



## JANUARY Luncheon Meeting

**TUESDAY, Jan. 15<sup>th</sup>**

**La Quinta Inn**  
**1425 E. 27<sup>th</sup> St.**  
**Tacoma, WA**  
**(I-5 at Exit 135)**

Welcome: 11:30am  
Lunch: 12:00pm  
Program: 12:30pm

**Cost: \$25\* cash or check**  
**students \$15**

**RSVP by noon Friday, Jan. 11<sup>th</sup>**  
**Kay Hoke @ 360-591-5760**  
[khoke@cityoftacoma.org](mailto:khoke@cityoftacoma.org)

Please note the section does not have the ability to accept credit cards. **Cash or Checks, please.**

## Mt. Rainier National Park—After 2006 Storm Damages

Speaker: **Mr. Dave Uberuaga,**  
*Superintendent*  
*of Mt. Rainier Park*

At our January 2008 luncheon meeting, the Superintendent of Mount Rainier National Park, **Dave Uberuaga** will present the story of the 2006 storm damage and the Park Service's efforts to restore roads. While we have wanted to hear the story of park recovery for many months, it should be particularly poignant as we witness the recent 2007 storm devastation to the Chehalis Valley and Olympic Peninsula.

"THE LIGHT AND MAJESTY OF MOUNT TACOMA" wrote Theodore Winthrop in 1863 during his adventures crossing the Cascades about the inspiring volcano at our backdoor. The national park, Mount Rainier, was created decades later in 1899, a decade after Washington statehood. The Mount Rainier legislation—only the fifth park after Yellowstone and California's Sequoia, Yosemite and General Grant—was to be a national park, which entailed both protection and development. It was to be a place for contemplative recreation through public access.

Since those early times, Mount Rainier has proven to be a crown jewel for the United States, clearly exceeding legislative intent. The notable exception: Northern Pacific Railroad's electric rail line to the park as one of their resort destina-

tions, which did not survive the revolution in gas buggies. Yet, the hydroelectric powerhouse at Lake Tapps, which was to serve the railroad, continues to operate...but that's another story.

Today, the park welcomes 2 million visitors annually from the nation and abroad. The inspiring beauty of this "worthless land" is reached by automobile on narrow mountain roads hewn into craggy slopes. The infrequent avalanche and the occasional lahar (mud flows from the glaciers) disrupt tourists' plans to seek those contemplative places on the mountain. However, in 2006, much broader devastation occurred when fall storms hit the mountain slopes with torrential rain. The resulting flows destroyed several routes into and within the park. Restoring access drained the National Park Service's annual budget. Only by special appropriations, championed by our Washington State congressional delegation reminiscent of much earlier efforts required for the park's original authorizing legislation, has progress been made to restore park roads. ■

“Engineers Make the *Difference*...  
They Provide the *Quality* of Life!”



*Bernie Hargrave P.E.*

Looking back to our November luncheon presentation: Brian Polagye, the University of Washington PhD candidate who is studying Puget Sound tidal energy potential, provided a description of his work and requested feedback from us. You'll find his article below.

All the best,

Bernie Hargrave  
2007-2008 Tac/Oly Section President

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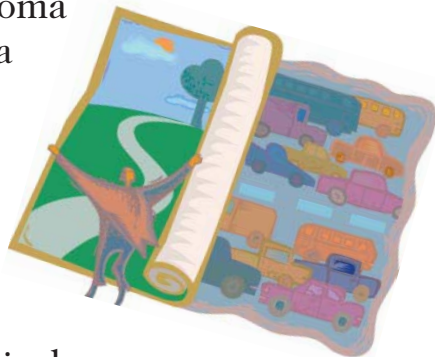
## Puget Sound Tidal Energy Studies and Civil Engineering Challenge

By: Brian Polagye

TIDAL IN-STREAM ENERGY CONVERSION, a type of ocean renewable energy, has received considerable public attention in Washington. Devices used to extract kinetic power from fast moving tidal currents superficially resemble wind turbines. Tacoma Power is pursuing a project in the Tacoma Narrows and Snohomish PUD is pursuing multiple projects, the largest of which would be located in northern Admiralty Inlet. Both utilities are conducting studies to help characterize the sites and any large-scale installation of in-stream turbines faces significant technical and regulatory hurdles.

