



SALMON PROTECTION AND WATERSHED NETWORK
NOAA Bay-Watershed Education & Training (B-WET)



Headwaters to Sea: 2nd Annual Salmon Institute

*Professional Development Training
For Teachers
July 18th - 22nd, 2011*



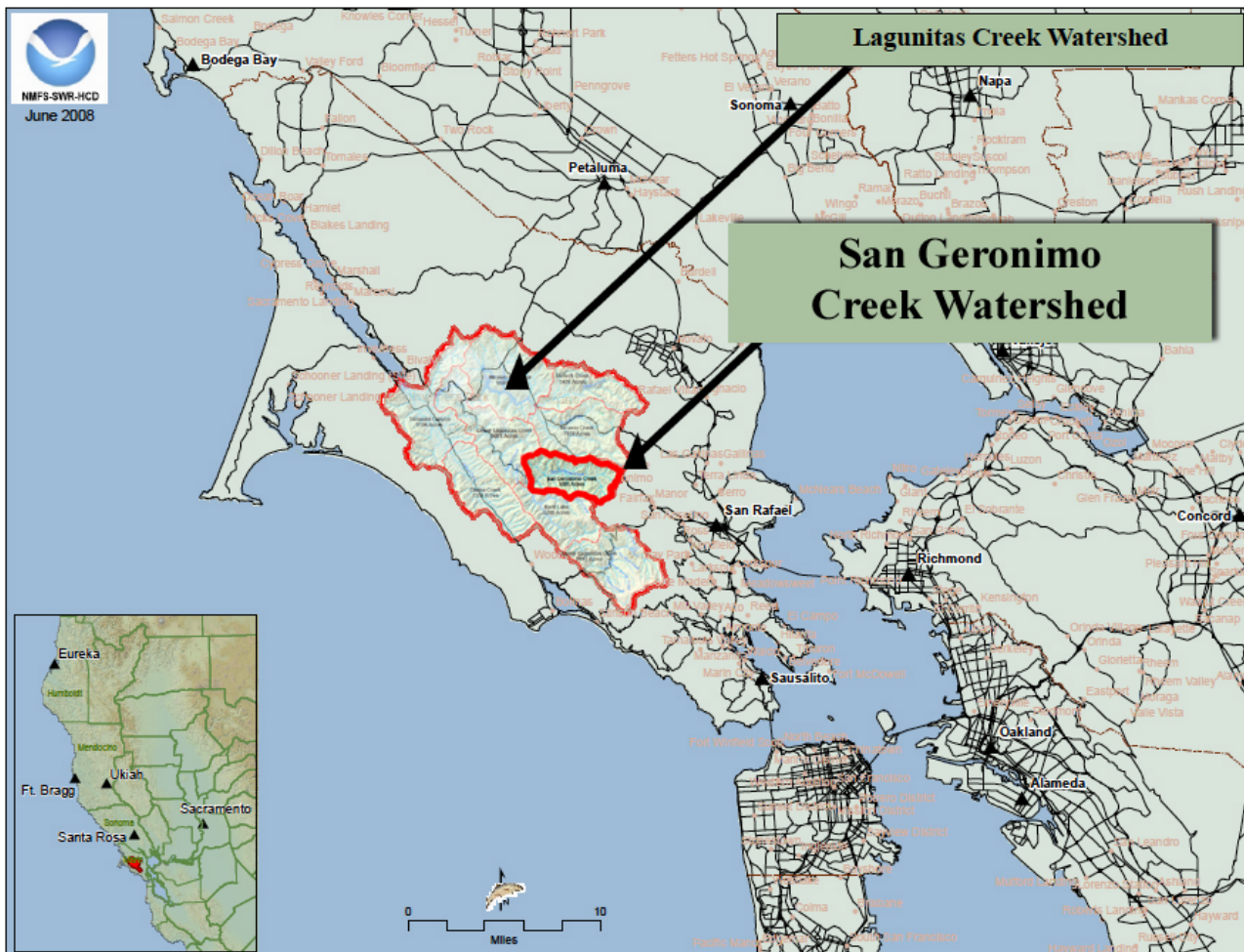
*A classroom and field focus on the pedagogy of providing a
Meaningful Watershed Experience to students of all ages.*

**Presented by the Salmon Protection and Watershed Network (SPAWN) in
the Lagunitas Creek watershed, Marin County, home to the largest wild
run of endangered coho salmon in Central California!**

www.SPAWNusa.org/BWET



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The Lagunitas Creek watershed, Marin County, is home to the largest wild run of endangered coho salmon in Central California.

The *Summer Salmon Institute* field exercises take place along San Geronimo Creek and Lagunitas Creek from their headwaters in Woodacre to the estuary and gateway to the sea in Pt Reyes Station.

Classroom and field instruction will take place at Pt Reyes National Seashore, San Geronimo Valley, and at the SPAWN headquarters along Lagunitas Creek at 9255 Sir Francis Drake Blvd. in the area of historic Tocaloma.

**www.SPAWNusa.org/BWET
(415) 663-8590 x 109, or email: carrie@spawnuma.org
Limited space, reserve your spot early!**



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Professional Development Training
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Introduction

The Salmon Protection and Watershed Network (SPAWN) is pleased to offer the 2nd annual Salmon Institute professional development training experience in partnership with NOAA's Bay-Watershed Education and Training (B-WET) program. Focused on the connections that salmon provide between oceans and inland watersheds, this five-day training combines expert instructors with standards based curriculum and hands-on experience to provide teachers the skills and tools to connect their students to their watersheds year-round.

