

AIPG California Section Spring 2020 Newsletter

RECENT TALKS

SPEAKER: BETSY MATHIESON

TALK TITLE: GEOLOGIC LICENSURE FROM A BOARD MEMBER'S PERSPECTIVE



AIPG California Section and UC Davis Student Chapter hosted the October 16, 2019 meeting. Sonoma State University (SSU) Student Chapter was also invited as were AIPG members from California and nearby states. UC Davis meetings are scheduled in the conference room in the Geology Building, first floor at 7 pm.

Elizabeth (Betsy) Mathieson, P.G., C.E.G.

Abstract – The talk will discuss various aspects of geologic employment and the requirements for registration as a Geologist and Specialty Geologist in California. The talk will also review the California Board which oversees professional geologists.

SHORT BIO - Betsy Mathieson is the geologist member of the California Board for Professional Engineers, Land Surveyors, and Geologists, a 15-member licensing board to which she was appointed by former Governor Brown. A California Professional

Geologist and Certified Engineering Geologist, she recently retired after 19 years at Exponent (originally Failure Analysis Associates) in Oakland, California.

Betsy is a self-identified disaster freak. As a child she was fascinated by floods, plane crashes, bridge collapses, earthquakes, and other destructive phenomena. After high school she realized that many of her favorite disasters—earthquakes, landslides, volcanoes, sinkholes—were geologic processes in action. At college geology field camp, Betsy learned that a career in engineering geology could enable her to reduce the impacts of geologic disasters on people.

Betsy obtained an A.B. in geology from Harvard University and an M.S. in engineering geology from Stanford University and went to work as an engineering geologist. Her career evolved over time from investigations of proposed development sites for geologic hazards, to investigations of ground failures that damaged developed sites. Betsy's work included investigations of landslides and river scour in Peru, a dam failure in New York, a major fill failure in West Virginia, sinkholes in Tennessee and Louisiana, a rockfall in Montana, foundation failures in Colorado and Louisiana, a debris flow in Utah, active faulting in Nevada, a pipeline failure in Oregon, and the spectrum of geofailures in California.

Midway through her career, Betsy began serving as a volunteer appointed by two successive California governors to State boards and commissions. The missions of these bodies include protecting the public from geologic risks, thus adding a public-service component to Betsy's career.

Betsy's illustrated presentation consisted of brief case histories and anecdotes from her career; a description of her work on the Board for Professional Engineers, Land Surveyors, and Geologists; and advice on planning a career path that includes licensure as a geologist or geophysicist, perhaps supplemented with certification as an engineering geologist or hydrogeologist.

SPEAKER: JOHN WILLIAMS

AIPG California Section and New UC Santa Cruz Student Chapter hosted the November 25, 2019 meeting. UC Davis and Sonoma State University (SSU) Student Chapters were also invited as were AIPG members from California and nearby states. UC Santa Cruz meetings are at the conference room in the Earth and Planetary Sciences Building, first floor at 7 pm.



INTRODUCTION TO AIPG - At the meeting John Williams and James Jacobs spoke about the benefits of setting up a University of California, Santa Cruz (UCSC) student chapter.

Dr. John Williams provided a speech about the ASBOG-PG exam, professional development, etc. The essential steps to a successful geologic career provided by Dr. Williams to

Adrienne Ricker for the meeting of November 25, 2019 has some sound advice for students, young professionals and seasoned geologists. That advice is printed below:

TALK TITLE: ESSENTIAL STEPS ALONG THE PATHWAY TO A SUCCESSFUL CAREER IN APPLIED GEOLOGY

Abstract: Attaining a successful career in applied geology involves more than just satisfactorily completing several classes in the academic setting and earning a degree. Appropriate course work in geology is essential to a successful career, but the knowledge gained from this course work must be supplemented by additional activities. Steps essential to achieving a successful career in applied geology includes:

