

# Headwaters to Sea Professional Development for Educators

## *A Summer Salmon Institute*

### **FREE training workshop series in 2010 and 2011**

NOAA Bay-Watershed Education Training (B-WET) partners with SPAWN to provide a series of classroom and field activities highlighting ways to incorporate coho salmon conservation, watershed and ocean ecology into all aspects of your education programs.

**\*Acquire lesson plans, curricula, tools and experience**

**\* New expert instructors each day**

**\* Up to 4 C.E.U.s from Dominican University(inquire for details)**

**\* Train, learn, and earn credit immersed in the beautiful watersheds of West Marin**

**\* Stipends offered to those in Title 1 schools**

Salmon provide a critical connection between the ocean and inland watershed health, and our land use practices at school and at home affect this vital connection. SPAWN staff and expert guests will detail the pedagogy of a meaningful watershed experience and participants will gain the tools and skills to provide their students a meaningful watershed experience with SPAWN.

**The Headwaters to Sea program launched the inaugural Summer Salmon Institute July 12-16, 2010!**

[Contact Carrie Sendak for details](#), (415) 663-8590 x109

[NOAA B-WET California informational website defines program and meaningful watershed experience goals.](#)

### **Agenda for the Summer Salmon Institute**

#### Monday: Defining A Meaningful Watershed Experience and The Salmon Connection

Classroom AM: Definition and pedagogy of a Meaningful Watershed Experience, Salmon Biology, and Salmon Decline Discussion.

Exercise AM: Use of maps to define oceans, watershed, creeks, geology, land ownership, land use.

Exercise PM: Habitat Mapping from Headwaters to Sea at 3 sites; Ephemeral Creeks, Floodplains, and Estuary.

Classroom PM: Evaluate and discuss habitat transitions from headwaters to sea.

#### Tuesday: Habitat Restoration in your Watershed - with co-instructor from the California Department of Fish and Game.

Classroom AM: Salmon Recovery Priorities and Human Impacts on Salmon Habitat: Streambank Erosion, Invasive Plants, and Restoration

Exercise AM: Native Seed Collection and Propagation

Exercise PM: Flora/Fauna Identification and native plant restoration.

Classroom PM: Habitat Restoration Results and Improvements

#### Wednesday: Hydrological Quality and Quantity in a Watershed - with co-instructor from the San Francisco Regional Water Quality Control Board.

Classroom AM: Hydrological cycle and Human Impacts on Salmon Habitat: Water Quality and Quantity

Exercise AM: Techniques to Assess Water Quality and Quantity.

Exercise PM: Water Quality Field Testing and Relocation of Stranded Salmonids.

Classroom PM: Discussion and results for Water Quality Testing and Fish Relocation

#### Thursday: Hydrological Conservation in your Watershed - with lead instructor Paola Bouley, Conservation Program Director at SPAWN.

Classroom AM: Human Impacts on Salmon Habitat: Land-use impacts on hydrologic cycles and Ocean Conditions.

Exercise AM: Designing a rainwater harvesting system and raingardens for a school.

Exercise PM: Tour of rainwater harvesting systems and raingardens.

Classroom PM: Calculating impervious surfaces and run-off.

Evening: Barbecue Dinner and Guest Speaker!

Friday. The Salmon Watershed Quality Audit - with lead instructor Todd Steiner, Executive Director of the Turtle Island Restoration Network and SPAWN.

Classroom AM: Making the Connection in your Watershed: Summary of "A Meaningful Watershed Experience."

Exercise AM: Salmon Watershed Quality Audit using watershed maps.

Exercise PM: Field assessment of Salmon Watershed Quality Audit.

Classroom PM: Discuss future Audits, complete evaluations, using techniques learned to provide a meaningful watershed experience to students, and encourage future leadership.