

Item 7

Guadalupe River Watershed Mercury TMDL

State Water Resources Control
Board

November 17, 2009

TMDLs

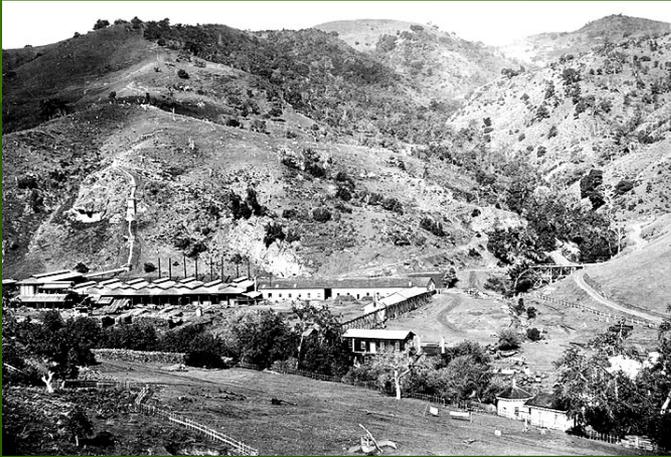
- Adopted October 8, 2008
- Establishes two TMDLs
 - Impaired Creeks and Rivers
 - 0.2 mg mercury per kg suspended sediment
 - Reservoirs and Lakes
 - 1.5 ng total methylmercury per liter of water

Water Quality Objectives

- Vacates an existing water column objective
- Establishes two fish tissue-based water quality objectives
 - 0.05 mg methylmercury per kg fish (trophic level 3 fish) 5 to 15 cm in length
 - 0.1 mg methylmercury per kg fish (trophic level 3 fish) 15 to 35 cm in length



Implementation



- Adaptive implementation (two phases)
- Implementation timeframe 20 years
- Annual progress report
- TMDL evaluation within 10 Years

