



A Note From Our President

It's hard to believe that the end of the academic year is so close. This newsletter marks my final presidential memo. Looking through old reports to National, the conference in Wenatchee will mark the conclusion of four years serving as section president. It has passed much too quickly.

One of the high points is that the Pacific Northwest section continues to be pointed to as one of the leading sections by National NAGT; from the annual conference, membership, OEST awardees to the website. While this recognition is great, the potential for making the section even better continues to exist. I look forward to supporting Cassie as she takes the section to new levels in the future. The organization is also in a solid fiscal state-thanks in no small part to the effort put in over many years as treasurer by the late Bob Christman. The generous support last year with the auction table also helped to replenish the

Kahle Fund and defray the cost of registration for several students at Wenatchee and potentially future conferences. The presence of students and K-12 educators on our section roster continues to slowly increase, which is important to the long-term health of the section.

Membership levels continue to be a concern, but the same could be said for all scientific and non-scientific organizations. Andy and I contacted a large number of lapsed members this year helping to swell our ranks to an incredible 130 members! This is a record in memberships and our numbers have not been that high since 2003. However there are still a number of active earth science educators that should be amongst our ranks. I would request that we all continue to press our colleagues to join NAGT so that we can continue to remain a vibrant and active organization in the decades to come.

I look forward to seeing many of you in Wenatchee in a few weeks. Also remember if you're not from one of the Canadian Provinces - you'll need to make sure your passport is up-to-date so that you are ready to join Tark across the border for the 2015 meeting in Camosun.

Thank you for the support you have all given me over the last four years and I look forward to your collegiality and support of NAGT into the future.

---- Ron

A giant thanks to our past leaders!

Submitted by Carla Whittington

Thank you Ron Metzger for all the hard-work, enthusiasm, and leadership that you have put into the NAGT while serving as our section president. We can never begin to repay the people who are willing to step forward and put in the time that keeps this organization vibrant and interesting. Thanks also to Andy, Scott, Jodie, Lynda, Cathy, Michael, Shawn, Dean, Frank, Jeff, Beth, Brett and Tark! Your participation has helped to make our section a success and we hope you will be with us another year!

NEWS FROM AROUND THE SECTION!

2014 Elections Are Coming Up!

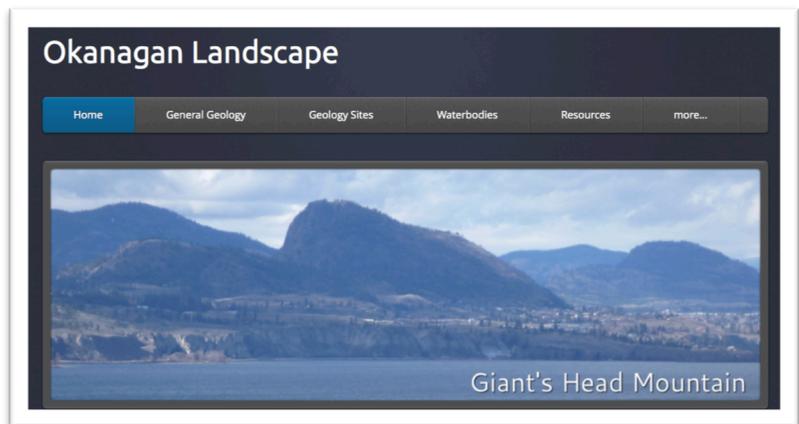
Watch your email! Cassandra Strickland will be sending out information about voting for section officers soon. The email will have a link to the website where you can vote for section officers. We need all of our members to care about the future of our organization! Be sure to participate.

Another Great Website Helps You Learn About Regional Geology!

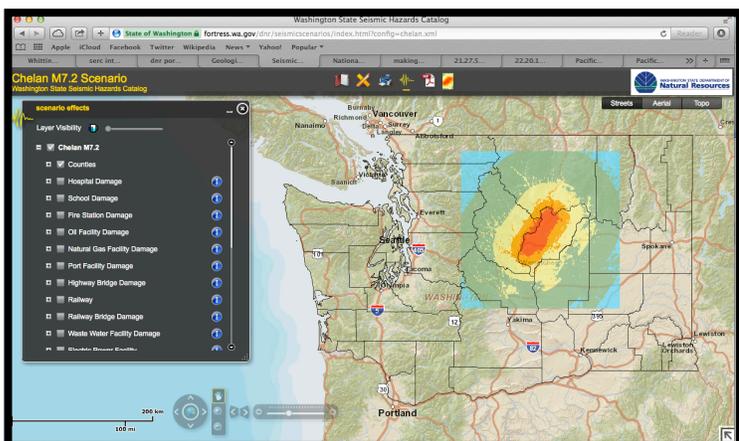
Submitted by Todd Redding, Okanagan College

The purpose of the Okanagan Landscape website is to provide information about the local geology and natural history of the South Okanagan. The site contains information about general geologic history and provides information about specific sites in the region. The website also includes a page with citations and links to key references. Sites can be accessed through menus on the homepage, or through a map interface. Future updates are planned on the topics of palaeoenvironments, climate and soils.

