Elizabeth Mine

U.S. EPA | HAZARDOUS WASTE PROGRAM AT EPA NEW ENGLAND

THE SUPERFUND PROGRAM *protects human health and the environment by investigating and cleaning up often-abandoned hazardous waste sites and engaging communities throughout the process. Many of these sites are complex and need long-term cleanup actions. Those responsible for contamination are held liable for cleanup costs. EPA strives to return previously contaminated land and groundwater to productive use.*

SITE DESCRIPTION:

The Elizabeth Mine site is an abandoned copper and copperas (iron sulfate) mine located in the towns of Strafford and Thetford, Vermont. Situated in a rural setting bordered by residential and undeveloped properties, the site lays south of Vermont Route 132 along the Ompompanoosuc River's West Branch. The nearly 970-acre site is the largest mining complex of the Vermont copper belt and has been deemed eligible for listing in the National Register of Historic Places. Copperas production occurred at the mine between 1809 and the 1880s, while the majority of the copper extraction and production occurred between 1942 and 1958.

CLEANUP ACTIVITIES TO DATE:

Since listing the site on the Superfund Program's National Priorities List (NPL) in 2001, EPA has been addressing the site through both short- and long-term cleanup actions. The waste rock on the property is rich in metals and sulfides. As water passes over and through the waste rock, sulfuric acid is produced and the metals within the tailings are dissolved and mobilized. This results in acid rock drainage, highly acidic water containing high concentrations of heavy metals, which contributes an elevated load of metals to Copperas Brook and the West Branch Ompompanoosuc River.

A key cleanup accomplishment involves completing a short-term cleanup which stabilized the mine's tailing dam and prevented a potentially catastrophic release of tailings into the Ompompanoosuc River's West Branch. In addition, EPA has implemented part of another short-term cleanup action to control the three major source areas responsible for leachate and acid rock drainage. Implementation of a long-term cleanup to address lead contamination will be completed in 2010.

In order to share information and gather public input, EPA meets regularly with the Elizabeth Mine Community Advisory Group. The group formed in 2001 and is comprised of a coalition of ten different community groups and has representatives from a historical society, an environmental group, community groups, and two town select boards. The Copperas Hill Coalition receives a Technical Assistance Grant, which EPA to date has awarded $130,000, matched thus far by the coalition with in-kind contributions of $16,250. The towns of Strafford and Thetford, funded by EPA, in 2004 commissioned a reuse assessment in part to help inform EPA's cleanup decisions.

RECOVERY ACT PROJECT ACTIVITY:

The $8 million in Recovery Act funding allocated to this site has enabled EPA to begin the final phase of a short-term cleanup to control the three major source areas responsible for acid rock drainage and leachate. This work is contributing to the cleanup actions targeted to eliminate acid rock drainage from the site's waste piles and will reduce greatly the iron rich leachate generated by the tailing impoundments. The final cleanup phase is a three- to four-year project, a portion of which will be funded via the Recovery Act. By enabling EPA to begin the final phase sooner than planned, this funding will allow EPA to complete the cleanup and achieve improved water quality more quickly.

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