NORTHWEST AQUATIC AND MARINE EDUCATORS

36TH ANNUAL CONFERENCE

“Restoring Watersheds Restoring Communities”

July 13 – 16, 2011
Olympic Park Institute
Lake Crescent, Washington
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PHOTO CREDITS

Cover: Jefftaylor@xwb.com
Page 2: Walter Siegmund
Page 6: Asahel Curtis
Page 8: DancingBear
Page 9: Walter Siegmund
Page 13: Michael Gäbler

NAME Conference photos courtesy of Giovannina Souers and Sean Hastie
Greetings from the shores of Lake Crescent! We are looking forward to you joining us this week in Olympic National Park as part of the NAME conference. Olympic Park Institute, a campus of NatureBridge, is dedicated to connecting youth to nature, and responsible actions to sustain it. NatureBridge has campuses in four national parks and is an environmental education partner of the National Park Service.

We use national parks as our classroom, and consider ourselves fortunate to have the historic Rosemary Inn as the center piece of our campus in the Olympic National Park. Our facilities offer a great balance of rustic and modern that helps us connect to our surrounding old growth forest through science, history, culture and adventure. As we venture off our campus to places in the park we can quickly find ourselves in natural settings that include alpine meadows, beautiful rivers, and the scenic coast.

We are excited to share this great classroom with you and in the learning of the great stories of this area, such as the Elwha River Restoration. Please make yourself at home, and take time to enjoy this wonderful place.

Sincerely,

[Signature]

Randall Walz
Program Manager
Welcome to the Olympic Park Institute!

Olympic Park Institute (OPI) is dedicated to teaching science and environmental education in nature's classroom to inspire a personal connection to the natural world and responsible actions to sustain it. Located in Olympic National Park, OPI’s programs inspire a personal connection to the natural world and motivate students to become engaged citizens who address environmental issues that impact their local communities.

Conference Themes

Fostering Sustainable Communities: How can marine and aquatic educators help connect what they are doing with the bigger picture? The power of people, culture, partnerships and looking towards the future.

Science for All: Sharing current research related to restoration, marine environment, watersheds and education. Particular emphasis on science related to the Elwha Dam removal is welcomed.


Meaningful Watershed Experiences: The role of place-based education in changing behaviors and attitudes about our home watersheds.

NAME Conference Traditions

With thirty-five conferences under our collective belt, we can’t help but have a few traditions. If you are a first time NAME member or conference attendee (and even if you aren’t), read on…

NAME Board Meeting: This is a gathering of NAME’s leaders (at least, the elected and appointed ones). All NAME members are invited to witness leadership in action, come meet the core members of NAME, bring your suggestions, new ideas and complaints.

SeaFaire: Consider it an idea and innovation garage sale, free of charge. Browse brochures, flyers, curriculum, and lots of free giveaways in the Cedar room in the Rosemary Inn, all day Wednesday and Thursday. Representatives will be at their tables from 5 – 6 pm on Wednesday. Conference attendees and local organizations are welcome to reserve a table and show off during this event.

Annual NAME Auction: Always a conference highlight, the auction raises funds for NAME’s mini-grant and scholarship programs. Auction items are varied and donated by members and local organizations, and you never know what will be on the table. There is normally both a silent and live auction.

Chapter Meetings: These meetings give members of each province and state a chance to meet together and plan the upcoming year. Find out what great stuff is happening in your own backyard.

NAME General Business Meeting: U.S. non-profit law requires a general membership meeting once each year, and this is it. Don’t miss this opportunity to learn about the latest NAME innovations, programs, and plans for the future. Be involved.

NAME Awards Banquet: Don’t miss a great evening capped off with our annual fundraising auction, dancing, great music, food, and fun!
GENERAL CONFERENCE INFORMATION

NAME Registration/Information Desk: Registration and check-in will begin at 8:30 am on Wednesday, July 13. The NAME Registration/Information Desk will be in the Fireside Room in the Rosemary Inn, and will be open all day. It will remain open as needed on Thursday and Friday.

If you are a presenter or exhibitor: Please check in at the registration table and double check the media set up prior to speaking. Don’t hesitate to ask for support if you need it.

SeaFaire: SeaFaire will be held in the Cedar Room in the Rosemary Inn. Booths will open on Wednesday morning and will be open all day Thursday. We encourage exhibitors to be near their booths after workshops on Wednesday afternoon and during breaks and lunchtime Thursday so folks can ask you questions about your programs.

Message Board: There will be a message board at the registration table in the Rosemary Inn if you want to coordinate rides or simply leave people messages.

NAMEtags: Wear ’em! They are your tickets to events, food, and other cool stuff. Besides, it helps you hide the fact that you can’t quite remember that person you met last year, and helps people you meet for the first time remember you next year.

Meals: All meals will be provided for registered participants. Most meals will be served in the dining hall at OPI, though select meals will be served in the large classroom at OPI. If you would like to purchase meals for a guest, please see someone at the registration table.

Guest Meal Tickets: If you have purchased additional tickets for your guest/s for meals, BBQ, auction, etc., you will receive a nametag for your guest at registration when you check-in. Please use these for entrance to these events.

Field Trips: If you have signed up for a field trip, please confirm your slot when you check in at the registration table and check for departure time and carpool information. If you haven’t signed up yet, we encourage you to check to see if there are any openings left…we’d love to have you join us for an experience that will highlight the rich environment of the Olympic Peninsula!

Beverage Cup/Water Bottle: We are dedicated to the Green Conference philosophy. We have made the decision to avoid providing beverage cups for breaks and the like. Please, don’t forget to carry your own cup with you.

Event Waiver Form: Just in case you snuck by us, make sure you have a signed Event Waiver Form turned into Registration. These forms are protection for NAME and you!
**Special Thanks to our Conference Planning Committee**

The following people put in countless hours to coordinate everything that made this conference a success: speakers, field trips, presentations, lodging, food, the auction and dance, registration, and all the other details that often go unnoticed.

