Project

Uncommon approach saves Franciscan Friars millions on reclamation and restoration project

99.8%

estimated reduction in dissolved copper load

$1.4 million

secured in grant funding

$3 million

saved on material disposal

Summary

- The Franciscan Friars of Saint Barbara — an charitable religious order whose members take a vow of poverty —

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received the former Gibson mine site as a donation.

- But the contaminated site required a costly cleanup, and the friars needed help to turn it from a liability into a sustainable asset.
- We helped the Friars secure large grants from the U.S. Environmental Protection Agency (EPA) and the Arizona Department of Environmental Quality (ADEQ), as well as in-kind donations, to fund the remediation.
- We also came up with innovative, cost-saving approaches to waste rock recycling and long-term water treatment at the site.

Client challenge

The Franciscan Friars of Saint Barbara, owners of the former Gibson mine site, needed significant regulatory and financial assistance to restore the historic site to productive post-mining use. Historical mining activities resulted in several areas of environmental contamination, including Pinto Creek, a tributary to the Salt River, a primary drinking water resource for the City of Phoenix. Once discovered, state environmental regulators threatened enforcement action against the unsuspecting and ill-equipped Friars.

The Friars, who take a vow of poverty as part of their mission to serve the poor, received the Gibson mine site as a gift in 1969. Their poverty vows left them completely unprepared to undertake the costly cleanup effort. Haley & Aldrich was determined to transform this gift from a liability into a sustainable asset by devising an approach to secure innovative funding and established partnerships to achieve the ultimate goal of remediation.

Our approach

Haley & Aldrich was instrumental in securing $1.4 million in grants from the EPA and the ADEQ. We also secured in-kind services and donations from BHP Copper and Carlota Copper Company, which met EPA and ADEQ's grant-matching requirements. We took a novel approach by working with BHP Copper to transport the Gibson mine wastes to their nearby active mine where the waste rock and tailings were recycled to extract remaining minerals for further processing or direct use. This inventive solution reduced transportation distance significantly, saving an estimated $3 million when compared to the alternative of landfill disposal.

Haley & Aldrich also collaborated with the University of Arizona's Department of Chemical and Environmental Engineering to design and construct an innovative subterranean low-flow passive mine water treatment system that requires minimal long-term maintenance.

Value delivered

- Saved the Friars almost $3 million with innovative solution, which included public and private partnerships, grants, and in-kind services
- Expected continued improvement of surface water runoff quality as the stream channels are flushed out and the vegetative cover further establishes itself
- Estimated reduction in dissolved copper load is 99.8%
- Recognized for the “Best Reclamation” project by the Arizona State Mine Inspector

For more information, contact:

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