

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

STAFF SUMMARY REPORT
STAFF: Lindsay Whalin
MEETING DATE: April 8, 2015

ITEM: 6

SUBJECT: **Leona Heights Sulfur Mine Remediation and Creek Restoration – Status Report**

DISCUSSION: Remediation of the Leona Heights Sulfur Mine and restoration of Leona Creek were recently completed to Water Board staff's satisfaction. This item describes the design, permitting, and construction of the remediation and restoration project.

The Leona Heights Sulfur Mine is a small, inoperative pyrite mine located in the Oakland hills east of Mills College. Cleanup of this mine has been a priority for the Water Board due to the generation of acid mine drainage, produced as Leona Creek's water came into contact with the mining wastes that had been deposited in and along the creek. This problem was exacerbated during and after storms when larger volumes of storm runoff came in contact with the wastes and became acidified. The acidic waters leached metals in high concentrations, severely impacting Leona Creek.

The Water Board initially required cleanup in 1992 under waste discharge requirements. When the dischargers failed to adequately comply, the Board adopted a cleanup and abatement order in 1998 to compel cleanup. The Board amended the cleanup and abatement order in 2003 to add a new discharger after property ownership changed. The dischargers submitted project designs and the process of permitting the cleanup was initiated, but disagreements between the dischargers created unacceptable delays. In 2008, the Board imposed \$200,000 in administrative civil liabilities on the current property owner, the discharger taking the lead role on cleanup at the time. In 2013, the Board further amended the cleanup and abatement order to clarify that all dischargers were responsible for the cleanup, to ensure the creek was restored and to elucidate requirements for tasks that had caused delays. At that time, the Board also issued a time schedule order prescribing maximum penalties for non-compliance with tasks and deadlines.

The dischargers began working on new remediation and restoration designs immediately after the 2013 adoption of the amended cleanup and abatement and time schedule orders. Developing and implementing the design was especially challenging due to the mine's surrounding land uses and topography. The mine parcel is part of a larger property, zoned as open space, and located at the top of a narrow road. It is surrounded by protected oak woodlands and residential properties. The creek runs through a steep canyon,

which further limited remediation and restoration design and construction options.

State and local agencies worked together to coordinate issuance of the necessary project permits, and the dischargers pushed the design and construction teams to work as quickly and safely as possible. However, some regulatory deadlines were missed. The 2013 orders established a September 30, 2014, deadline for completion of construction; the actual date of completion was March 4, 2015. The Board's prosecution staff does not recommend enforcement for this missed deadline because the dischargers' culpability is low and there was no apparent economic gain. A number of factors, including the need to obtain numerous environmental permits and to work around inclement weather, contributed to the overall delay. The dischargers and their consultants communicated regularly with Board staff to work through the many complicated aspects of an innovative and challenging cleanup remedy and creek restoration. Overall, staff is pleased with the collaborative approach maintained by the regulatory agencies, the dischargers, and the design and construction teams. We are especially pleased with the results of the remediation and restoration.

Two tasks in the amended cleanup and abatement and time schedule orders remain for the dischargers to complete:

1. recording a deed restriction, and
2. submitting an acceptable site monitoring and maintenance plan.

We are currently working with the dischargers to ensure timely completion of these tasks. We plan to keep the cleanup and abatement order in place as the mechanism to ensure that the remediation and restoration project performs and is maintained as expected.

**RECOMMEN-
DATION:**

This report is presented for information purposes only – no action is needed.