Amy Sprenger, NAME Washington Director & Conference Chairperson  
Giovannina Souers, Lodging and Sessions Coordinator  
Jennifer Magnusson, NAME Webmaster & Conference Registrar  
Casey Ralston, Panel Coordinator  
Woody Moses, Speaker and Music Coordinator

<table>
<thead>
<tr>
<th>Fawn Custer</th>
<th>Linda Maxson</th>
<th>Susan Bullerdick</th>
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<tbody>
<tr>
<td>Suzi Wong Swint</td>
<td>Orlay Johnson</td>
<td>Debbie Smith</td>
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<td>Alan Rammer</td>
<td>John Hunter</td>
<td>Randall Walz</td>
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<td>Bob Steelquist</td>
<td>JoAnn Moore</td>
<td>Glen Alexander</td>
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<td>Jacqueline Laverdure</td>
<td>Peggy Foreman</td>
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**About Northwest Aquatic & Marine Educators**

NAME was founded in 1976 and became a chapter of the National Marine Educators Association in 1980. In the early 1990s NAME expanded its mission and membership to include all aquatic environments, recognizing that marine and aquatic ecosystems, environments, and issues are linked together, and that educators working in both environments share common beliefs and strategies. NAME includes members from Alaska, British Columbia, Washington, and Oregon. Annual NAME conferences rotate through these states and provinces. In addition, each state or province offers local professional development opportunities for formal and non-formal educators.

**NAME is a “family” of educators who believe:**

- That every human on Earth needs to be water-literate.
- In sharing our knowledge, experiences, and visions about the world of water with others.
- That the sharing of that vision creates a community, and that this community supports each of us personally and professionally.
- That informed stewardship of the ocean and watersheds of our region is essential for the continued survival of all life, and the cultural and spiritual well-being of the stewards.
- In using the allure of water, both salt and fresh, to enrich and facilitate learning in all subjects and environments.

These are our Core Values, values that drive the work we do. We are also guided by a Strategic Plan, annual education and event plans for each province and state, and an innovative, energetic Board of Directors.

**Our Goals**

- Encourage professional growth by offering quality workshops, conferences, field experiences, and in-services in the Pacific Northwest.
- Share information and education materials focused on marine and aquatic environments and issues.
- Promote the magic of water as a catalyst for learning.
**2010-2011 NORTHWEST AQUATIC & MARINE EDUCATORS LEADERSHIP**

**Board of Directors**
- Alan Rammer, President, WA
- Sean “Bill” Hastie, Past-President, OR
- Fawn Custer, President-elect, OR
- Anne Nelson, Secretary, OR
- Rob Coats, Treasurer, OR
- Bill Hanshumaker, NMEA Rep, OR
- Nicole Nelson, Alaska Director
- Anne Stewart, British Columbia Co-director
- Eriko Arai, British Columbia Co-director
- Joy Tally, Oregon Director
- Amy Sprenger, Washington Director

**Communications Committee**
- Nora Deans, Co-chair, AK
- Sean “Bill” Hastie, Co-chair, OR
- Amy Sprenger, Flashmail Manager, WA
- Jennifer Magnusson, Webmaster, WA
- Gretchen Glaub, Scuttlebutt Editor, WA
- Tina Kelly, BC Correspondent
- Gordon Green, BC Correspondent
- Nancee Hunter, Oregon Correspondent
- Vicki Osis, Oregon Correspondent

**Committee Chairs**
- Gretchen Glaub, Membership Chair, WA
- Pat Willis, Award Chair, OR
- Debbie Smith, Mini-grants/Scholarships Chair, WA
**Conference at a Glance**

<table>
<thead>
<tr>
<th>Tuesday, July 12</th>
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<tbody>
<tr>
<td>3:00 pm</td>
<td>NAME Board Meeting</td>
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<tr>
<td>6:00 pm</td>
<td>Conference Committee meeting</td>
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<table>
<thead>
<tr>
<th>Wednesday, July 13</th>
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<tbody>
<tr>
<td>8:30 am</td>
<td>Registration Opens</td>
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<tr>
<td>9:00–12:00 pm</td>
<td>Elwha Tours or free time to explore OPI campus</td>
</tr>
<tr>
<td>10:00 am</td>
<td>SeaFaire Opens</td>
</tr>
<tr>
<td>11:30–12:30 pm</td>
<td>Lunch</td>
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<tr>
<td>12:30 pm</td>
<td>Welcome: <em>Kim Hanson</em>: OPI Interim Director; <em>Todd Suess</em>: Deputy Superintendent, Olympic National Park</td>
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<tr>
<td>1:00 pm</td>
<td>Opening Speaker: <em>Frances Charles</em>: Tribal Chairwoman, Lower Elwha Klallam Tribe</td>
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<tr>
<td>2:00–5:00 pm</td>
<td>Elwha Tours or Afternoon Workshops</td>
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<tr>
<td>5:00–6:00 pm</td>
<td>SeaFaire</td>
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<tr>
<td>6:00–7:00 pm</td>
<td>Dinner at OPI</td>
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<tr>
<td>7:00–9:00 pm</td>
<td>Poster Session and Dessert Reception</td>
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<tr>
<th>Thursday, July 14</th>
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<tr>
<td>7:30–8:30 am</td>
<td>Breakfast</td>
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<tr>
<td>8:30–10:00 am</td>
<td>Elwha Discussion Panel</td>
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<tr>
<td>10:00–12:00 pm</td>
<td>Concurrent Sessions</td>
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<tr>
<td>12:00–12:45 pm</td>
<td>Lunch and SeaFaire</td>
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<tr>
<td>12:45–1:45 pm</td>
<td>Speaker: <em>Julia Parrish</em>, University of Washington School of Aquatic and Fisheries Science</td>
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<tr>
<td>2:00–5:00 pm</td>
<td>Concurrent Sessions</td>
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<tr>
<td>5:00–5:30 pm</td>
<td>Chapter Meetings</td>
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<td>6:00–9:00 pm</td>
<td>Salmon BBQ on OPI Lawn</td>
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<th>Friday, July 15</th>
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<tr>
<td>7:30–8:30 am</td>
<td>Breakfast and pack lunches</td>
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<td>9:00–4:00 pm</td>
<td>Field trips</td>
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<td>5:00–6:30 pm</td>
<td>Dinner and speaker: <em>Lynda Mapes</em>, Author and journalist, Seattle Times</td>
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<tr>
<td>6:30–8:00 pm</td>
<td>Awards and Auction</td>
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<tr>
<td>8:00–11:00 pm</td>
<td>Dance</td>
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<th>Saturday, July 16</th>
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<tr>
<td>7:30–8:30 am</td>
<td>Breakfast</td>
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<tr>
<td>8:30–9:00 am</td>
<td>General Membership Meeting</td>
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<tr>
<td>9:00–9:45 am</td>
<td>Speaker: <em>Jan Newton</em>, University of Washington Applied Physics Laboratory</td>
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<tr>
<td>10:00–12:00 pm</td>
<td>Concurrent Sessions</td>
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<tr>
<td>12:00–1:00 pm</td>
<td>Lunch</td>
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<tr>
<td>1:00 pm</td>
<td>Closing Ceremony</td>
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**CONFERENCE DETAILS**

**Tuesday, July 12**

3:00 pm  NAME Board Meeting (Anders Administrative Office)

The NAME Board of Directors will meet in the Conference Room in the Anders Administrative Office. Board meetings are open to any NAME member who would like to sit in and hear what’s happening in the organization at the grass-roots level!