- Work and field experience - get a part-time job in geology while you are in school;
- Know your faculty members, who offer guidance and will be writing your letters of recommendation and clueing you into opportunities for employment;
- Recognize that initial employment opportunities may not be in the immediate geographic area and that your career is likely to take you to a wide variety of geographic locations;
- Improve oral and written communication skills - taking opportunities to give oral presentations;
- Understand and practice the skills to become an effective team player;
- Become known in the geoscience community by participating in professional societies and other organizations, starting this activity as a student member;
- Recognize the importance of and work toward achieving the appropriate professional licenses. Not having these licenses is likely to be a career roadblock;
- Ethical challenges will develop in one's professional career that must be dealt with appropriately;
- Take advantage of leadership opportunities; and
- Develop a pattern of continuing education to keep up with advances in the science.

Dr. Williams talk provided students with a boots-on-the-ground view of what it takes to find professional success in the field of geology. He also noted that sometimes ethical issues are more complex than the geology and technical issues. Integrity and honesty are important traits of the successful geologist, regardless of the geology sub-discipline.

SHORT BIO

John W Williams is a professor emeritus of engineering geology, Department of Geology, San Jose State University and former department chair, a position he held for 25 years. He earned his PhD degree in geology at Stanford University after getting an undergraduate degree in geology at the College of William and Mary. Following graduation from Stanford, he worked as an engineering geologist with the California

Division of Mines and Geology (California Geological Survey). He joined the Department of Geology at San Jose State University in 1976 where he served until his retirement in 2006. Dr. Williams is a licensed geologist, certified engineering geologist, certified hydrogeologist in California and holds licenses in several other states. His areas of expertise and practice focus on slope stability and seismic issues as they impact the safe utilization of land. He served as thesis advisor for many graduate students. He was elected president of the Association of Environmental and Engineering Geologists (AEG) and the National Association of State Boards of Geology (ASBOG) and is a Fellow of the Geological Society of America.

University of California Santa Cruz



Photo of the UC Santa Cruz students and professors, November 25, 2019

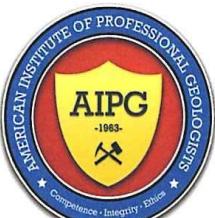
AIPG California Section Welcomes UCSC as Newest California Student Chapter!

In the startup of the UC Santa Cruz student chapter on April 21, 2020, the approval letter from J. Todd McFarland, AIPG National President and Aaron W. Johnson, AIPG Executive Director is included below which describes some of the benefits to joining and engaging with AIPG. AIPG thanks Adina Paytan and Adrienne Ricker for their efforts in the UCSC AIPG Student Chapter process.

UCSC AIPG Student Chapter Advisor: Dr. Adina Paytan, Institute of Marine Sciences
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UCSC AIPG Student Chapter Coordinator: Adrienne Ricker, PhD Student
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UCSC AIPG Sponsor: James A. Jacobs; jjacobs@clearwatergroup.com



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April 21, 2020

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Mr. James A. Jacobs
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Dear Mr. Jacobs:

It is with pleasure that the National AIPG Executive Committee welcomes the geology students of the University of California Santa Cruz as the newest Student Chapter of AIPG. The students will not regret the time and effort.

Although the advantages of AIPG membership are numerous, the most compelling reason for involvement is one's own self-interest. The additional opportunities opened to AIPG members comes from a wide network of accomplished geologists who are only too willing to assist colleagues in achieving professional career goals.

AIPG membership consists of geologists engaged in every discipline. AIPG focuses on the professional, institutional, regulatory, and social-economic aspects of the practice and what geologists do for the benefit of society. The Student Chapter's initial exposure to AIPG will, we are certain, expose an entirely new perspective for students as they build careers.

To assist in establishing the Chapter, the Executive Committee is pleased to contribute \$100 Visa Gift card to the University of California Santa Cruz AIPG Student Chapter treasury.

We hope some of our new Chapter members may be able to attend the AIPG 2020 Annual Meeting to be held in Sacramento, California.

