

Northwest Environmental Training Center presents:



## Emergency Flood Hazard Assessment & Protection Measures

Course ID: HYD-406

May 30 - 31, 2007, 8 A.M. to 5 P.M. (2 Days) - rescheduled from April 26 - 27, 2007.  
Snohomish County Administrative Building East  
Meeting Room 07, First Floor  
3000 Rockefeller Avenue  
Everett, Washington 98201

**Instructors:** Tim Abbe, PhD, LEG, LHG; Laura Musikanski, JD, MBA  
Roger Peters, PhD, U.S. Fish and Wildlife Service  
Randel Perry, U.S. Army Corps of Engineers  
Jim Park, Washington State Department of Transportation

**Description:** Due to their inherent urgency, emergency flood and erosion responses tend to be exempt from environmental regulations, and often lack the science and engineering that goes into non-emergency projects. Rapid response tends to lead to relatively crude applications of shoreline protection such as end dumping rip rap that may later require mitigation. Individual emergency response actions are typically limited in geographic extent with minimal environmental impacts. But cumulatively, year after year, emergency responses can have significant impacts and transform relatively pristine rivers into armored ditches. This course provides tools for assessing the magnitude and extent of flood emergencies, and provides a number of environmentally sensitive rapid response protection measures that integrate into long term solutions.

### Course Topics

#### Overview of Flood and Erosion Emergencies:

- policy
- damages
- cost

#### Overview of Applicable Fluvial Geomorphology

#### Environmental Implications of Emergency Flood and Erosion Protection

#### Risk Assessment:

- Evaluating costs
- Prioritization
- Decision Trees
- Cost/Benefit

#### Action Alternatives:

- Short-term vs. Long-term
- Mitigation vs. Self-mitigating

#### Typical Response Designs:

- wood
- rock
- floodplain benches
- riparian buffers
- increasing complexity

#### Regulatory Compliance

#### Case Studies

**Intended Audience:** This course is intended for engineers, biologists, and ecologists seeking an improved understanding of emergency flood and erosion hazard assessment and protection measures.

**Prerequisites:** A basic understanding of fluvial geomorphic processes is required.

**Course Materials:** Each participant will receive a copy of the course proceedings and reference material.

**What to Bring:** Please bring a pen or pencil and a water bottle.

**Credit:** 2.0 Continuing Education Units (CEUs)

**Registration:** \$350 (\$295 reduced tuition is available to Native American Tribes; nonprofits; government agencies; students; and NEBC, NWAEP, and NAEF members). You may register via the attached registration form or by calling the Northwest Environmental Training Center at (206)762-1976.

**Cancellation Policy:** Registration fees are fully refundable up to 7 days before to the event and 50 percent refundable thereafter. Registration may occur up to the day prior the event provided that space is available.

To find out more about NWETC's programs, please call or send us an email at [info@nwetc.org](mailto:info@nwetc.org).

#### Northwest Environmental Training Center

A nonprofit 501(c)(3) program of the Northwest Environmental Education Council  
650 S. Orcas Street, Suite 220, Seattle, Washington 98108  
Phone: (206)762-1976, Fax: (206)762-1979  
[www.nwetc.org](http://www.nwetc.org)

# Location Map Snohomish County Facilities in Everett, Washington

**INDEX BELOW**



## MAP INDEX

**NOTE:** The address for all central campus facilities (Admin EAST & WEST, Courthouse, Mission, etc.) is: 3000 Rockefeller, Ave., Everett, WA 98201

**A - Administration EAST**  
3000 Rockefeller Ave  
**Customer Srvs Center 1st Fl**

**G - County Jail**  
3025 Oakes Ave  
**County Work Release**



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## REGISTRATION FORM

Name: \_\_\_\_\_ Today's Date: \_\_\_\_\_

Agency/Organization: \_\_\_\_\_

Street Address: \_\_\_\_\_ Mail Code: \_\_\_\_\_

Street Address (cont.): \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_ Title: \_\_\_\_\_

### Course:

**Emergency Flood Hazard Assessment & Protection Measures (HYD-406)** \$ \_\_\_\_\_

May 30 - 31, 2007, 8 A.M. to 5 P.M. at Snohomish County Administrative Building East  
3000 Rockefeller Avenue, Everett, WA 98201. Registration: \$350 (\*\$295)

(rescheduled from April 26 - 27, 2007)

\*Reduced rates for nonprofits; Native American Tribes; students; and NEBC, NAEP, NWAEP members.

Payment Method: Check  PO  Credit Card (Visa or Mastercard)  Total: \$ \_\_\_\_\_

Credit Card or PO #: \_\_\_\_\_ Exp: \_\_\_\_\_

### Notes:

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