6:00 pm  Dinner in the Dining Hall and NAME Conference Committee meeting in the Cedar Room in the Rosemary Inn

**Wednesday, July 13**

8:30 am  Registration Opens (Rosemary Inn – Fireside Room)

✦ Please bring in your Auction Item to drop it off here
✦ Pick up map, program, bag of goodies
✦ Field trip check in, transportation volunteer sign up
✦ Message Board Available

9:00–12:00 pm  Elwha Tours or free time to explore OPI campus

This guided, three-hour driving tour will be your introduction to the Elwha River watershed and the changes to come upon removal of the Elwha and Glines Canyon dams. Along the way you will stop to get close up views of the Elwha Valley, learn from the Olympic Park Institute staff and have time to stretch your legs. Please sign up early to save a spot for this amazing tour. Offered free with registration!

✦ Please see the registration desk to sign up for an Elwha tour
✦ Meet at the Rosemary Inn 10 minutes prior to departure

10:00 am  SeaFaire Opens (Rosemary Inn – Cedar Room)

11:30–12:30 pm  Lunch (Assemble lunch plates in the Dining Hall, then move up to the Classroom Building)

12:30 pm  Welcome (Classroom Building)

**Kim Hanson**, Olympic Park Institute, Interim Director

**Todd Suess**, Deputy Superintendent, Olympic National Park
Wednesday, July 13 (Continued)

1:00 pm  Opening Speaker:  **Frances Charles**, Tribal Chairwoman, Lower Elwha Klallam Tribe

Frances G. Charles is an enrolled member of the Lower Elwha Klallam Tribe. Frances graduated in 1977 from the Port Angeles High School and she then went on to work with the Olympic National Forest Service devoting 12 years of service working with the fire crews and earning her way to one of the top crew leaders for our area. Frances is currently the Tribal Chairwoman for the Lower Elwha Klallam Tribe and has served the tribe for 16 years now.

She played a vital role in the recovery of Tse-whit-zen, one of the largest archaeological recoveries in the Northwest; Frances took a lead role in the negotiation process for the Ancient Klallam Village on behalf of her people and their ancestors, and as a leader for her community she did a great job in upholding Klallam Cultural Values. She has been involved in the culture of the Lower Elwha Klallam Tribe most of her life, she is an active supporter of the annual Tribal Canoe Journey as well as the language program, Indian Education and honoring Tribal Veterans, the youth and the elders of the Tribe.

2:00–5:00 pm  Elwha Tours (meet at the Rosemary Inn) or Afternoon Workshops

+ **Exploring Ocean Change in the Classroom and in the Field**  
  *Jacqueline Laverdure*, Olympic Coast National Marine Sanctuary  
  *Karen Matsumoto*, Seattle Aquarium  
  (Classroom Building – Left)

+ **Nature and Process of Science for Ocean Educators**  
  *Shawn Rowe*, Oregon State University  
  *Jude Apple*, Western Washington University  
  (Classroom Building – Right/Center)

+ **Facilitating Fabulous Student-Driven Field Investigations in B-WET and Beyond**  
  *Cara Ianni*, Stilly-Snohomish Fisheries Enhancement Task Force  
  *Breanna Trygg*, Pacific Education Institute  
  (Rosemary Inn – Science Lab)

+ **Discover and Dig Your Way to Understanding an Estuary**  
  *Joy Tally*, South Slough National Estuarine Research Reserve  
  (Amphitheater)

6:00–7:00 pm  Dinner (Rosemary Inn – Dining Hall)

7:00–9:00 pm  Poster Session and Dessert Reception (Classroom Building)

This year COSEE-Ocean Learning Communities, COSEE Pacific Partnerships and COSEE Alaska are hosting a poster session as a way to share research, citizen science projects and resources that have a watershed, marine, ocean science or learning science focus. This evening session will provide an opportunity for conference attendees to learn more about current projects and to talk directly with researchers, citizen scientists and educators.
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<tr>
<th>Time</th>
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<tr>
<td>7:30–8:30 am</td>
<td>Breakfast (Classroom Building)</td>
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<td>8:30–10:00 am</td>
<td>Elwha Discussion Panel (Classroom Building)</td>
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<td>Panelists:</td>
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<td><strong>Dean Butterworth</strong>, Outreach and Education Specialist, Olympic National Park</td>
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<td><strong>Sarah Morley</strong>, Research Fishery Biologist, NOAA’s Northwest Fisheries Science Center</td>
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<td><strong>Ian Miller</strong>, Coastal Hazards Specialist, Washington Sea Grant</td>
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<td><strong>Jennie Hoffman</strong>, Senior Scientist, EcoAdapt</td>
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<td>This is your chance to hear directly from the experts on the latest developments regarding the</td>
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<td>upcoming Elwha River Restoration. Each panelist will briefly discuss their role in this project,</td>
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<td>what they’ve been learning, why it matters to the community, and any lessons they’ve learned</td>
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<td>that might be especially interesting to educators. Bring your questions- there will be plenty</td>
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<td>of time for Q&amp;A about this exciting project.</td>
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<td>10:00 – 10:10 am</td>
<td>Morning Break (Classroom Building and Dining Hall)</td>
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<tr>
<td>10:10–11:00 am</td>
<td>Concurrent Session 1</td>
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<td></td>
<td><strong>Ocean acidification in the Pacific Northwest</strong></td>
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<td><em>Sarah Mikulak</em>, NANOOS/Applied Physics Lab-UW</td>
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<td>(Classroom Building – Left)</td>
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<td><strong>Peer Teaching: Connecting Deforestation, Erosion, and Aquatic Life in the Watershed</strong></td>
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<td><em>Beth Parsons, Kara Allan</em>, Taft Elementary</td>
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<td><em>MaryBeth Guerena</em>, Oceanlake Elementary</td>
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<td></td>
<td>(Classroom Building – Center)</td>
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<td><strong>Schools as Labs: Supporting Student Designed Research on Runoff</strong></td>
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<td><em>Stephen Streufert and Jason Winters</em>, Salish Sea Expeditions</td>
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<td>(Classroom Building – Right)</td>
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<td><strong>Cape Creek Watershed: How a curriculum team designed an outdoor school program</strong></td>
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<td><em>Robyn Medici, Ingrid Olson, Jennifer Stobie</em>, Lincoln County School District/OCAMP</td>
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<td>(Rosemary Inn – Science Lab)</td>
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Thursday, July 14 (Continued)