Best wishes,

J. Todd McFarland

J. Todd McFarland, CPG-11348
 President

Aaron W. Johnson

Aaron W. Johnson, PhD
 Executive Director

Encl.

cc: Ramon Hess, Student Chapter President
 Joseph Cherayil, Student Chapter Vice President
 Natalie Smith, Student Chapter Secretary
 Isis Lemus, Student Chapter Treasurer
 Adina Paytan, Faculty Sponsor
 James A. Jacobs, Section President
 2020 AIPG National Executive Committee

Future Talks: Unfortunately, due to the COVID-19 shut down of the University, and Shelter in Place orders, the meeting will be planned when it is safe to socialize again. However, Dave Fowler will be the next speaker when socializing can resume!

Dave Fowler, Geologist, North Coast Regional Water Quality Control Board, Santa Rosa, California, will discuss his geologic career and background.

FUTURE MEETING SCHEDULE: AIPG California Section and Sonoma State (SSU) Student Chapter will host a future meeting with Dave Fowler. UC Davis and UC Santa Cruz Student Chapters will also be invited as will be the AIPG members from California and nearby states. SSU Geology meetings will be at Darwin Hall in Room 128 at 7 pm.

**Dave Fowler
PRESENTER
SONOMA STATE AIPG STUDENT CHAPTER MEETING
Future Meeting
Sonoma State University**

By Dave Fowler as told to Gary Pischke.

Abstract - I was a student at SSU from 1983 through 85. I attended UCSC field camp in the summer of 1985. I worked for Harding Lawson Associates in Novato from 1986 through 1996. I started out working on groundwater cleanups involving large "tech" companies in the Santa Clara Valley, but also did some seismic refraction studies for both industrial and residential developments in the North Bay area. I worked on several DOD projects including Hunters Point, Mare Island, and Fort Ord. Some of the more interesting projects included work on the Ward Valley (Mojave desert) proposed low-level nuclear repository, mapping bullet coverage on the firing ranges at Fort Ord, a seismic reflection study at Fort Ord, and a series of aquifer tests in Genoa Nevada.

From 1996 through 1999, I worked with several small companies on various projects involving both DOD and civilian sites. Interesting projects included groundwater investigations at Port Hueneme and Point Mugu, bioremediation at Vandenburg, and well design, installation, and testing at various sites.

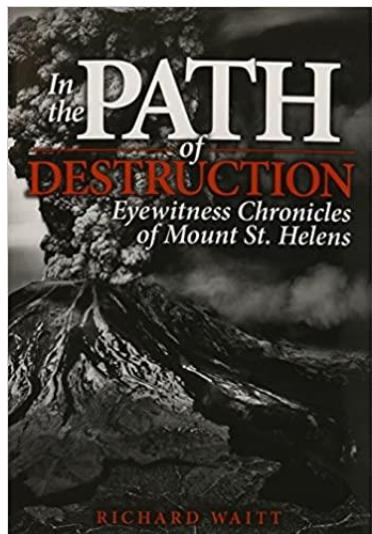
I've been at the North Coast Regional Water Quality Control Board in their Non-Point Source and Timber Harvest division since November 1999. The Regional Water Board region extends from Cotati to the Oregon border and back to Modoc County. I work in the Southern Timber Unit, so my area goes from Cotati to Humboldt Bay. Besides getting paid to go walk (and ride ATVs) in the woods, I also work with the California Board of Forestry and Fire Protection in developing revisions to the Forest Practice Rules (to make sure any new or revised rules are protective of water quality and the beneficial uses of water, and comply with the Porter-Cologne Water Quality Act and the Water Quality Control Plan (Basin Plan) for the North Coast).

I've kept in touch with SSU over the years. Terry Wright, former structural geology

instructor, invited me to assist on the structural field trip to the Poleta Folds back in the early 1990s since I had spent three weeks mapping the area during the UCSC summer field camp. When Terry retired, his successor, Matty Mookerjee, asked me if I would continue assisting on the field trip. I gladly accepted since Deep Springs Valley is one of my favorite places and since I very much enjoy working with students. I've assisted on somewhere around 25 SSU field trips to Deep Springs Valley (not counting when I was a student TA). I'm still known at SSU by the nick-name I received when I was a student there: "Super Dave."

