



GROUNDWATER RESOURCES ASSOCIATION
O F C A L I F O R N I A

GRA Field Trip – Managed Aquifer Recharge LA Style
The Making of Tertiary Recycled Water for Recharge
Coastal Aquifer Spreading Grounds
Advanced Recycled RO for Direct Aquifer Injection
USA’s Largest Potable Groundwater Treatment Plant
Aquifer Storage Recover (ASR) Well

Field Trip Leaders:

Ted Johnson, Water Replenishment District of Southern California

Eric Reichard, U.S. Geological Survey

Earle Hartling, Los Angeles County Sanitation Districts

Sterling Klippel, Los Angeles County Dept. of Public Works

Paul Fu, Water Replenishment District of Southern California

Liza Gutierrez, City of Long Beach Water Department

Field Trip Itinerary

0830 Field Trip Introductory Briefing – Westin Long Beach. Hotel conference room for overview of the Central and West Coast Groundwater Basins in coastal Los Angeles County and their history with overdraft, seawater intrusion, adjudication, managed aquifer recharge, basin recovery and sustainability, high resolution basin characterizations, modeling, regulatory compliance and issues, and storage/conjunctive use (**Ted Johnson, WRD, and Eric Reichard, USGS**).

1000 San Jose Creek Water Reclamation Plant. Arrive at the San Jose Creek Water Reclamation Plant for a tour of the facility which converts primary sewage to high quality tertiary effluent for surface groundwater recharge and other reuse projects (**Earle Hartling, LACSD**).

1100 San Gabriel Coastal Spreading Grounds. Arrive at the San Gabriel Coastal Spreading Grounds for a tour of a groundwater recharge facility, in-channel inflatable rubber dams to divert recharge water, and discussion of spreading grounds operations and maintenance issues. Problems such as the new Alligator Weed issue will be discussed as well as solutions such as

excavating through shallow confining layers to enhance percolation (**Sterling Klippel, LACDPW**).

1145 Lunch at the Spreading Grounds sponsored by WRD.

1230 Leo J. Vander Lans Water Treatment Facility. Arrive at the Leo J. Vander Lans Water Treatment Facility for a tour of advanced treatment of recycled water for use for direct injection into the coastal aquifers at the Alamitos Seawater Barrier to halt salt water intrusion. Treatment technologies to be seen include microfiltration, reverse osmosis, and ultraviolet light (**Paul Fu, WRD**).

1330 Long Beach Groundwater Treatment Plant. Arrive at the Long Beach Groundwater Treatment Plant, the nation's largest potable groundwater treatment facility. Tour the facility and the groundwater bottling plant. Hear a presentation on the City's water supply challenges and future, including water quality, storage, a patent-pending ocean desalination system, and ASR technologies (**Liza Gutierrez, CLBWD**).

1445 City of Long Beach's New ASR Well. Arrive at the City of Long Beach's new ASR well built in conjunction with MWD funding (**Liza Gutierrez, CLBWD**).

1530 Arrive back at the hotel.