11:10 am–12:00 pm Concurrent Session 2

- The Indigenous Science of Northwest Coastal Peoples
  Gloria Snively, University of Victoria
  (Classroom Building – Left)

- Conservation Genetics in the Salish Sea: NOAA’s Teacher in the Lab Program
  Casey Ralston, NOAA Northwest Fisheries Science Center
  Michelle Wolski, Arlington High School
  Jennifer Duncan-Taylor, Port Angeles High School
  Jon Baker, Mariner High School
  (Classroom Building – Center)

- Gliders Observing the Coastal Waters of Washington & Oregon; Robots Are Our Friends
  Fritz Stahr, University of Washington School of Oceanography
  (Classroom Building – Right)

- B-WET SWIMS: Salmon and Watershed Education in Whatcom County
  Lindsay Taylor, Nooksack Salmon Enhancement Association
  (Rosemary Inn – Science Lab)

12:00–12:45 pm Lunch and SeaFaire (Rosemary Inn – Dining Hall and Cedar Room)

12:45–1:45 pm Speaker (Classroom Building)

Julia Parrish, University of Washington
School of Aquatic and Fisheries Science

Informal Science Education in the Marine Environment: People Making A Difference

In the past decade citizen science, or the pursuit of scientific education outside the boundaries of the classroom, has grown to incorporate thousands of programs and millions of people. Although often dismissed by academic and agency scientists as not rigorous, some citizen science programs are successful at marrying scientific rigor with relevance to local citizens such that program data are credible to all involved. Rigorous citizen science programs have the power to involve citizens in lifelong, lifewide learning, creating more informed and more active agents of change who can advocate for the continued health of their local environments and their communities.
Thursday, July 14 (Continued)

2:00–2:50 pm Concurrent Session 3

+ **Building Teaching Communities: A look at hosting an Informal Teaching Practicum for teachers-in-training**
  *Lindsay Bliek and Amy Stephenson,* Vancouver Aquarium
  (Classroom Building – Left)

+ **Seals, Satellites, and STEM: What does NASA have to do with ocean science?**
  *Katie Hart and Heidi Ebel,* Seattle Aquarium
  (Classroom Building – Center)

+ **Engaging students, educators, and scientists in a community of practice**
  *Alicia Christensen,* SMILE Program, Oregon State University
  (Rosemary Inn – Science Lab)

+ **Fostering Stewardship**
  *Jen Kidder and Katie Bovee,* Olympic Park Institute
  (Inglenook Fireplace Shelter)

2:50 – 3:30 pm Afternoon Break and SeaFaire (Rosemary Inn – Cedar Room)

3:30–5:00 pm Concurrent Session 4

+ **High and Dry? Teach your students to B-WET all the way to the coast and beyond!**
  *Jenna Kulluson, Tom Gaskill,* South Slough National Estuarine Research Reserve
  *Nancee Hunter,* Oregon Sea Grant
  *Trish Mace,* Oregon Institute or Marine Biology
  (Classroom Building – Left)

+ **Hazards on the Homefront—Teaching about Hazardous Household Products**
  (Classroom Building – Center)

+ **Science-Based Service Learning Projects—A Community Partnership**
  *Tara Morrow,* Western Washington University
  Huxley College of the Environment on the Peninsula
  *Port Angeles High School Students*
  (Rosemary Inn – Science Lab)

+ **Increasing awareness, knowledge and appreciation of nature using a unique field journaling system**
  *Pat Willis,* Oregon State University Extension
  (Rosemary Inn – Naturalist Room)

+ **Plenty-O-Fish!**
  *Kent Chapple and Shannon Walz,* Olympic Park Institute
  (Inglenook Fireplace Shelter)
**Thursday, July 14 (Continued)**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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</table>
| 5:00–5:30 pm | Chapter Meetings
  - Alaska (Gazebo)
  - British Columbia (Classroom Building)
  - Washington (Inglenook Fireplace Shelter)
  - Oregon (Amphitheater) |
| 6:00–9:00 pm | Salmon BBQ on OPI Lawn
  Join us for a traditional Salmon bake presented by members of the Lower Elwha Klallam Tribe |

**Friday, July 15**

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<th>Time</th>
<th>Activity</th>
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<tr>
<td>7:00 am</td>
<td>Sack lunch assembly available (Rosemary Inn – Dining Hall)</td>
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<tr>
<td>7:30–8:30 am</td>
<td>Breakfast and sack lunch assembly (Rosemary Inn – Dining Hall)</td>
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</table>
| 9:00–4:00 pm | Field trips
  **All-day Field Trips**
  - Hiking the Elwha Valley
  - Port Townsend Marine Science Center
  - Makah Museum and Cape Flattery
  **Morning Field Trips**
  - Salt Creek Tide Pooling
  - Exploring the Elwha River Nearshore Environment
  - Battelle Marine Labs, Pacific Northwest National Laboratory, US Department of Energy |
| 12:00–1:00 pm| Field trip sack lunch                                                      |
| 1:00–4:00 pm | Field trips
  **Afternoon Field Trips**
  - Dungeness Bay Birding
  - Recreational Paddle, Port Angeles
  - Canoe Lake Crescent |
Friday, July 15 (Continued)

5:00–6:30 pm  Dinner and speaker: Lynda Mapes. Author and journalist, Seattle Times (Rosemary Inn – Dining Hall and Cedar Room)

Lynda Mapes is a reporter and author who specializes in the natural history and native people of the Northwest. A reporter at the Seattle Times, she is working on a book published by the Seattle Times and the Mountaineers Press about the take down of the Elwha Dams, due out in fall, 2012. She is also researching and writing a special section on the dam removal project for the newspaper, which will be published this September. Her most recent book is Breaking Ground, published by the University of Washington Press in 2009 about the inadvertent discovery of the Tse-whit-zhen Village site on the Port Angeles waterfront during a state construction project. She also writes a series for the Seattle Times about natural history, called In Season, and the blog Field Notes, about nature and the outdoors for the paper. A resident of Seattle, she has been a daily newspaper reporter for more than 25 years, and won numerous regional and national awards for her work.

6:30–8:00 pm  Awards and Auction (Rosemary Inn – Cedar Room)

A great evening of fun, good food, music and dancing.

The NAME Awards are our chance to honor and recognize the work of NAME members who have put their hearts into aquatic and marine education.

