



April 2017

Newsletter of the Inland Geological Society

Volume 33 No. 4

**Wednesday
April 5th**

Time:
Social: 6:00pm
Dinner: 7:00pm
Lecture: 7:45pm

Location:
UC Riverside
Botanical Gardens
Conference Room
Botanic **Gardens**
Drive
Riverside, CA
92521
(Map on Pg. 6)

**Coming to
Dinner?
Please RSVP
by Friday 3/31
on the GRA
website:
[https://www.grac.org/
events/93/](https://www.grac.org/events/93/)**

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April Speaker:

Claudia Faunt, Ph.D, P.E.

Supervisory Hydrologist/Program Chief, Groundwater Framework and Applied Modeling, California Water Science Center, United States Geological Survey

Water Availability and Sustainability in California's Central Valley: Past, Present, and Future

Abstract:

Management to ensure the sustainability of California's water resources is critical. Groundwater is a crucial buffer against land-use change effects, water restrictions, drought, and the impacts of climate change, including the depletion of mountain snowpack that is relied on for part of California's water supply. Despite its essential role, the state's groundwater system is under considerable strain and until recently has been largely unregulated. California's Sustainable Groundwater Management Act of 2014 (SGMA) provides a framework to comprehensively measure and manage groundwater and empowers local agencies to assess hydrologic issues that can cause "undesirable results." California's Central Valley has many basins with "undesirable results" and most of these are considered "critically overdrafted basins." The Central Valley covers about 20,000 mi² and is one of the most productive agricultural regions in the world. Because the valley is semi-arid, surface-water availability varies substantially. Agricultural demand for irrigation is heavily reliant on surface water and groundwater. In parts of the valley, groundwater pumping has caused severe groundwater-level declines, resulting in land subsidence of up to 30 feet. Starting in the 1950s, state and federal water distribution systems have eased the reliance on groundwater as dependence shifted to diverted (continued on p. 2)

Abstract: (continued from p. 1)

surface water. As a result, groundwater levels recovered and subsidence virtually ceased for a few decades. In the last 20 years, however, land-use changes and limitations to surface-water availability—including drought and environmental flows—have increased pumping, causing groundwater-level and groundwater-storage declines, renewed subsidence, decreased stream flows, and changes to ecosystems. As these recent trends continue, monitoring and modelling are critical to understanding the dynamics of groundwater use and developing management strategies. Modeling tools, such as the USGS Central Valley Hydrologic Model, enable (1) Groundwater Sustainability Agencies (GSAs) to have a head start in meeting requirements for key elements of their Groundwater Sustainability Plans, including a hydrogeologic conceptual model, water budgets (past & projected), development of measurable objectives and minimum thresholds, and monitoring network design; and (2) GSAs and state agencies to develop management strategies to mitigate adverse impacts while also optimizing water availability. Such capabilities are critical for successful implementation of SGMA.

Biography:

Dr. Claudia Faunt has been a hydrologist for the U.S. Geological Survey since 1988 and a part of the California Water Science Center since 1998. As a USGS hydrologist, she has led studies that focused on regional groundwater flow systems, including the Central Valley of California and Death Valley, California and Nevada. Her research has specialized in water availability, regional groundwater flow modeling, hydrogeologic framework modeling, and incorporation of hydrologic and geologic spatial information into groundwater models. Claudia's recent technical experience includes several projects related to water availability in California's Central Valley. Claudia received her Doctorate in Geological Engineering in 1994 from the Colorado School of Mines. In 2013, Claudia became Program Chief of the California Water Science Center's Groundwater Framework and Applied Modeling section.

Announcement: LA County Well Permits Update

March 1, 2017

The County of Los Angeles Public Health (drinking water program) has finalized the permitting requirements for borings and soil vapor probes. These can be viewed on the county web site:

http://publichealth.lacounty.gov/eh/EP/dw/dw_req_boring_svp.htm

Permitting Requirements for Exploration Hole (Boring) and Soil Vapor Probe

- Exploration holes (or Borings) and Cone Penetrometer Tests (CPT) for the purpose of determining hydrological conditions at a site, which are conducted at a depth greater than 10 feet below ground surface in the vadose zone or at any depth in the saturated zone, are required to submit a work plan and application to the Drinking Water Program. If an exploration hole (or Boring) or Cone Penetrometer Test (CPT) does not exceed 10 feet below ground surface and is not located within the saturated zone, a work plan and application is not required.
- No permit is required for Soil Vapor Probe installed in vadose zone. A permit will be required if they reach saturated zone during the installation of the probe.



BLM Clarifies Request for Applications for the Mojave Trails National Monument Subgroup

MORENO VALLEY, Calif. – The Bureau of Land Management (BLM) is clarifying the request as it pertains to several categories of interest for the Mojave Trails National Monument Subgroup. Clarifications of the request are found in the tribal, recreation and rights-of-way areas of interest.

The California Desert District Advisory Council (DAC) is seeking members for its Mojave Trails National Monument subgroup to help develop a management plan for the Mojave Trails National Monument, provide input and advice about current or proposed actions by the Bureau of Land Management (BLM), and aid in communicating management plan considerations to interested parties. The subgroup will report its findings to the full DAC during a scheduled public meeting to advise the BLM's California Desert District Manager.