Comments

- State board received 6 comment letters
- Staff recommends approval
- Questions



Watershed Tour

San Jose Airport

Downstream

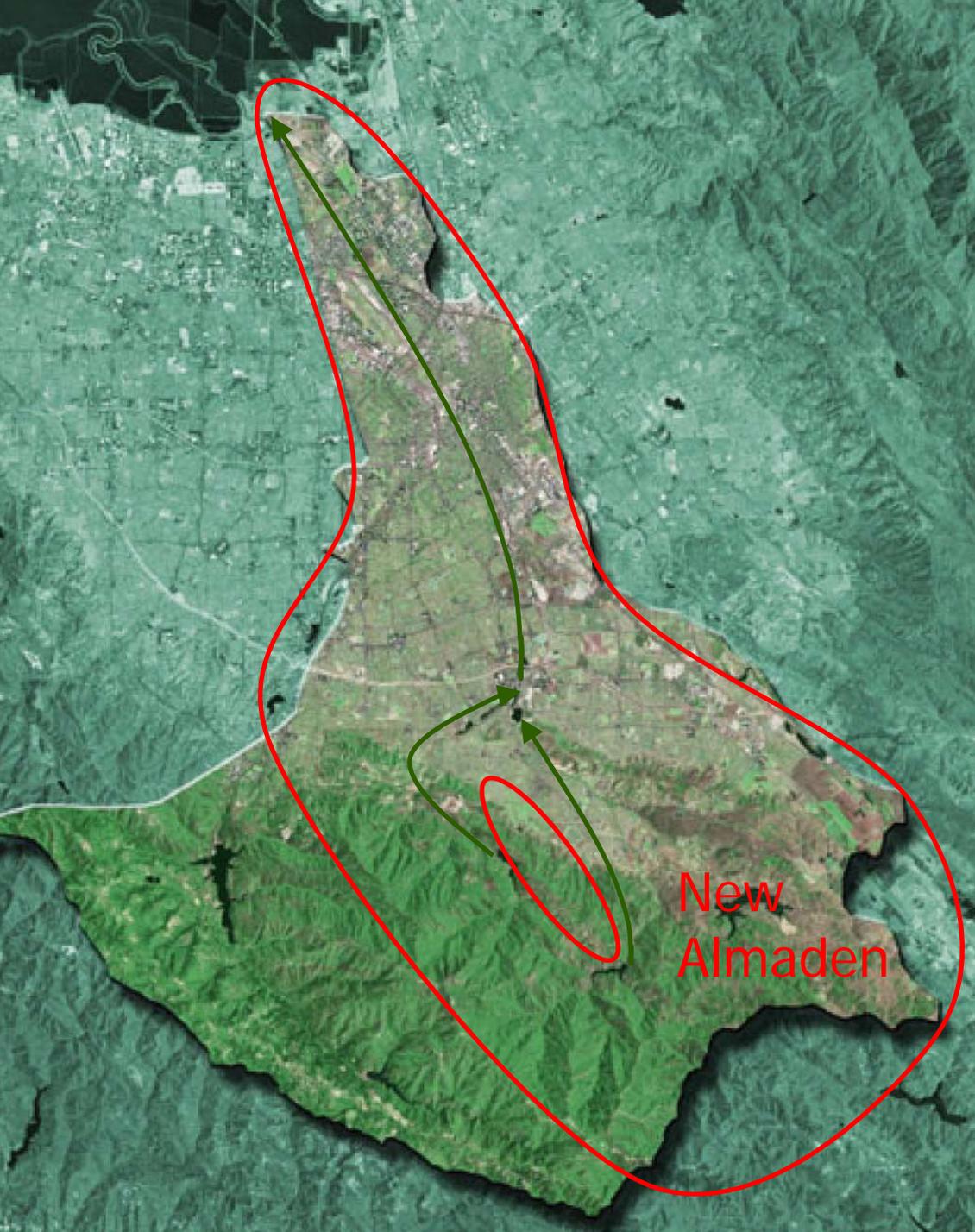
Reservoirs
& Lakes

Upper Watershed



Watershed Tour





Problem

**PUBLIC HEALTH
ADVISORY
ON FISH
CONSUMPTION**

no one should
consume any fish