The NAME Auction is always a conference highlight; the silent and live auction raises funds for NAME’s mini-grant and scholarship programs. Auction items are varied and donated by members and local organizations, you never know what will be on the table!

8:00–11:00 pm  Dance (Rosemary Inn – Cedar Room)

Join us for a lively dance with music provided by a favorite local DJ.
### Saturday, July 16

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<thead>
<tr>
<th>Time</th>
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<tr>
<td>7:30–8:30 am</td>
<td>Breakfast (Rosemary Inn – Dining Hall)</td>
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<tr>
<td>8:30–9:00 am</td>
<td>General Membership Meeting (Classroom Building)</td>
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<td>Besides the fact that U.S. non-profit law requires a general membership meeting once each year, this is an opportunity to learn the latest NAME innovations, programs, and plans for the future – and there are BIG plans, for a BIG conference in a BIG state to be hosted by NAME coming up next year…</td>
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<td>9:00–9:45 am</td>
<td>Speaker: <strong>Jan Newton</strong>, Applied Physics Laboratory, University of Washington (Classroom Building)</td>
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<td>Dr. Jan Newton is the Executive Director of NANOOS (the NW Association of Networked Ocean Observing Systems) where she guides the development of a collaborative and comprehensive ocean observing system for the Pacific Northwest’s coastal ocean and estuaries. Dr. Newton will touch upon what it takes to build such a system, how ocean observing is helping us understand regional issues such as hypoxia and ocean acidification and how bringing information and tools from ocean observing systems into education and outreach efforts can further ocean literacy.</td>
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<td>9:45 – 10:00 am</td>
<td>Morning Break (Classroom Building and Dining Hall)</td>
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<td>10:00–10:50 am</td>
<td>Concurrent Session 5</td>
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<td><strong>NOAA Resources to support Science and Social Studies learning for K-12 Audiences</strong></td>
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<td><em>Amy Sprenger</em>, NANOOS, Applied Physics Lab, UW</td>
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<td>11:00–11:50 am</td>
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<td><strong>Population Ecology and What Can Be Learned From a Little Poop</strong></td>
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<td><strong>Washed Ashore</strong></td>
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<td>12:00–1:00 pm</td>
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<td>Closing Ceremony (Dining Hall)</td>
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**Wednesday, 2:00 – 5:00 pm**

**CB-L**
Exploring Ocean Change in the Classroom and in the Field  
Jacqueline Lavedure, Olympic Coast National Marine Sanctuary; Karen Matsumoto, Seattle Aquarium

**CB-RC**
Nature and Process of Science for Ocean Educators  
Shawn Rowe, Oregon State University; Jude Apple, Western Washington University

**RI-SL**
Facilitating Fabulous Student-Driven Field Investigations in B-WET and Beyond  
Cara Ianni, Stilly-Snohomish Fisheries Enhancement Task Force; Breeanna Trygg, Pacific Education Institute

**AMPH**
Discover and Dig Your Way to Understanding an Estuary • Joy Tally, South Slough National Estuarine Research Reserve

**Thursday, 10:10 – 11:00 am**

**CB-L**
Ocean acidification in the Pacific Northwest • Sarah Mikulak, NANOOS/Appplied Physics Lab-UW

**CB-C**
Peer Teaching: Connecting Deforestation, Erosion, and Aquatic Life in the Watershed  
Beth Parsons, Kara Allan; Taft Elementary; MaryBeth Guerena; Oceanlake Elementary

**CB-R**
Schools as Labs: Supporting Student Designed Research on Runoff  
Stephen Streufert and Jason Winters; Salish Sea Expeditions

**RI-SL**
Cape Creek Watershed: How a curriculum team designed an outdoor school program  
Robyn Medici, Ingrid Olson, Jennifer Stobie; Lincoln County School

**Thursday, 11:10 – 12:00 pm**

**CB-L**
The Indigenous Science of Northwest Coastal Peoples • Gloria Snively, University of Victoria

**CB-C**
Conservation Genetics in the Salish Sea: NOAA’s Teacher in the Lab Program  
Casey Ralston, NOAA Northwest Fisheries Science Center; Michele Wolski, Arlington High School

**CB-R**
Giders Observing the Coastal Waters of Washington & Oregon; Robots Are Our Friends  
Fritz Stahr, University of Washington School of Oceanography

**RI-SL**
B-WET SWIMS: Salmon and Watershed Education in Whatcom County  
Lindsay Taylor, Nooksack Salmon Enhancement Association

**Thursday, 2:00 – 2:50 pm**

**CB-L**
Building Teaching Communities: A look at hosting an Informal Teaching Practicum for teachers-in-training  
Lindsay Bliek and Amy Stephenson; Vancouver Aquarium

**CB-C**
Seals, Satellites, and STEM: What does NASA have to do with ocean science?  
Katie Hart and Heidi Eber; Seattle Aquarium

**RI-SL**
Engaging students, educators, and scientists in a community of practice  
Alicia Christensen, SMILE Program, Oregon State University

**IFS**
Fostering Stewardship • Jen Kidder and Katie Bovee, Olympic Park Institute

**Thursday, 3:30 – 5:00 pm**

**CB-L**
High and Dry? Teach your students to B-WET all the way to the coast and beyond!  
Jenna Kulluson, Tom Gaskill; South Slough National Estuarine Research Reserve; Nancee Hunter, Oregon Sea Grant; Trish Mace, Oregon Institute or Marine Biology

**CB-C**
Hazards on the Homefront—Teaching about Hazardous Household Products  

**RI-SL**
Science-Based Service Learning Projects—A Community Partnership  
Tara Morrow, Western Washington University Huxley College of the Environment on the Peninsula; Port Angeles HS Students

**RI-NR**
Increasing awareness, knowledge and appreciation of nature using a unique field journaling system  
Pat Willis, Oregon State University Extension

**IFS**
Plenty-O-Fish! • Kent Chapple and Shannon Walz, Olympic Park Institute

**Saturday, 10:00 – 10:50 am**

**CB-L**
NOAA Resources to support Science and Social Studies learning for K-12 Audiences  
Casey Ralston, NOAA Northwest Fisheries Science Center, Peggy Foreman, NOAA Northwestern Regional Office

**CB-R**
A Bridge between the Sound and the Community • Woody Moses, Highline Community College

**RI-CR**
K-12 Estuary Education • Glen Alexander, Padilla Bay National Estuarine Research Reserve

**RI-SL**
USing authentic data to teach science concepts: MBARI’s EARTH Program, NEPTUNE CANADA and NANOOS  
Jennifer Magnussen, Monterey Bay Aquarium Research Institute; Natasha Ewing, Ocean Networks Canada, University of Victoria; Amy Sprenger, NANOOS, Applied Physics Lab UW

