



SCHIFF ASSOCIATES

As-Needed Corrosion Engineering Services, Los Angeles & Ventura Counties, California

Client: Calleguas Municipal Water District (CMWD)

Key Project Personnel: Graham E.C. Bell, PhD, PE – Project Principal & Manager
John French, PE – Project Engineer
James Keegan – Technician
Robert Pannell – Senior Technician
Gary Barton – CP Specialist

Services Provided:

- Develop PCCP Corrosion Maintenance Master Plan
- Evaluate Cathodic Protection Designs
- Troubleshoot Cathodic Protection Systems
- Design Cathodic Protection
- Evaluate Coating and Cathodic Protection For Steel Reservoirs

Client Representative: Ms. Susan Mulligan (805) 579-7115
Calleguas Municipal Water District
2100 Olsen Road
Thousand Oaks CA 91360-6800

Situation:

CMWD provides water wholesale to communities in the eastern Ventura County including Moorpark, Simi Valley, Thousand Oaks, and to the west to include Camarillo and Oxnard. CMWD receives water from MWD in western Los Angeles County and delivers it through two conduits to the Bard Reservoir and treatment facility. CMWD's infrastructure includes water treatment, storage, and hundreds of miles of water transmission pipelines. Corrosion control ranges from cement-mortar coatings, joint bonds, insulated joints, and test stations to active impressed current cathodic protection systems. In 1986 and 1997, CMWD experienced failures in one of its PCCP conduits.

Schiff Associates Response:

Schiff Associates has reviewed existing reports, designs, and survey data and developed work plans for the next step of investigation of CMWD's existing steel and PCCP pipelines. Recommendations for continued operation have been made based on soil and groundwater corrosivity in conjunction with the needs of CMWD and affected communities. Our work has included electromagnetic conductivity surveys, corrosion and cathodic protection surveys, obtaining and testing soil and groundwater samples, internal inspections, cathodic protection and coating evaluation for steel reservoirs, cathodic protection and corrosion control design, and stray current tests.