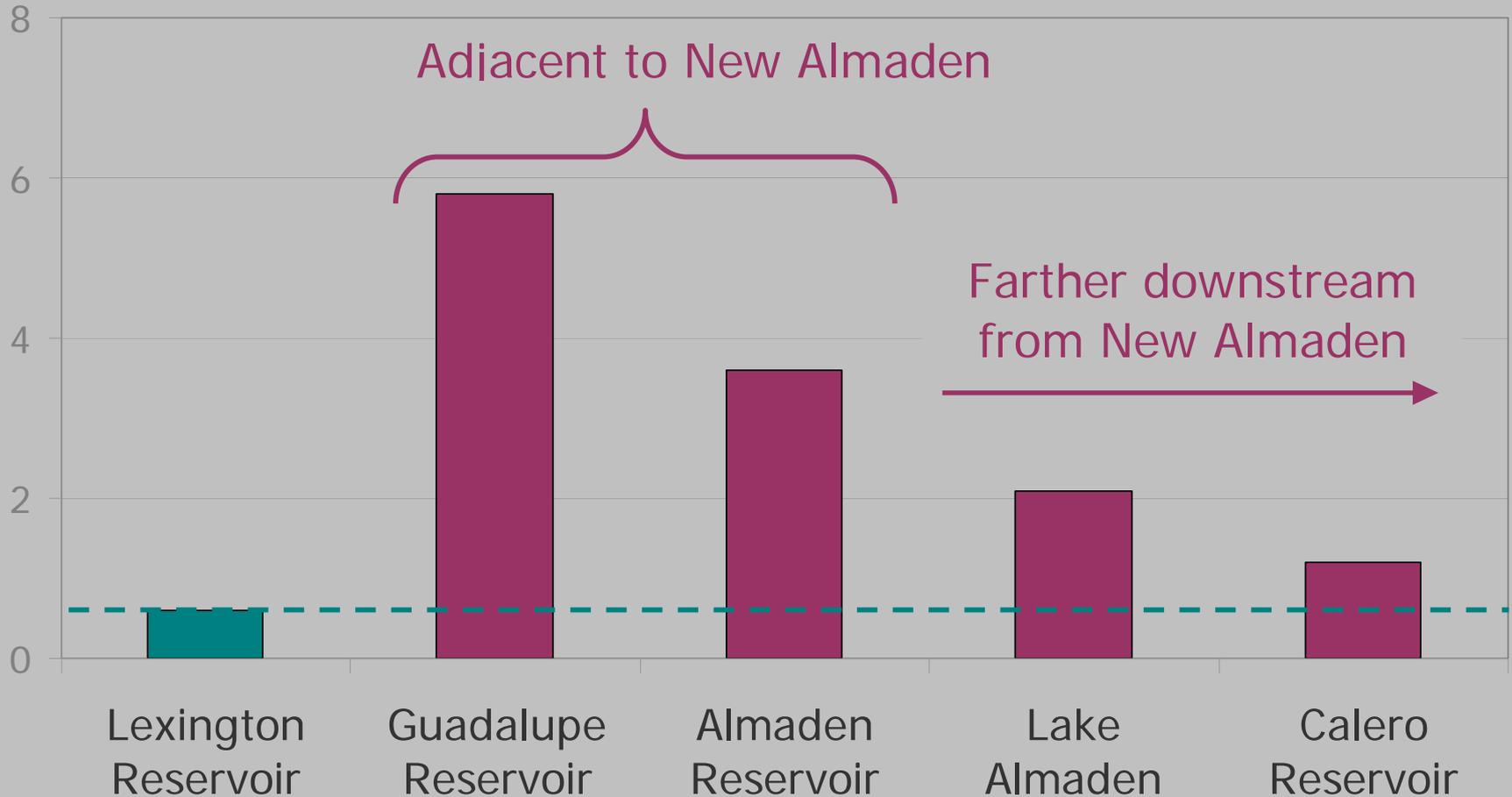
New
Almaden

Mercury Problem

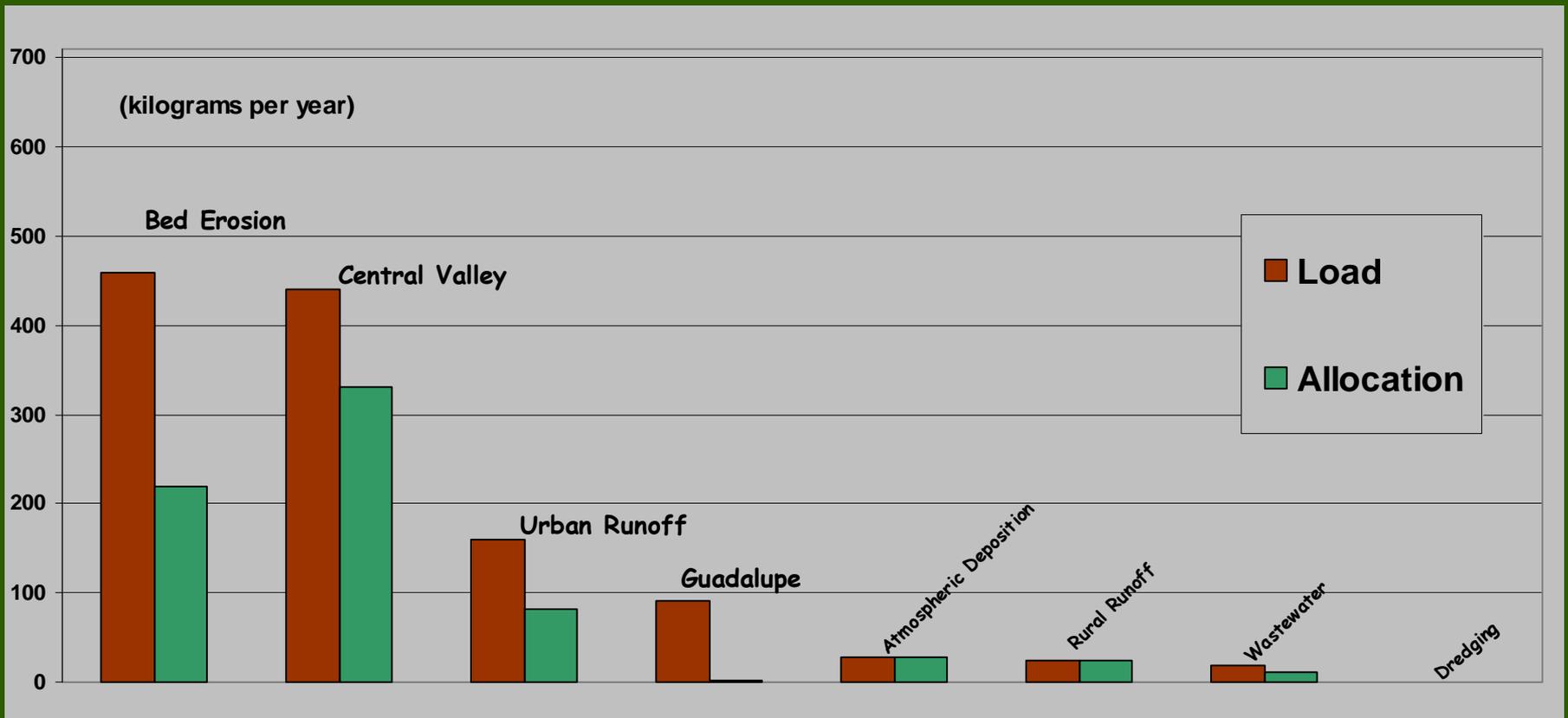
- The Guadalupe River Watershed impaired by legacy impacts of mercury mining
- Concentrations increase in fish due to bioaccumulation
- Exposure results in various human health concerns and has detrimental effects on fish and wildlife