**Saturday, 11:00 – 11:50 am**

**CB-L**
Population Ecology and What Can Be Learned From a Little Poop • Adrianne Akmajian, Makah Fisheries Management

**CB-R**
Marine Science Activities for the Classroom  
Vanessa Hunt, Central Washington University; Rus Higley, Highline Community College

**RI-CR**
Washed Ashore • Jana Osterlund, Jo Train; Newport Intermediate School

**RI-SL**
Using authentic data to teach science concepts: MBARI’s EARTH Program, NEPTUNE CANADA and NANOOS  
(Continued)
WEDNESDAY AFTERNOON WORKSHOPS
Wednesday † July 13, 2011 † 2:00 PM – 5:00 PM

Exploring Ocean Change in the Classroom and in the Field
Jacqueline Laverdure, Olympic Coast National Marine Sanctuary
Karen Matsumoto, Seattle Aquarium
(Classroom Building – Left)

See what’s new in marine science education, and how it relates to the multitude of environmental issues that directly affect the way we do business and how we go about our everyday lives—and how this can be integrated into education practices. We will use a combination of PowerPoint slide show, hands-on activities, and small group discussion to explore the use of ocean science in teaching about ecosystems, field investigations, and conservation in a formal education setting.

Nature and Process of Science for Ocean Educators
Shawn Rowe, Oregon State University
Jude Apple, Western Washington University
(Classroom Building – Right/Center)

Much misunderstanding of current ocean and climate science stems from a lack of comfort with the nature and process of science. This workshop challenges educators and interpreters to articulate their own understanding of the nature of science and presents a model of scientific processes as complex and iterative. Educators will be introduced to interactive exercises, hands-on activities and group discussion to explore some basic principles for engaging learners in both structured and informal settings. The workshop will also address some of the challenges that face educators in creating an inclusive learning environment that honors prior knowledge and different cultural perspectives on science. Although these activities follow the Communicating Ocean Science to Informal Audiences (COSIA) curriculum and are geared towards informal settings, the skills and strategies are applicable to almost any learning environment, including structured classroom settings.

Facilitating Fabulous Student-Driven Field Investigations in B-WET and Beyond
Cara Ianni, Stilly-Snohomish Fisheries Enhancement Task Force
Breanna Trygg, Pacific Education Institute
(Rosemary Inn – Science Lab)

This presentation will provide an overview of the models, techniques and activities useful in facilitating student-driven field investigations of aquatic ecosystems. Using riparian habitat on campus, instructors will lead participants in first developing research questions and then using appropriate sampling techniques to investigate their questions. Participants will be provided with tips for ensuring student success in the field and tools, such as PEI’s Field Investigation Model and Project Based Learning Model, to empower teachers to construct meaningful investigations. Programs highlighted have received funding through NOAA B-WET, EPA and other environmental education grants.

Discover and Dig Your Way to Understanding an Estuary
Joy Tally, South Slough National Estuarine Research Reserve
(Amphitheater)

This workshop will travel to a Port Angeles City park to explore the habitats and organisms of the estuary. Hands-on activities will focus on simple tools you can use to dig, discover, determine, and divulge the secrets of the estuary. Workshop presenters will demonstrate effective strategies for engaging a wide variety of audiences in estuary science. Discover how to use local resources and simple techniques to unravel the magic of estuaries.
Ocean acidification is a term that is being heard more and more in the news, but what exactly does it mean, how does it work, and is it happening in the Pacific Northwest? In this session, I will present the most recent research and data from NANOOS and partners at the NOAA Pacific Marine Environmental Lab (PMEL) and Oregon State University to answer these questions. Newly developed education resources related to ocean acidification from NANOOS will also be introduced.

Peer Teaching: Connecting Deforestation, Erosion, and Aquatic Life in the Watershed
Beth Parsons, Kara Allan; Taft Elementary
MaryBeth Guerena, Matt Falby; Oceanlake Elementary

Presenters will discuss their “pilot” experience with peer teaching using an inquiry model and SIOP strategies, to reinforce key vocabulary and increase scientific discussion and written communication. 6th grade students facilitated an inquiry to explore the impact of deforestation on erosion, aquatic life, and a watershed. 3rd and 4th grade students worked with 6th graders to create a model, develop hypotheses, and make observations, conclusions and connections. Resources will be made available.

Schools as Labs: Supporting Student Designed Research on Runoff
Stephen Streufert and Jason Winters, Salish Sea Expeditions

The workshop will chronicle the pathway that has led us to the development of a modular plans that allow students to use a school’s campus and surrounding areas to gather samples and analyze key parameters. Presenters will share how students follow the scientific method, including presenting results at the Salish Sea Student Science Symposium. Participants will leave with ample information and resources to develop a similar program.

Cape Creek Watershed: How a curriculum team designed an outdoor school program
Robyn Medici, Ingrid Olson, Jennifer Stobie; Lincoln County School District/OCAMP

Three Crestview Heights teachers will share how their curriculum study team designed and implemented a science-based outdoor school program. The “place-based” instruction focused on observation and inquiry in the Cape Perpetua Watershed. Scientists, informal educators, and community expert volunteers helped lead the students through a day of science exploration and discovery with a variety of fun, hands-on activities.
Concurrent Session 2 • Thursday • 11:10 AM – 12:00 PM

The Indigenous Science of Northwest Coastal Peoples
Gloria Snively, University of Victoria
(Classroom Building – Left)

Indigenous science relates to both the science knowledge of long-resident, usually oral culture peoples, as well as the science knowledge of all peoples who as participants in culture are affected by the worldview and practical interests of their home communities. This presentation describes many examples from Canada and around the world of indigenous people's contributions to science, environmental understanding and sustainability. Special attention will be given to BC examples of marine related traditional ecological knowledge and wisdom. The presenter argues the view that Western or modern science is just one of many sciences that need to be addressed in the science classroom.

Conservation Genetics in the Salish Sea: NOAA’s Teacher in the Lab Program
Casey Ralston, NOAA Northwest Fisheries Science Center; Michelle Wolski, Arlington High School
Jennifer Duncan-Taylor, Port Angeles High School; Jon Baker, Mariner High School
(Classroom Building – Center)

We’ll provide an overview of NOAA and NOAA Fisheries education resources, specifically highlighting programs that provide research experiences for educators (i.e. Teacher at Sea). Come meet local teachers who are participating in an ongoing Teacher in the Lab pilot project at NOAA’s Mukilteo Research Station. We’ll discuss our research on conservation genetics and let you know how we are taking what we’ve learned back into our classrooms to create locally relevant lessons for our students.

