California Water and Environmental Modeling Forum

Promoting Excellence and Consensus in Water and Environmental Modeling

P.O. Box 488, Sacramento, CA 95812 ◆ 916-607-0435 ◆ cwemf@cwemf.org ◆ www.cwemf.org

Joint CWEMF/USBR Workshop
on

Application of HydroSphere for Conjunctive Simulations of Surface and Subsurface Flow and Transport

September 28-30, 2004
8:00 a.m-5:00 p.m. on Days 1 and 2; 8:00 a.m.-12 p.m. on Day 3

U.S. Bureau of Reclamation Mid-Pacific Regional Office
2800 Cottage Way, Sacramento, CA 95825
Cafeteria Conference Room C-1001
Directions: www.cwemf.org/Calendar/

Fee: Free for state and federal government; $100 CWEMF members; $150 non-members.
To register, please email (or call) Carol at lcdorning@mp.usbr.gov (916-978-5480) and provide your name, organization, email address and telephone number. See below for payment information.

Overview

This course presents an introduction to hydrologic cycle modeling using HydroSphere. The material covered provides an understanding of the physical processes governing flow and transport behavior in coupled surface and subsurface environments, and a numerical background for their analysis. Participants are expected to know the basic processes of hydrology, hydrogeology, contaminant transport, and modeling.

The course is divided between theory lectures and hands-on computer sessions. Theory and governing equations pertaining to each of the systems (surface and subsurface water regimes) is discussed to enhance an understanding of the governing relationships of flow and transport. Modeling assumptions and their implications on the results are also discussed. This, in turn, will help in selection of appropriate conceptualizations and parameters for a field investigation. Computer exercises follow each lecture to provide hands-on experience and are conducted for simulation of several of these systems to apply the concepts to site investigations. Hands-on simulation training also provides participants with an understanding of the numerical difficulties associated with modeling these systems and methods of overcoming them for successful field applications. The code HydroSphere is used for all simulations, with Gridbuilder providing pre- and post-processing capabilities

Key instructors are Professor Edward Sudicky, University of Waterloo, Ontario, Canada; Professor Rene Therrien, Laval University, Quebec, Canada; and Dr. Sorab Panday, HydroGeoLogic, Inc., Virginia, USA.

The three-day training session is free for state and federal government, $100 for CWEMF members and $150 for non-members, payable in advance. Checks should be made out to “CWEMF” and sent to the address above. The non-member registration fee provides membership until the CWEMF's Annual Meeting at Asilomar on March 1-3, 2005. Seating is limited and enrollment is not guaranteed until confirmed by e-mail. When notified of enrollment, each participant will be responsible for bringing a laptop computer to the workshop with the software downloaded from a website. For more information, please contact George Matanga at (916) 978-5084 (gmatanga@mp.usbr.gov) or Don DeMarco at (519) 884-9868 (ddemarco@hgl.com).

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Agenda

	Time			
	from	to	Instructor	Lecture Title/Description
28-Sep	8:00	8:20	George Matanga	Background information and course outline
	8:20	9:00	Ed Sudicky	Introduction to Integrated Surface-Subsurface Modeling
	9:00	9:15	Break	
	9:15	12:00	Rene Therrien	Subsurface Flow and Transport
	12:00	13:00	Lunch	
	13:00	17:00	Rob McLaren	Computer Exercise: Gridbuilder
29-Sep	8:00	10:00	Sorab Panday	Surface Flow and Transport
	10:00	10:15	Break	
	10:15	12:00	Ed Sudicky	Coupling of Surface-Subsurface Modules
	12:00	13:00	Lunch	
	13:00	17:00	Rob McLaren	Computer Exercise: Introduction to HydroSphere
30-Sep	8:00	10:00	George Matanga	BOR Projects
	10:00	11:00	George Matanga	Discussions and Conclusions