Mercury Problem

Fish Mercury Concentrations (mg/kg wet wt.)



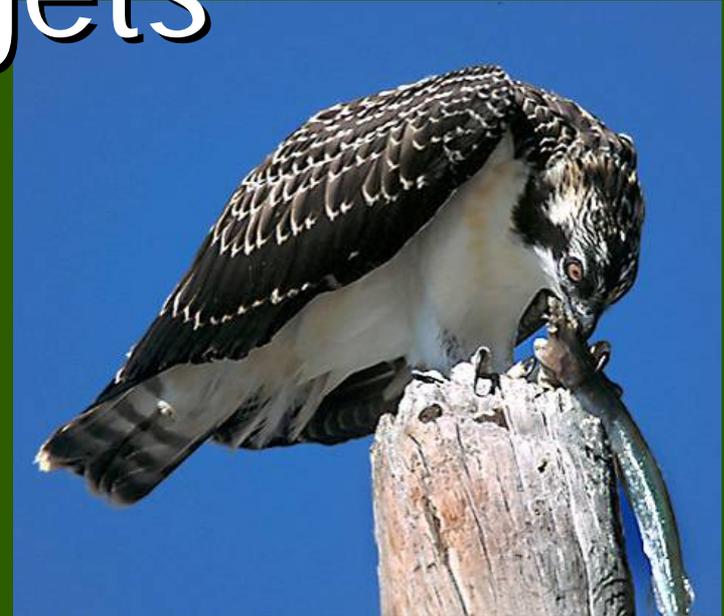
SF Bay Mercury TMDL and Allocations



Water Quality Objectives and Targets



0.05 mg methylmercury
per kg fish, wet wt.



0.1 mg methylmercury
per kg fish, wet wt.