For more information, please visit: <http://okanaganlandscape.weebly.com> or contact Todd Redding at Okanagan College (tredding@okanagan.bc.ca)



www.facebook.com/groups/150216048427579/



Washington Seismic Hazards Scenarios are available online!

The Washington Department of Natural Resources has its entire seismic hazards scenario catalog online in an interactive GIS system! If you haven't had a chance to browse this important resource, you can find it at: fortress.wa.gov. Scenarios include Cascadia and quakes along faults throughout Washington State. The website lets you explore the risk to your community!

Washington K-12
Teachers!
Earn some Clock
Hours while having
fun - Join us in
Wenatchee!



**Pacific Northwest Section
2014 Summer Conference
Wenatchee Valley College
June 18 - 22, 2014**

2014 Conference Registrations materials are available online!

<http://www.wvc.edu/directory/departments/earthsciences/default.asp>

Conference Schedule

- Wednesday, June 18: Field Trip – Blewett Pass and Ingalls Ophiolite
- Thursday, June 19: Field Trip – Periglacial Geology of the Wenatchee Valley
- Friday, June 20: Conference Day at Wenatchee Valley College Dinner with guest speaker
- Saturday, June 21: Field Trip – Glacial Geology of Lake Chelan Area Dinner at private residence in Trinidad overlooking West Bar
- Sunday, June 22: Field Trip – Ice-Age Floods and Flood Basalts of the Soap Lake to Odessa Area

Conference Day – Friday, June 20, 2014

Featured Speaker: Dave Tucker, Western Washington University

Dave Tucker is a research associate in the Geology Department of Western Washington University is a founder and board member of the nonprofit Mount Baker Volcano Research Center (mbvrc.wordpress.com). He also runs the Northwest Geology Field Trips blog (nwgeology.wordpress.com/) and leads field trips coordinated via the blog. He is author of *Geology Underfoot in Western Washington* (Mountain Press) in bookstores this coming Autumn 2014. Dave will be telling us how his blogging, field tripping, teaching, and geology research have come together in the writing of his new book.

You can sign up for Dave's class: **Mt. Baker: Discovering Hidden Cinder Cones and Crater Lakes** offered through the North Cascades Institute on July 6, 2014. The one-day course fee is \$95. Register here: <http://ncascades.org/signup/programs/volcanoes-legacy-in-cinder-cones-and-crater-lakes>.

SILENT AUCTION TO BE HELD AT 2014 CONFERENCE

After the success of the auction in Coos Bay, we would like to continue the tradition in Wenatchee. If you have any books, samples or other geologic things for the auction, please consider bringing them. The proceeds will go to help defray the cost of registration for students at future section conferences. So remember not only to clean out those nooks and crannies of interesting specimens, but also to bring some cash to bid on items on the table. It goes to a great cause ---- strengthening connections with the next generation of earth science educators!



National Association of Geoscience Teachers

National Association of Geoscience Teachers - Pacific Northwest Section
2014 Summer Conference - Wenatchee Valley College June 18-22, 2014

Field Trips

The weather in late June in Wenatchee is usually hot and sunny, with the rare possibility of thunderstorms. Be prepared for heat and sun with appropriate clothing, hats with brims, sunscreen, and bottles of water. We will occasionally traverse rocky, dusty, and brushy ground, and go up and down moderately steep slopes. Wear appropriate footwear. Lunches, including beverages, will be provided.

All field trips depart from the Smith Gymnasium parking lot at 8 AM. Arrive well before 8:00 to get your seat and be prepared to depart on time.

Wednesday, June 18

Blewett Pass and Ingalls Ophiolite

Trip leaders: Jeff Tepper and Ralph Dawes

This field trip looks closely at several rock types of the Triassic Ingalls ophiolite, the Eocene Swauk formation intruded by basaltic dikes of the Teanaway formation, and thick beds of fluvial sandstone from formations younger than the Teanaway. We will examine a thick, diabasic sill of the Teanaway formation; a monolithologic diamictite of the Swauk formation that may represent a long-runout avalanche shed from the rapidly uplifted Mount Stuart batholith during fast-moving tectonic structural development of the area in the Eocene epoch; and the Camas Land sill, which has been proposed to be an intrusion of Columbia River Basalt that invaded down into beds of Eocene arkose.



