

**BAY-DELTA MODELING FORUM
1998 WORKSHOP/ACTIVITY PROPOSAL**

WORKSHOP/ACTIVITY:

Modeling of Subsurface Flow and Percolating Groundwater

PROBLEM(S) /ISSUE(S) :

In California, different regulatory classifications apply to groundwater depending upon its character and distribution. The type of classification is often a disputed issue between competing parties to groundwater and is a question of fact before a trial court or the State Water Resources Control Board (SWRCB).

California water law, both case and statutory, differs between groundwater and surface water. The California Water Code defines groundwater as "water beneath the surface of the ground, whether or not [it is] flowing through known and definite channels." However, only surface water and subsurface flow through known and definite channels is subject to the SWRCB's "surface water" permitting authority. The other category of groundwater, "percolating groundwater", is considered to be beyond the jurisdiction and authority of the SWRCB. In order to demonstrate that groundwater is percolating as opposed to surface flow, the "water cannot form part of the body or flow, surface or subterranean, of any stream". (Groundwater Resources Association of California, "California Groundwater Management", November 1997).

According to current SWRCB policy, all groundwater is assumed to be either percolating groundwater or a "subterranean stream flowing through known and definite channels." "Known" refers to knowledge of a stream by reasonable inference, and "defined" means a contracted and bounded channel (bed and banks). The "underflow" of a stream is not considered to be subsurface flow unless it is bounded by "bed and banks." The SWRCB also assumes that all groundwater is percolating groundwater until it is proven otherwise. Consequently, diversion of subsurface flow is not accounted for when the SWRCB determines which streams are fully appropriated. Much confusion exists over the technical and legal determination of subsurface flow and percolating groundwater.

OBJECTIVE(S) /QUESTION(S) :

- Define and clarify California's groundwater terms: groundwater, subsurface flow, subterranean stream, underflow, percolating groundwater, and underground stream. What is the practical and legal importance of such distinctions?

- How can analytical tools, such as models, be used to make factual determinations of whether waters are subsurface flow or percolating groundwater? What criteria should be used to define the limits of subsurface flow?
- How should groundwater be classified if it forms part of the body or flow of a stream, but "bed and banks" cannot be adequately defined?
- If "underflow" boundaries cannot be practically determined with state-of-the-art models, what changes are necessary in the technical or legal arena to make such a determination possible?

SUGGESTED FACILITATORS/INSTRUCTORS/PRESENTERS: (If known, please include name, agency, phone, & e-mail address.)

Forum Groundwater Subcommittee:

Jeff Lefkoff (HCI, Forum): 916-440-8000, hci3@ix.netcom.com

Ali Toghavi (MW): 916-921-3513, ali.taghavi@us.mw.com

Terry Erlewine (SWC): 916-447-7357, terrye@calweb.com

Matt Zidar (JSA): 916-737-3000, mattz@jsanet.com

Harrison Phipps (CGA Exec. Dir.): 916-758-3656, execdir@grac.org

Carl Hauge (DWR, CGA): 916-327-8861, chauge@water.ca.gov

Anne Schneider (Law Firm of Ellison & Schneider): 916-447-2166

Kevin Neese (Law Firm of Hatch & Parent): 805-963-9231

SUGGESTED DATE/TIME/LOCATION: (Daylong events are usually scheduled from 9 am-4 pm.)

During the GRA Annual Mtg: Sep 1998; 9 am-4 pm; SF (east) Bay Area

ESTIMATED COSTS AND SUGGESTED FEE: (Workshops should be self-sufficient; Workshops are usually free for members and \$30 for non-members.)

Costs to be determined.

Free for Forum or CGA members; \$30 for non-members

MISCELLANEOUS INFORMATION:

CGA and the Forum will jointly sponsor the workshop.

PROPOSER & DATE PROPOSED: (Please include name, agency, phone, e-mail, & date.)

Richard Satkowski, SWRCB, 916-657-0435,

rsatkowski@waterrights.swrcb.ca.gov; Proposed on March 13, 1998.