The public application period will end April 10, 2017. Those interested in serving on this subgroup should meet at least one of the following qualifications:

- A representative with expertise in natural science and research selected from a regional institution of higher education or research.
- A representative of the California Natural Resources Agency;
- A representative of the California Public Utilities Commission;
- A representative of the County of San Bernardino, California;
- A representative of each of the cities of Barstow, Needles, Twentynine Palms, and Yucca Valley, California;
- A representative of each of
 - Twentynine Palms Band of Mission Indians;
 - the San Manuel Band of Serrano Mission Indians;
 - the Colorado River Indian Tribes;
 - the Fort Mojave Indian Tribe; and
 - the Chemehuevi Indian Tribe.
- A representative of the Department of Defense;
- A representative of the Wildlands Conservancy;
- A representative of a local conservation organization; A representative of an historical preservation organization;
- A representative of organizations relating to each of the following recreational activities: motorized / hunting / rock hounding / non-motorized.
- A representative of the Southern California Edison Company;
- A representative of the Pacific Gas and Electric Company;
- A representative of the Metropolitan Water District of Southern California;
- A representative from a local chamber of commerce or tourism and hospitality organization.

Those wishing to apply for consideration as a member should submit their application no later than April 10, 2017, to External Affairs, BLM CDD, 22835 Calle San Juan de Los Lagos, Moreno Valley, CA, 92553, or srazo@blm.gov. The “Mojave Trails Subgroup Membership Application,” can be found online at <https://on.doi.gov/2mx4W2H>.

All members of the DAC MTNM subgroup will serve two-year terms without salary and meet as needed to fulfill objectives. All members of the subgroup will be required to disclose any direct or indirect interest in leases, licenses, permits, contracts, or claims that involve lands or resources administered by the BLM, or in any litigation related thereto. No subgroup member will participate in any matter in which the member has a direct interest. Selection and appointment of subgroup members is by the DAC with the concurrence of the designated federal official.

2017 Desert Symposium Registration



Join us for the 2017 Desert Symposium and Field Trip

April 14-17 at the Desert Studies Center, Zzyzx, CA

UPDATE: Abstracts and paper submissions are now closed but registration for the 2017 Desert Symposium is open and spaces are filling up. If you plan to attend the event, please download our registration form (http://nsm.fullerton.edu/dsc/images/DSCdocs/Symposium_2017_Reg_form.pdf) and submit with payment before April 1st (recommended). Space is limited and we can not guarantee housing for those registering late or on-site.

Symposium: Friday and Saturday will feature 38 oral presentations and 12 posters, with a Friday evening seminar by Dr. Steven Grodsky (UC Davis) – “Multi-dimensional, species-process interactions may inform sustainable solar energy development”, and a Saturday evening talk by Walter Feller – “Along the Troubled Trail: Travels with Nicholas Porter Earp”.

Field Trip: “Eastern California Shear Zone (ECSZ) – Changes in Latitude, Changes in Altitude” will take place Sunday and Monday. Field trip participants will be required to car pool (arrangements can be made at the Symposium) and the trip will return to the DSC on Sunday night.

We hope to see you in April.

Upcoming Meetings/Events

Los Angeles Basin Geological Society



Monthly lunch meetings are typically the 4th Thursday of the month from 11:30 am to 1:00 pm at the Willow Street Conference Center in Long Beach. On April 27th, Sherilyn Williams-Stroud, AAPG Visiting Scientist/Confractus Inc., will present *"Induced Hydraulic Fractures or Reactivated Natural Fractures?"* For more info., visit their website at www.labgs.org.

South Coast Geological Society



Join SCGS on **Monday, April 3, 2017, 6:00-9:00 pm** at The DoubleTree Club Hotel, 7 Hutton Centre Drive, Santa Ana. Thomas Harder, California registered Professional Geologist and Certified Hydrogeologist, will present *"The Case of the Missing Water: A Cautionary Tale of Water Resource Management in the Kern Water Bank, Kern County, California."* For more info., visit their website at www.southcoastgeo.org.

San Diego Assoc. of Geologists Meeting



The next SDAG meeting will be held on Wednesday, April 19th, location TBA. John Minch will present *"The Greater Hanshin (Kobi) Earthquake"*. For more info, visit their website at www.sandiegogeologists.org.

Rock & Gem Shows—Various locations

Various rock and mineral shows will be held throughout So. California. To find one near you, visit www.rockngem.com, then select the Show Dates tab.

Student Scholarship and Grant Opportunities

American Geophysical Union (AGU)

Grants and Scholarships:

Various awards with deadlines from April 1 to April 15, 2017

<http://honors.agu.org/research-grants-and-awards/>

Association for Women Geoscientists (AWG)

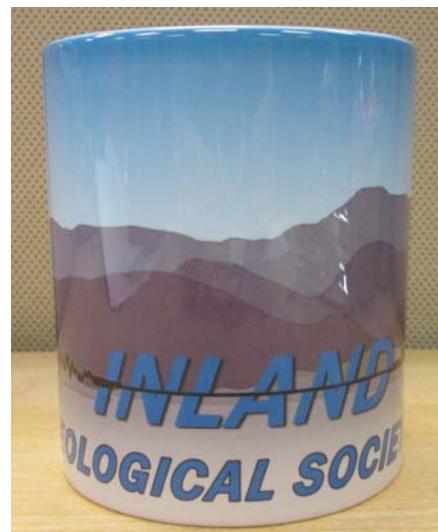
Scholarships and Awards:

Various awards with deadlines between February and November

<http://awg.org/awards>

Get Your IGS Coffee Mug!

IGS will now be selling IGS coffee mugs at the monthly meetings. They will be on sale for \$10.



IGS MEETING LOCATION:

UC Riverside Botanical Gardens
Conference Room
Botanic Gardens Drive
Riverside, California 92521

There is handicap parking and a shuttle from parking lot 13.
 There will be a student member in the parking lot with passes.

APRIL MEETING FEES:

Professional members \$30
 Student member (with ID) \$10

You may pre-pay your dinner online (new!!) . You may also pay at the door - checks made payable to IGS .

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