An appraisal of land in the Gold Country needs to *incorporate the cost to remediate* chemical and physical hazards into the appraisal process. To understand the highest and best use of the property, and therefore identify appropriate comparable sales for appraising the value of the property, new standards and protocols are required. New training and licensing requirements may be required as well.

Informed Acquisitions & Project Design Clarifies Liability: Clarifying risk to the public and understanding liability issues is primary on AMLs. Structure purchase agreements to reflect the specific interests of each party. Assessment must inform project design and permitting on AMLs.

TSF's Due Diligence Protocol



Action #2: Enact Policies to Increase Pace & Scale of Mine Remediation

Abandoned mine lands are dangerous. Yet, there are presently few real incentives to remediate the AMLs that compromise hundreds of thousands of acres of California's Gold Country – a region that serves as the state's primary source of water. The report outlines a suite of actions needed to increase the pace and scale of mine remediation:

Build Support for Mine Remediation: Leaders at every level should *call for action now to transform lands with toxic abandoned mines into clean, safe and productive properties that benefit the community*. The state should implement actions to address AMLs proposed in the 2020 report by the California Legislative Analyst Office. The 2021 Presidential Executive Order calling for increasing abandoned mine remediation should facilitate coordination around this topic with federal partners. Conservation groups, business leaders and public health advocates must join this call for action.

Adopt Impactful Policies: Legacy mines on federal and state lands should be identified, catalogued, assessed, and prioritized for remediation. Adoption of best management practices and technologies on AMLs should be part of the state water quality program to reduce sediment and mercury discharge from hydraulic mine features hidden in forest landscapes. California environmental regulations must be strengthened to require AML remediation in local government general plans. Local government planning and permitting must require consistent Informed Assessment prior to project approval. Funding for projects on AMLs should be expanded and reformed to require informed Due Diligence prior to acquisition, project design or approval. c New public and private funding must be identified and invested in mine remediation.

Include Mine Remediation in Projects on Public Lands: Projects planned for public lands with AMLs in California, including trail building, wetlands restoration and forest health projects, should include mine remediation in their design and permitting. New resources, including a clearinghouse for information on best practices and technologies, must be developed to support project planning and implementation on AMLs.

“Our mission is nothing less than alchemy: transforming the toxic legacy of the Gold Rush into resilient and vibrant ecosystems and communities in the Sierra Nevada.”

Elizabeth “Izzy” Martin, CEO, The Sierra Fund

This report is directed to decision makers with jurisdiction over acquisition or management of abandoned mine lands (AMLs), including local, state, federal and tribal governments; businesses, developers, lenders, and investors; and land trusts and other non-profit organizations. A project of TSF’s Environmentally Healthy Communities and Ecosystem Resiliency Programs, its purpose is to remediate mining hazards so that communities both in the Sierra headwaters and downstream have clean water, soil and air and are healthy places to live, work, and prosper.

*Historic
Jackson High School
downtown Jackson, CA*

Built in 1913, directly
downstream from the
Argonaut Gold Mine



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