On the personal side, I live in Cloverdale and my favorite sport is skydiving. In my pre-geology life, I worked at a variety of jobs including driving tractors and other farm equipment on a prune farm in Gilroy, I drove a tow truck in the San Jose area and on the SF Peninsula, and did a student internship with the National Park Service in Yosemite.

The Armchair Geologist by James A. Jacobs



Forty years ago on 18 May 1980 an extraordinary geologic event occurred – the explosive eruption of Mount St. Helens in southwest Washington state. Based on that 40th anniversary, I looked for a book that neatly summarizes the devastation and loss of animal, plant and human life on Mount St. Helens. One of the best books on Mount St. Helens is Richard Waitt's "*In the Path of Destruction, Eyewitness Chronicles of Mount St. Helens*". The book reads quickly and smoothly. Waitt writes exceedingly well and his many decades of experience with the USGS studying Mount St. Helens allows him scientific insights that few could master. What sets this book apart are the author's interviews with hundreds of eye witnesses to the catastrophic eruption that wiped out the volcano's top as well as the historic Spirit Lake

Lodge, a well-known local hot spot prior to the explosive event. The post-eruption interviews the author had with hundreds of witnesses as well as inspection of recovered camera film taken by those who perished in the blast are detailed in the book. From his detective work which started around 1980 to when the book was first published in 2014, Waitt accurately weaves a minute-by-minute account of an explosive volcanic eruption, with some of the best observations of active volcanic processes that can be found anywhere in the geologic literature. Although the book was first published in 2014, with reprintings in 2015 and 2016, the book is incredibly relevant today, especially to geologists who like to hang around active volcanoes. The December 9, 2019 volcanic eruption on White Island (Whakaari) on the north island of New Zealand resulted in 17 deaths and dozens of terribly burned tour guides and cruise ship tourists. These rare, but powerful events remind all geologists of the massive path of destruction associated with explosive volcanoes. In the forty years since the eruption, ecosystems on Mount St. Helens today have been restored as nature returns. Nonetheless, the fiery menace still exists. (413 pages, paperback, WSU Press).

Other News

Hello All from the California Section President:

I hope you are doing well and staying safe! A few items - California Section will stay the course and keep the dues the same.

Given the situation we are all living through, I recommend keeping the same California Section dues. I think lowering dues would be a bad precedent, and raising dues, although it would be nice to have more money, might be very difficult for too many of our members. Therefore, the decision was made by itself.

From AIPG National:

James Jacobs will receive the AIPG 2020 Section Leadership Award from AIPG National as described in a letter dated April 2, 2020, from J. Todd Macfarland, AIPG National President.

“The AIPG Section Leadership Award is to recognize one or more of our members who have demonstrated a long-term commitment and have been long-term contributors to AIPG at the section level. AIPG has many sections where one or more individuals have demonstrated exceptional leadership for their section and in many instances kept the section together and moving forward. These individuals are commonly not known at the National level or by AIPG members outside of their sections, however, their contributions have been vital to their sections, and they perform this work because of their commitment to our profession and AIPG” A reward will be presented to James at the next Annual Meeting.

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- Steve Baker, Student Section Mentor
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- Bob Sydnor, Student Section Mentor
- Gary Pischke, Advisor
- Steve Baker, Advisor
- Mehmet Pehlivan, Advisor
- Stephen Testa, Advisor
- Gary Pischke, Newsletter Editor

AIPG is a participatory sport and there are always spaces for those who want to pitch in! Call James Jacobs at 510-590-1098 or jjacobs@clearwatergroup.com if you want to volunteer. For those who want to write an article, interview a geologist, provide photos for the next newsletter, please contact Gary Pischke at pishbert@ix.netcom.com