Thursday, June 19

Periglacial Geology of the Wenatchee Valley

Trip leaders: Nick Zentner and Ralph Dawes

The Wenatchee Valley and the Columbia River Valley nearby, feature slopes planted in apple, pear, and cherry orchards, and vineyards. Most of the arable land is on depositional landforms from late Pleistocene megafloods along with Holocene alluvial fans and stream terraces representing Quaternary evolution of the Wenatchee River floodplain.

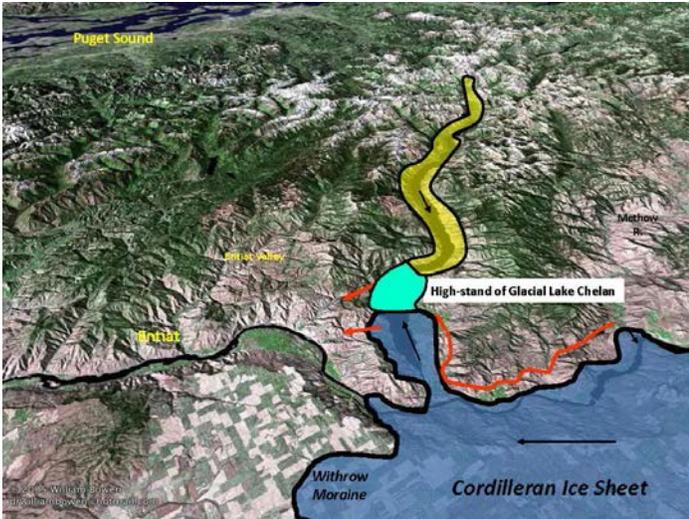


Underlying the Quaternary sediments are beds of Eocene sandstone that add up to miles of stratigraphic thickness, juxtaposed against a terrane of metamorphic and plutonic rock along a major fault. We will compare flood-transported boulders up to nearly 10 meters long on the valley floor with smaller, iceberg-rafted boulders higher up on the valley sides, look for layers of clay and silt that may have accumulated in a periglacial lake, and see if we can agree that there are also rhythmites deposited by repeated Late Pleistocene megafloods. We will also look at the Swakane Biotite Gneiss, an accreted terrane with an unclear age and origin that contains zircons with cores over a billion years old.

Saturday, June 21

Glacial Geology of Lake Chelan Area

Trip leaders: Jon Reidel, Brent Cunderla, and Ralph Dawes



The Lake Chelan basin results from a combination of mountain building processes in the deep crust, uplift and erosion of the Cascades, and a combination of alpine glaciation and continental ice sheet glaciation. On this field trip we will examine the features these processes created in the southern end of the basin.

The Cordilleran ice sheet sent tongues of ice into the lake from opposite ends at least once, and the glaciation scoured the bedrock bottom of the basin down below sea level. Geomorphic features around the southern end of Lake Chelan include water gaps from temporary lake outlets, kame terraces recording successive stages of glacial recession, erratic boulders of Columbia River Basalt brought

from the Columbia Plateau by the ice sheet, kettles, and sedimentary beds recording a higher stand of Lake Chelan when it was glacially dammed.

The geology and climatology of Lake Chelan led it to be officially designated an American Viticultural Area by the USDA, a wine-growing zone with unique attributes to its terroir. Our consideration of the wine and terroir will include a stop at a winery with the option to taste and buy some wine and a discussion on wine and soil from one of the wine-makers.

Sunday, June 22

Ice-Age Floods and Flood Basalts of the Soap Lake to Odessa Area

Trip leaders: Karl Lillquist and Jack Powell

This field trip starts in a basin that received megaflood discharges triggered by Pleistocene glaciation and channeled via Grand Coulee and Crab Creek. J Harlan Bretz was drawn back to the geomorphic puzzles in this area during his return to the Channeled Scablands late in his career. We will go on to examine Columbia River Basalt flows in light of the latest thinking about how the magma originated, erupted, flowed, and cooled. A short side trip will visit a lake that recently dried up due either to climate change, groundwater mining, or both. The field trip will culminate with an examination of two sets of Odessa ring dikes, which are self-intrusive features of Columbia River Basalt with no consensus on their exact origin.



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