The University of Washington is developing numerical models to study the effects of large-scale tidal energy extraction on the Puget Sound. Basic modeling indicates that too large an installation of turbines could affect the Sound's circulation and tidal range. The modeling being undertaken will be used to predict the fluidic effects of large-scale energy extraction. The ecosystem impacts of these fluidic changes could then be assessed and an estimate made of sustainable extraction levels. The project is a partnership between the Department of Mechanical Engineering and School of Oceanography and is supported by Snohomish PUD.

One of the particular challenges for in-stream technology is the availability of a robust, low-cost foundation for deep water installation of in-stream turbines. To date, demonstration units have utilized monopile foundations analogous to those for offshore wind, but installation and material costs become problematic at depths greater than 40m. Since the prime sites in the Puget Sound are generally of depths in the 60 to 80m range, a new foundation approach will be required. Viable foundation alternatives for utility-scale turbines would be welcomed by site and device developers.



For more information, please contact:

Dr. Philip Malte (Mechanical Engineering):  
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Brian Polagye (Mechanical Engineering):  
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Contact:

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# SECTION CALENDAR and ENGINEERING RESOURCES



## Section Calendar

### Tacoma/Olympia ASCE Section Meetings/Activities

**January 15, 2008** – Luncheon Meeting, La Quinta Inn, Tacoma. 11:30am  
Mt. Rainier Damage From 2006 Storms presented by Rainier National Park Director **Mr. Dave Uberuaga**.

**February 15<sup>th</sup>** (tentative date)  
Engineer's Week dinner at St. Martin's University, Lacey

**March** – Joint Luncheon Meeting with Society of Military Engineers (SAME)

**APRIL** - Honors & Awards with Legislative Update

**MAY** - Field Trip to Port of Tacoma

\*DATE/TIMES/LOCATIONS TO BE ANNOUNCED/VERIFIED

### Tacoma/Olympia ASCE Board Meetings:

Local Board Meetings are open and generally held the **first Monday of the month** at 5:30pm. Locations vary. **Please check the WEB site, this calendar, or contact the president for confirmation.**

**Monday December 3rd, 6:00pm**, Olive Garden, Tacoma; off I-5, 72nd St Exit.

<http://sections.asce.org/tacoly/tacoly.htm>

## Younger Member Forum Activities And Update

Younger Member Newsletter  
[www.asce.org/inside/cym\\_pubs.cfm](http://www.asce.org/inside/cym_pubs.cfm)

### Upcoming Events & Activities

**MESA Career Day**; Pacific Lutheran University (PLU)- Parkland, Wa; **January 17, 2008**; 9:00am -1:00pm) **Volunteers and Companies needed**

**ASCE 2008 Region 8/9 Leadership Conference And Western Region Younger Member Council (WRYMC)** ; **February 8 – 9; Las Vegas, NV**

**National Engineers Week; 3rd Week - February, 2008**

## TRANSPEED Courses

For a complete list of courses, visit the website at <http://www.engr.washington.edu/epp/Transpeed/index.html> for specific course descriptions and dates. Click on the specific course link to view the course outline, or contact:

**Julie Smith**  
**Engineering Professional Programs**  
**Phone: 206-543-5539**  
**Toll-Free: 1-866-791-1275**

### 2007 Professional Development Short Courses

For a complete description of the course and registration information visit our website <http://www.engr.washington.edu> or call us at: **Engineering Professional Programs, University of Washington**, phone: 206.543.5539 (fax) 206-543-2352 or (toll free) 1.866.791.1275  
\*\*\*\*\*

**Stephanie Strom, Program Mgr:**  
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## Continuing Ed

For scheduled seminars in your geographic area are available on ASCE's website at [www.asce.org/conted/seminars](http://www.asce.org/conted/seminars).

These in-depth, practice-oriented programs are produced by ASCE's Continuing Education Department and may be of interest to many ASCE members in your Sections and Branches. We would greatly appreciate if you would consider posting information on these seminars in your newsletters and on your websites.

If you have questions or need assistance, please contact:

**Kelly Jarvis, Continuing Education Registrar** at [kjarvis@asce.org](mailto:kjarvis@asce.org) or

**Michael Cook** at [mcook@asce.org](mailto:mcook@asce.org).

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**Bernie Hargrave...**  
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## Tacoma/Olympia Section Board 2007 - 2008

<http://sections.asce.org/tacoly/html/board.htm>

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**Bernie Hargrave**

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**Brook Maples...**

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## We're on the web!

<http://sections.asce.org/tacoly/tacoly.htm>

For address changes/corrections, notify the Editor or the WEBmaster.