

**PACIFIC SECTION SEPM (Society for Sedimentary Geology)**  
**FALL FIELD TRIP, Saturday & Sunday, Sept. 29–30, 2018**  
**FROM SHORELINES TO AQUIFERS:**  
**LATE CRETACEOUS THROUGH PLIOCENE FILL OF THE**  
**NORTHERN SACRAMENTO VALLEY**

**Todd J. Greene, Russell S. Shapiro, David Maloney**  
**California State University, Chico**  
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**Field Trip Information**

**Participant Limit:** 100+. We encourage teachers to bring their stratigraphy/sedimentology class.

**Vehicles Recommended:** no requirements

**Highlights:** This year's Pacific Section SEPM Fall Field trip will take place in Chico and along the Black Butte Reservoir, California. We will explore the Pliocene aquifer stratigraphy as well as the Cretaceous shorelines exposed along the flanks of the northern Sacramento Valley. We will visit key outcrops of the Tuscan and Tehama formations, as well as the fossiliferous Cretaceous Chico Formation. With the implementation of the Sustainable Groundwater Management Act (SGMA) in California, the need to better understand aquifers has never been more critical. Aquifer stratigraphic architecture is one of the most salient elements in building defensible basin conceptual models and reasonable estimates of sustainable operational yield, as is now required pursuant to the new SGMA groundwater management regulations. The development and implementation of Groundwater Sustainability Plans is also already proving to provide a significant new employment opportunity for CA geologists.

Sierra Nevada Brewery, a prolific user of Tuscan groundwater, will be offering on-site sustainability tours along with a tasting for interested participants. Come join us for an adventure in northern California geology among friends of PS-SEPM!!

## Itinerary:

On Friday night, everyone should meet at the Buckhorn Group Campground site at Black Butte Reservoir. The campground is 105 miles north of Sacramento International Airport. Take I-5 North to Orland, turn left (west) on to Newville Road and drive 12 miles, turn left onto Buckhorn Rd., drive 0.8 miles, turn right towards the group campground. If you're arriving Saturday morning, you have an option of meeting the group in Chico, at the Chico Park and Ride along Highway 32 just east of the Highway 99 intersection.

On Saturday, we will drive east across the valley to Chico and spend most of the day on the Big Chico Creek Ecological Reserve observing outcrops of the Pliocene Tuscan Formation and Late Cretaceous Chico Formation. Hikes will be moderate, with occasional steep portions along trails. Steady footwear is recommended. We will also have the option of participating in a Sustainability Tour at the Sierra Nevada Brewery Saturday afternoon. After visiting outcrops and the optional tour, we will head back to Buckhorn Group Campground at Black Butte Reservoir. A catered BBQ will be provided on Saturday night.

On Sunday, we will visit outcrops surrounding the Black Butte Reservoir including the Great Valley Group, the Tehama Formation, and other aquifer units. We will conclude the outcrop stops at approximately 12pm.

## Fees:

### Lodging/Camping Options:

**Option 1: Buckhorn Group Campground at Black Butte Reservoir.** Spacious campground, holds up to 80 people on a first-come, first-served basis. Overflow will be accommodated in individual sites depending on the amount of registered participants.

**Option 2: Alternative accommodations at hotels in Orland or Chico. If you do not camp on Friday or Saturday night, you will be responsible for reserving and paying for your own hotel.** Chico is located ~37 mi (~60 km) west of Buckhorn Group Campground and Orland is located ~14 mi (~21km) west of the campground. A listing of alternate motels in Chico and Orland will be provided. Rates will vary.

### Meals:

*Lunch, Saturday only:* (included in professional and student registration fee), vegetarian or meat sandwiches, bag of chips, cookie, and beverage, plus snacks, fruit, and water.

*Saturday Night catered BBQ at Buckhorn Group Campground:* meat entrees, salad, sides, and appetizers. Veggie-style will be available.

*You will be responsible for providing your own dinner for Friday night, breakfasts for Saturday and Sunday, and lunch for Sunday.*

**Guidebook in color:** included in professional and student registration fee.

Please direct any questions to Todd Greene (tjgreene@csuchico.edu)

**REGISTRATION FEES:**

Professional .....\$125\_\_\_\_\_ (✓)  
Student .....\$35\_\_\_\_\_ (✓)  
Fri. & Sat. night camping at Buckhorn Group Campground add .....\$10\_\_\_\_\_ (✓)  
Sat. Sustainability Tour at Sierra Nevada Brewery, optional .....free\_\_\_\_\_ (✓)

**TOTAL PAYMENT REMITTED: \$\_\_\_\_\_**

**Each field-trip participant is required to complete and return this Registration Form.**

Name:\_\_\_\_\_ College/University if student:\_\_\_\_\_

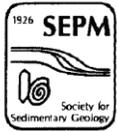
Mailing Address:\_\_\_\_\_

Telephone #:\_\_\_\_\_ e-mail address:\_\_\_\_\_

Please note any DIETARY RESTRICTIONS (allergies, vegetarian, vegan, etc.)\_\_\_\_\_

**Mail this registration form along with the indemnity form and membership form together  
with check made payable to Pacific Section SEPM to:**

Wayne Henderson  
Dept. of Geological Sciences  
California State University, Fullerton  
P.O. Box 6850  
Fullerton, CA 92834-6850



