

NORTHERN CALIFORNIA GEOLOGICAL SOCIETY



NCGS FIELD TRIP Friday October 24, 2014 "CALAVERAS DAM REPLACEMENT PROJECT"

Leader: C. Philip Respass, C.E.G. Senior Project Engineering Geologist, URS Corporation

The San Francisco Public Utilities Commission (SFPUC), owner and operator of the Hetch Hetchy Regional Water System, is building a new dam to replace the existing Calaveras Dam. The Calaveras Reservoir, impounded by Calaveras Dam, is the system's largest drinking water reservoir in the local Bay Area. The existing earth fill dam is 89 years old and is located within 1,500 feet of the active Calaveras Earthquake Fault. In 2001, the SFPUC lowered water levels in the reservoir to less than 40 percent of normal operating capacity in response to seismic concerns. The Calaveras Dam Replacement Project is the largest project of the \$4.6 billion Water System Improvement Program (WSIP) to repair, replace, and seismically upgrade key components of the Hetch Hetchy Regional Water System. Construction began in 2011 to build a new earth and rock fill dam adjacent to the existing dam. To date, the Contractor has moved over five million cubic yards of earth and rock materials and started to construct the new dam.

This field trip will focus on the geology of the Calaveras Dam Project area. Excavation for the replacement dam has provided excellent exposures of the Temblor Formation and Franciscan Complex. In the left abutment, the Miocene-age Temblor Formation contains evidence of folding, faulting, landsliding, hydrothermal activity, and numerous significant paleontological finds, including whale skulls and megalodon (a very large paleo-shark) teeth. The Franciscan Complex, exposed in the right abutment, channel bottom, and the Stilling Basin excavations, has provided opportunities to increase practical knowledge pertaining to the geotechnical engineering characteristics of block-in-matrix (BIM) mélange.

Please try and carpool to the meeting location described below. We will circulate an attendees list for carpooling to meeting location. **Site Visitor Reminders:** Please wear hiking boots or sturdy boots. No tennis shoes or open-toe shoes. No shorts or sleeveless tops, please wear long pants. You will be issued Personal Protective Equipment (PPE) - hard hat, safety vest and safety glasses if you do not have your own. Please wear sunblock and bring a reusable water bottle (optional). You must be escorted by personnel at all times during the tour. Weather permitting: please bring rain gear if rain is forecasted. **No geologic hammers are allowed.**

THIS FIELD TRIP WILL BE LIMITED TO 26 PEOPLE.

***** **Field Trip Logistics** *****

Time: Oct 24, 2014, 8:45 AM – 3PM. **Meeting Location:** Please meet the onsite tour bus at the New Irvington Tunnel Project Trailers promptly at 8:45 AM. The Project Trailer address is: 6535 Calaveras Road, Suite B, Sunol, CA 94586. From Calaveras Road, turn right into the large driveway and park in front of the grey trailers. A map showing meeting location will be emailed to registered attendees in advance.

Cost: \$50/person, which includes a handout, lunch, and on-site tour bus.

***** **REGISTRATION FORM (Calaveras Dam Field Trip)** *****

Name: _____ E-mail: _____

Carpool origin: _____ Phone: _____ Phone (alternate): _____

Check no./amount _____

Lunch / Kinder's Sandwich Choices: Ball Tip Steak: _____ Grilled Chicken Breast: _____ Vegetarian: _____ (Please check one)

Please mail registration with a check payable to NCGS: **Greg Bartow, 1237 Mtn. View Blvd., Walnut Creek, CA 94596**

Questions e-mail: gbartow@sfgwater.org Phone: 415-934-5724