Glider Observing the Coastal Waters of Washington & Oregon, Robots Are Our Friends
Fritz Stahr, University of Washington School of Oceanography
(Classroom Building – Right)

The ocean has many features we cannot observe well because it’s hard to be there continually via ships, our primary sampling platform. To help, various robotic instruments have been developed in the last two decades, including underwater gliders, several of which are observing off the Oregon and Washington coasts right now. This talk will illustrate the power of these robots for a variety of science missions, and focus on a Seaglider that’s being operated by the Northwest Association of Networked Ocean Observing Systems at present. We’ll discuss the intricacies of piloting it and, depending on current mission status, take control for a few dives.

B-WET SWIMS: Salmon and Watershed Education in Whatcom County
Lindsay Taylor, Nooksack Salmon Enhancement Association
(Rosemary Inn – Science Lab)

The Nooksack Salmon Enhancement Association’s (NSEA’s) salmon and watershed ecology-focused Student Watershed Investigations and Marine Science (SWIMS) program provides 4th – 6th grade students in all seven Whatcom County school districts with local and relevant environmental science and stewardship experiences. SWIMS provides local youth with the opportunity to explore their watershed in a hands-on way by participating in lessons and activities that use inquiry-based science to study freshwater and marine ecosystems. Students also engage in protecting and restoring watersheds by implementing a streamside habitat restoration project.
Concurrent Session 3 ✶ Thursday ✶ 2:00 PM – 2:50 PM

Building Teaching Communities: A look at hosting an Informal Teaching Practicum for teachers-in-training
*Lindsay Bliek and Amy Stephenson; Vancouver Aquarium*
(Classroom Building – Left)

We all know that learning does not just take place in the classroom, yet teacher-training programs tend to concentrate their efforts on grooming teachers-in-training for that learning environment. Over the years, the Vancouver Aquarium has developed and offered a three-week long Informal Teaching Practicum (ITP) for some of these teachers in partnership with several universities. Let us share our experiences with you and consider developing a similar program for your own aquarium, marine or nature centre, or museum to help foster building partnerships in your community and promote effective teaching practices, both formal and informal.

Seals, Satellites, and STEM: What does NASA have to do with ocean science?
*Katie Hart and Heidi Ebel; Seattle Aquarium*
(Classroom Building – Center)

What does NASA have to do with ocean science anyway? More than you might think. Find out how NASA’s Earth Observing Satellites help us to better understand our home planet, including the 70% that is covered by water. Try some interactive tools and games developed by NASA and the Seattle Aquarium to bring STEM (science, technology, engineering, and math) and ocean science concepts to life. Learn how NASA and NOAA have partnered to study northern fur seals and how the Seattle Aquarium is helping them share their findings with the public. Discover NASA resources you can access for your own marine education program.

Engaging students, educators, and scientists in a community of practice
*Alicia Christensen, SMILE Program, Oregon State University*
(Rosemary Inn – Science Lab)

How do you engage scientists in meaningful and effective education and outreach? How can K – 12 students and teachers be exposed to college, scientists, and current scientific research? This session will answer these questions by looking at the SMILE (Science and Math Investigative Learning Experiences) high school problem-solving challenge model, which brings ocean research scientists, graduate students, undergraduate students, and K – 12 teachers and students together into a community of practice.

Fostering Stewardship
*Jen Kidder and Katie Bovee, Olympic Park Institute*
(Inglenook Fireplace Shelter)

Join Olympic Park Institute staff for an interactive exploration of methods that build student understanding of connections between themselves, their actions, and the world. Discover and share new ways of using discussion, exploration, play, and food to help students develop their values and foster stewardship actions.
High and Dry? Teach your students to B-WET all the way to the coast and beyond!
Jenna Kulluson, Tom Gaskill; South Slough National Estuarine Research Reserve
Nancee Hunter, Oregon Sea Grant; Trish Mace, Oregon Institute of Marine Biology
(Classroom Building – Left)

Join educators from the Oregon Coast Education Program as we share ways we have explored through a NOAA B-WET grant to work with partners in the drier parts of Oregon, as we seek to engage teachers and students in meaningful watershed education experiences that reach from the crest to the coast. We will share resources and ideas both indoors and out on an interactive watershed walk developed as a part of the program. We hope to learn from other talented NAME educators through discussion on what works well and what has yet to be tried! Participants will receive a resource field journal.

Hazards on the Homefront—Teaching about Hazardous Household Products
Joanne Lind, Hazardous Waste and Toxics Reduction Program,
Washington State Department of Ecology
(Classroom Building – Center)

What are common hazardous household products? How can your students learn to make informed choices, for their health and the environment? Teach these concepts using the Hazards on the Homefront (HHF) curriculum. HHF includes lessons on the selection, use, and disposal of hazardous household products. There are two versions: one for grades 6 – 12, the other for grades 4 – 6. Each lesson identifies which learning objectives (Washington EALRs) are met. This session will include an overview of all lessons, with demonstrations of lessons on analyzing labels and routes to the environment. Come get your free CD with the complete curriculum!

Science-Based Service Learning Projects—A Community Partnership
Tara Morrow, Western Washington University Huxley College of the Environment on the Peninsula;
Port Angeles High School Students
(Rosemary Inn – Science Lab)

This presentation will provide a hands-on modeling experience. It will engage participants in a program developed to involve students in real-world, science-based service learning projects. The session includes an indoor project and an outdoor field lesson along Lake Crescent. Participants will discover a project that can be used in a variety of settings. Participants work through a sample of the project, discuss place-based science topics while walking near Lake Crescent, develop an Essential Question to provide focus for a scientific inquiry and create an ecosystem description. Session participants will receive a complete curriculum packet that can be used for senior culminating or other student projects perfect for formal or non-formal educators and community partners.
CONCURRENT SESSION 4 (CONTINUED)

Increasing awareness, knowledge and appreciation of nature using a unique field journaling system
Pat Willis, Oregon State University Extension
(Rosemary Inn – Naturalist Room)

Einstein, Hemmingway, Darwin, Lewis & Clark; all of these people had something in common, they kept a journal. A journal is much more than a log or diary and can be a very important component in positive youth development, connecting kids with outdoor settings and sense of place. Participants leave with their own field journal, a pragmatic and effective journaling system, and journaling techniques that connect both the left and right brain to outdoor learning experiences. Findings from a student field journaling research project conducted in the fall of 2010 will be shared providing assessment strategies embedded in field journals.

