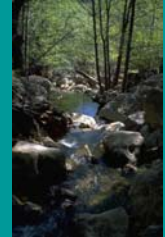


WEST CORRAL DE PIEDRA CREEK RESTORATION PROJECT AT WOLFF VINEYARDS

Presented by Jean-Pierre Wolff, Ph.D.

On-Farm Creek Restoration

- Created flood planes at restricted sections of the creek to reduce upper embankment erosion
- Re-sloped steep embankments to 2:1 slope, protected with jute and erosion control native grasses



On-Farm Creek Restoration

- Installed "J" hooks with ¾ ton boulders at two creek bottom locations to recreate steelhead resting pools and re-center water flow
- Installed willow mats and willow trenchers at two locations



On-Farm Creek Restoration



- Installed bio logs at creek toe to prevent water undercutting in newly sloped areas
- Planted 280 native trees and shrubs to establish creek canopy and riparian wild life habitat at work locations
- Established upper embankment buffer strip with California native flowers

On Farm Creek Restoration

- Installed temporary irrigation system to establish new plant material
- Modified four existing culvert storm water discharge systems into the creek with splash pool energy dissipaters and 45 degree offsets to reduce erosion and undercutting

On-Farm Creek Restoration



On-Farm Creek Restoration



On-Farm Creek Restoration



On-Farm Creek Restoration



On-Farm Creek Restoration



On-Farm Creek Restoration



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