TMDLs

Impaired
Waters

0.2 mg mercury per kg suspended
sediment

Reservoirs

1.5 ng methylmercury per liter water

TMDLs & Load Allocations

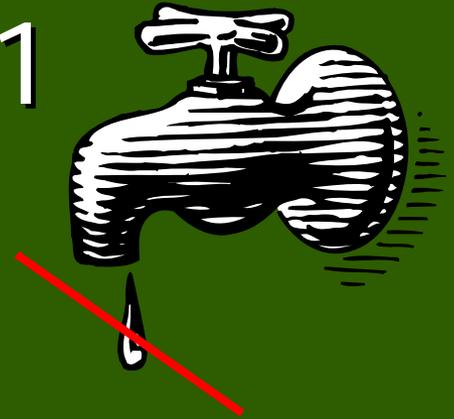
Sources	Allocations
Mines	0.2 mg mercury per kg erodible mercury mining waste
Reservoirs	5 ng methylmercury per liter water
Depositional Features of Creeks and Rivers	0.2 mg mercury per kg erodible sediment

TMDLs & Load Allocations

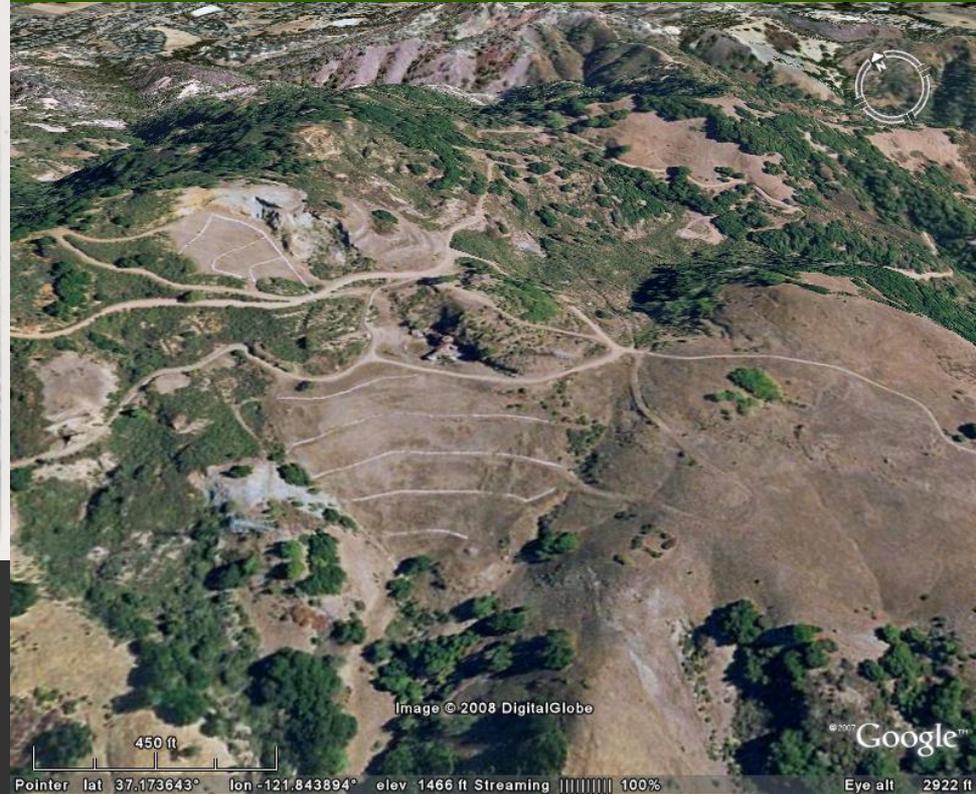
Sources	Allocations
Nonurban stormwater runoff	0.1 mg mercury per kg suspended sediment
Atmospheric Deposition	0.02 mg mercury per square meter of water surface (per year)
Urban Stormwater Runoff	0.1 mg mercury per kg suspended sediment

Implementation—Phase 1

Start at the Top



Mine Hill ca. 1870
From: History San Jose website



Mine Hill 2008
From: Google Earth

Implementation—Phase 1: Reservoirs



Implementation Phase 2: Downstream Clean-Up



Adaptive Implementation

- Annual Report to Board
 - Implementation actions and progress
 - New and relevant information
 - Monitoring and special studies
- Review TMDL within ten years

Recommendation

- Approve the Amendment to incorporate the TMDL in the Regional Board Basin Plan
- Questions?