

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

STAFF SUMMARY REPORT (Carrie Austin)
MEETING DATE: September 13, 2006

ITEM: 2

SUBJECT: **Watershed Stewardship Excellence Award** – Recognition of the Santa Clara Valley Water District for Watershed Stewardship Excellence

DISCUSSION: This item recognizes the exceptional watershed stewardship and legacy mercury pollution control efforts of the Santa Clara Valley Water District. The Water District's role as the steward of local watersheds is the driving force behind its mission: a healthy, safe, and enhanced quality of living in Santa Clara County through watershed stewardship and comprehensive management of water resources in a practical, cost-effective, and environmentally sensitive manner. The Water District has exercised its stewardship role by taking significant actions in advance of permits or orders to assist in the development of a TMDL and implementation measures for mercury in the Guadalupe River watershed.

Former mercury mines are located in the upper Guadalupe River Watershed, which have contributed mercury to downstream surface waters and San Francisco Bay. The New Almaden Mining District was the largest producer of mercury in North America. An unfortunate consequence is that the Guadalupe River and its tributaries and reservoirs downstream of the Mining District are now impaired by mercury. The Mining District is also a significant source of mercury impairment of South San Francisco Bay.

As a proactive response to these impairments, the Water District has provided extensive staff support and nearly \$1 million to develop the scientific basis of the Guadalupe River Watershed Mercury TMDL. It assumed a lead role in convening a stakeholder participation forum for development of the TMDL via the Santa Clara Basin Watershed Management Initiative. In addition, the Water District funded studies to assess mercury contamination in the watershed and in fish, to find where key transformations of mercury to methylmercury, the bioavailable form of mercury, are and are not occurring, to determine wet and dry weather mercury loading, and to evaluate dry season changes in methylmercury concentrations in reservoirs. The results of these studies provide a concise description of the current understanding of the most relevant processes for controlling mercury in the watershed and form the cornerstone of the TMDL that we expect to bring before the Board next spring.

Actions to reduce methylmercury production and bioaccumulation require innovative measures, such as changing reservoir management practices. The Water District's studies showed that methylmercury reaches astonishingly high concentrations in

reservoirs downstream of the Mine District. Current practices result in low oxygen conditions at depth that contribute to this problem.

In response, the Water District has begun a pilot test using a solar-powered circulator, used elsewhere in golf course ponds to control algae buildup and in reservoirs for taste and odor control. It mixes water up from depth to the surface, which increases oxygen levels. The Water District is monitoring its effects on oxygen, methylmercury, fish mercury levels and potential, but unlikely, disturbance of wildlife in Lake Almaden. We are optimistic that this study will demonstrate an efficient and effective means of controlling methylmercury and reducing mercury levels in fish. This pilot effort demonstrates the Water District's commitment to watershed stewardship and to management of water resources in an environmentally beneficial manner.

RECOMMEND- Present Watershed Stewardship Excellence Award to the Santa Clara Valley Water
ATION: District.