PACIFIC SECTION

Pacific Section SEPM
(Society for Sedimentary Geology)
Fall Field Trip, 2018

RELEASE AND INDEMNITY AGREEMENT

In consideration of the receipt by field trip "Registrant" of permission from the Pacific Section, Society for Sedimentary Geology (PS-SEPM) to register for and participate in the PS-SEPM 2018 Fall Field Trip to be conducted September 29-30, 2018, and entitled "From Shorelines to Aquifers: Late Cretaceous through Pliocene Fill of the Northern Sacramento Valley", registrant hereby releases and will indemnify, defend, and hold harmless Pacific Section SEPM and Global SEPM, the agents, officers, servants, and employees of each, and those persons in charge of and/or conducting any of the Adjunct Activities, including without limitation the leader or leaders of the Field Trip (hereafter referred to as "Indemnitee" or "Indemnitees") of and from any and all liabilities, claims, demands, actions, and causes of action whatsoever arising out of or relating to any loss, damage, or injury, including death, as may be sustained by Registrant, and to any loss, damage, or injury to any property of Registrant's, while involved in any way with the Field Trip, including without limitation any exhibition component thereof or any of the Adjunct Activities.

Registrant is fully aware that the Field Trip may involve hazardous and/or dangerous activities and/or being in or around hazardous conditions and recognizes and accepts the risks, known and unknown, involved on the Field Trip, including without limitation those involved in traveling to and from the site or sites of the Field Trip (whether by air, water, or land transportation) and at and during all stops and layovers during the Field Trip. The provisions of this paragraph shall in no way serve to limit or restrict Registrant's release and indemnity of PS-SEPM and those persons in charge of and/or conducting any of the Adjunct Activities.

This release and indemnity includes without limitation liabilities, claims, demands, actions, and causes of action to or by third parties as well as to or by Registrant. This release and indemnity includes without limitation liabilities, claims, demands, actions and causes of action arising out of or relating to any loss, damage, or injury caused in any way by the concurrent or contributory negligence of any Indemnitee. This release and indemnity includes without limitation liabilities, claims, demands, actions and causes of action arising out of or relating to any loss, damage, or injury caused in any way by the sole negligence of any Indemnitee. Having made all inquiries deemed by Registrant to be appropriate, Registrant hereby voluntarily assumes all risks of loss, damage, or injury, including death, as may be sustained by Registrant or any property of Registrant while involved in any way with this field excursion.

In the event the release by Registrant of any Indemnitee of any liability, claim, demand, action, or cause of action described herein is determined to be invalid or unenforceable, Registrant agrees that Registrant's total recovery of damages from the Indemnitees, or any of them, both actual and punitive, shall be limited to the cost of the registration for the field trip and the costs of tuition or other charges paid by Registrant for Registrant's participation in any of the Adjunct Activities.

In the event any provision of this Release and Indemnity Agreement is determined to be invalid or unenforceable, all other provisions hereof shall continue to be enforceable and shall be interpreted as though said invalid provision had never been contained herein. The provisions of this Release and Indemnity Agreement shall be binding upon Registrant's heirs, next of kin, executors, administrators, and personal representatives.

This Release and Indemnity Agreement shall be governed by and construed and enforced in accordance with the laws of the State of California, United States of America (without regard to any conflict of laws and principles). All actions, suits and proceedings arising out of or in connection with this Release and Indemnity Agreement shall be brought to the District Court of California, United States of America, which shall be the exclusive forum therefore. Registrant hereby irrevocably submits, in person, to the jurisdiction and process of the District Court of California, United States of America.

By consenting to the terms of this Release and Indemnity Agreement with a signature, Registrant acknowledges that:

- 1. He or she has read and understands the above terms of this Release and Indemnity Agreement, and agrees to them voluntarily.
2. He or she is allowed to register for and participate in the field trip and any adjunct activities.
3. Consenting to the terms of this document is essential to allowing Registrant to register for and participate in this field trip and any adjunct activities.

Print Name \_\_\_\_\_

Signed \_\_\_\_\_ Dated: \_\_\_\_\_

KEEP A COPY OF THIS REGISTRATION FORM FOR YOUR RECORDS

**Pacific Section – SEPM (Society for Sedimentary Geology)  
Membership Form, 2018**

CHECK ONE (☑️): Renewed Membership

New Membership

Individual		
Last Name	First Name	Middle Initial
Company or Corporation		
Business Name:		

Preferred Mailing Address: <i>Business or Home - PLEASE COMPLETE ONLY ONE</i>			
<b>Business Address</b>	Name of Business or Teaching Institution		
	Street or P. O. Box #		
	City	State	Postal Code
<b>Home Address</b>	Street or P. O. Box #		
	City	State	Postal Code

Telephone & Email	
Business	
Home	
Cell	
Email Address	

Highest Degree Earned	
Year Earned	
Institution	
Specialization	

<b>Regular Memberships</b> <small>(check ☑️ one)</small>	1-year professional	\$ 7.50	
	3-year professional	\$20.00	
	3-year student	\$ 5.00	
<b>Lifetime Memberships</b> <small>(check ☑️ one)</small>	20-40 years old	\$150.00	
	40-60 years old	\$100.00	
	60 years old and older	\$ 50.00	
	CORPORATE	\$500.00	



Make check payable to Pacific Section SEPM & send payment and this form to: Wayne Henderson

Department of Geological Sciences  
California State University, Fullerton  
P. O. Box 6850  
Fullerton, CA 92834-6850

**Please help increase membership in the Pacific Section SEPM by copying this form and giving it to students and colleagues who share an interest in sedimentary geology, sedimentary tectonics, stratigraphy, and paleontology.**