Plenty-O-Fish!
Kent Chapple and Shannon Walz, Olympic Park Institute
(Inglenook Fireplace Shelter)

There’s plenty o’ fish in the sea… or is there? Step onto the slippery (imaginary) deck of your own commercial fishing boat in this fast-paced and fun classroom activity from Olympic Park Institute’s marine curriculum that gives you a chance to balance economics with ecology. Race to fill your boat with delicious paperfish before the season closes (or before your competitors get them first!), then sell them at market to sustain your boat, purchase gear and upgrades, and feed your family. But don’t get carried away, the paperfish is an endangered delicacy, and there’s no guarantees next seasons catch will be as good as the last one. It’s not like they grow on trees! You might even find yourself in the role of a research biologist trying to monitor their fluctuating populations, implementing management regulations and even issuing hefty fines to violators!

CONCURRENT SESSION 5 ✨ SATURDAY ✨ 10:00 AM – 10:50 AM

NOAA Resources to support Science and Social Studies learning for K-12 Audiences
Casey Ralston, NOAA Northwest Fisheries Science Center
Peggy Foreman, NOAA Northwest Regional Office
(Classroom Building – Left)

Come learn about a few of NOAA’s NEW resources for teachers and other educators. We are proud to present our new SEM (Scanning Electron Microscopy) poster and want to highlight a few activities that could be easily adapted in your classrooms. Students can learn more about fish eggs, diatoms, and sensory adaptations of marine species. Help your students learn how real-life scientists are using microscopes to study marine ecosystems. As you know, integration is a powerful way of presenting information to students. NOAA’s NWRO has been working on three themes (Sustainable Fisheries, Salmon Habitat, and Killer Whale Recovery) to provide background information on these topics to support student accomplishments, one of the WA State Social Studies Classroom Based Assessments.
CONCURRENT SESSION 5 (CONTINUED)

A Bridge between the Sound and the Community
*Woody Moses*, Highline Community College
(Classroom Building – Right)

The Marine Science and Technology (MaST) Center is the marine laboratory for Highline Community College. MaST is dedicated to expanding knowledge about the Puget Sound and the surrounding environment through teaching, outreach, and research. In addition to several college-level classes including Marine Biology and Oceanography, the MaST Center also hosts dozens of K – 12 visits each year and a Summer on the Sound kids camp. Come learn about this great community resource right in your own back yard and discuss ways in which you and your colleagues can collaborate with a truly unique marine educational experience.

K-12 Estuary Education
*Glen Alexander*, Padilla Bay National Estuarine Research Reserve
(Rosemary Inn – Cedar Room)

Padilla Bay Reserve has been offering on-site, hands-on field experiences since 1982. For the last few years we’ve received B-WET funds to align the program with Meaningful Watershed Education Experiences. In this presentation you’ll hear what Padilla Bay Reserve does to educate students and teachers about estuary science.

Using authentic data to teach science concepts: MBARI’s EARTH Program, NEPTUNE CANADA and NANOOS
*Jennifer Magnusson*, Monterey Bay Aquarium Research Institute
*Natasha Ewing*, Ocean Networks Canada, University of Victoria
*Amy Sprenger*, NANOOS, Applied Physics Lab UW
(Rosemary Inn – Science Lab; 1½-hour presentation)

Ocean observing systems provide educators with authentic real-world information on what is happening in our ocean in real-time. Designed by classroom teachers and informal educators across the country, the EARTH program integrates this near-real-time data from ocean observatories with existing educational standards and tested curriculum in an interactive and engaging way. This session will provide an introduction to the EARTH program, and an in-depth exploration of the activities and resources available on the website: [http://www.mbari.org/earth/](http://www.mbari.org/earth/). In addition, data and education resources from two regional ocean observing systems in the Pacific Northwest: Ocean Networks Canada Observatory (VENUS and NEPTUNE Canada) and NANOOS (NW Association of Networked Ocean Observing Systems) will be demonstrated. Participants are encouraged to bring their own laptops in order to personalize and extend the website exploration.
Concurrent Session 6 ★ Saturday ★ 11:00 AM – 11:50 AM

Population Ecology and What Can Be Learned From a Little Poop
Adrienne Akmajian, Makah Fisheries Management
(Classroom Building – Left)

Makah Fisheries Marine Mammal program is currently undergoing a study to compare and identify prey of Steller and California sea lions on the North Coast of WA State. The presentation will describe our goals, methods for collection, processing, and identifying prey species, and other information than can be gathered from scat. Participants will process their own “sea lion scat” and get ideas for use in the classroom.

Marine Science Activities for the Classroom
Vanessa Hunt, Central Washington University
Rus Higley, Highline Community College
(Classroom Building – Right)

Marine science is an engaging field for the majority of students from upper elementary grades through college general science electives, and one in which appropriate activities can address objectives in biology, chemistry, physics, earth science, mathematics, and technology. The presenters are involved in science teaching from grades 5 – 16, and offer a demonstration of sample classroom lab activities we have developed that bring marine issues into the classroom while addressing state standards, and that can be carried out with easily available equipment.

Washed Ashore
Jana Osterlund, Jo Train; Newport Intermediate School
(Rosemary Inn – Cedar Room)

We will share an ocean literacy project that was completed with 6th graders and Artist Angela Hasseltine Pozzi. Students learned about ocean currents, gyres and marine debris. They collected debris from local beaches and created masks and sculptures. It was integrated with creative writing as well. We will share how we accomplished this with community partnerships.

Using authentic data to teach science concepts: MBARI’s EARTH Program, NEPTUNE CANADA and NANOOS
Jennifer Magnusson, Monterey Bay Aquarium Research Institute
Natasha Ewing, Ocean Networks Canada, University of Victoria
Amy Sprenger, NANOOS, Applied Physics Lab UW
(Rosemary Inn – Science Lab; Continued)

Ocean observing systems provide educators with authentic real-world information on what is happening in our ocean in real-time. Designed by classroom teachers and informal educators across the country, the EARTH program integrates this near-real-time data from ocean observatories with existing educational standards and tested curriculum in an interactive and engaging way. This session will provide an introduction to the EARTH program, and an in-depth exploration of the activities and resources available on the website: http://www.mbari.org/earth/. In addition, data and education resources from two regional ocean observing systems in the Pacific Northwest: Ocean Networks Canada Observatory (VENUS and NEPTUNE Canada) and NANOOS (NW Association of Networked Ocean Observing Systems) will be demonstrated. Participants are encouraged to bring their own laptops in order to personalize and extend the website exploration.
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