Classroom and field training is located in beautiful West Marin and consists of exploring creeks, redwoods, and other wild places with experts in the field. In-depth standards based materials will be distributed daily with a focus on ocean ecology, the natural history of coho salmon, and how water and land-use practices affect the health of inland watershed and coastal marine ecosystems and their ability to support healthy salmon.

The *Summer Salmon Institute* is a free, five-day workshop for all educators. Continuing Education Units (CEU) from Dominican University are also available. Educator stipends are available for those who work in Title 1 schools.

**Instruction and materials are free, but fees apply to earn CEUs. Inquire for details.
Residence is not provided, but local accommodations are available.**

Monday: Oceans and Watersheds: The Salmon Connection, co-instructor from NOAA National Marine Sanctuary.

Tuesday: Taking Action for Salmon Conservation and Restoration, co-instructor from National Park Service.

Wednesday: The Essential Salmon Habitat: Plants, Water, Bugs, Oh My!, co-instructor from Tomales Bay Watershed Council Watershed Council.

Thursday: Hydrological Conservation at the Watershed Scale, co-instructor from SPAWN's 10,000 Rain Gardens Project.

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

To register and secure your spot, or for more information, contact Carrie Sendak, carrie@spawnusa.org, (415) 663-8590 x109,
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SPAWN is comprised of a team of dedicated and experienced environmental educators and scientists, and summaries of their qualifications are as follows:

Todd Steiner, Executive Director and founder of SPAWN and its sister project the Sea Turtle Restoration Project, has nearly 30 years experience in environmental education and protection. He holds a B.S. in Conservation Nature Interpretation, a M.S. in Biology, has led field research on endangered sea turtles in Florida, Mexico, and Nicaragua, and has worked for the U.S. National Park Service, Museum of Natural History, and as Director of Earth Island's highly successful Save the Dolphin Project. Todd's career as an environmental educator is equally impressive, having served as a lecturer at Florida International University and as an invited speaker at the Salmonid Restoration Federation Conference, Environmental Forum of Marin, University of San Francisco Law School, International Forum on Globalization, UNESCO's Wildlife in the Everglades and Latin American Wetlands Symposium, and was an invited lead educator at the Interpretive Training Program for the Everglades National Park.

Carrie Sendak, SPAWN's Watershed Biologist and Salmon Institute Coordinator, has over 4 years experience developing curriculum and teaching environmental education programs. She also has over 10 years experience in ecological research and monitoring with the USFWS, USGS, and USFS on a various number of species and habitats. She earned a B.S. in Biology from Florida Southern College and a M.A. in Biology from Humboldt State University, conducting research on the spatial distribution and occupancy of frogs. Carrie held teaching positions in undergraduate environmental courses at Humboldt State University, has developed and taught salmon conservation to K-12 classes, and has developed environmental curriculum for Youth Conservation Corps (a program of the USFWS) and the federal TRIO Upward Bound Program. She has also trained several interns and field technicians on an array of ecological research projects.

Aaron Fairbrook, SPAWN's Watershed Scientist has nearly 4 years of experience leading landowner workshops in constructing restoration projects and 9 years experience implementing soft engineering restoration projects in Washington and California. He earned a B.S. in Environmental Science from Willamette University and a M.S. in Environmental Science from Washington State University, researching four watersheds and their restoration approach for aquatic life enhancement and sediment reduction. Past experiences include working for the Dept. of Fish and Game and the California Conservation Corps as a Fish Habitat Assistant and Prunuske Chatham, Inc. on a variety of stream and salmonid habitat restoration projects. He has participated with a variety of age groups on native riparian planting projects and was involved in educational experiences on watersheds and their importance for young children in State Parks.

Diana Baestcher, SPAWN Intern, AmeriCorps Watershed Stewards Member and Salmon Institute Educational Assistant graduated in 2009 from St. Olaf College in Minnesota, with degrees in biology and political science. Through SPAWN and AmeriCorps, she has developed, adapted, and co-taught two six-week salmonid curriculum courses for elementary school students. Diana also led K-12 and college students, and volunteers in restoration ecology experiences, naturalist interpretation walks, in-class salmonid presentations, and streamside biological monitoring activities.

Emi Bauman, SPAWN Intern and AmeriCorps Watershed Stewards Member graduated from UC Santa Cruz in 2009 with a B.A. in Environmental Studies and has been an AmeriCorps member with the Watershed Stewards Project for 8 months. In her time as an AmeriCorps intern at SPAWN, she has taught hundreds of students K-12 about salmon life cycle, habitat, and anatomy as well as led field trips to local creeks to discuss salmon conservation. She has also led weekly salmonid habitat restoration workshops with volunteer groups such as college classes, K-12 groups, clubs, and individual volunteers.

Taylor Tan, SPAWN Intern has worked with children K-6 while planting a native plant garden at the Lagunitas School, teaching them about the importance of a healthy riparian corridor and how native plants can help improve a disturbed system. He has also been at a number of large environmental-themed expositions, handing out materials and teaching the public and children about SPAWN's mission the life-cycle of Coho salmon. He graduated from UC Berkeley with a degree in Environmental Science.

Chris Dudenhoeffler, SPAWN Intern graduated from UC Santa Cruz with a B.S in Marine Biology. He has a strong interest in fishery science, marine conservation, and habitat restoration. Chris worked as an undergraduate Intern on a Coral recruitment study of Midway Atoll and was a Resident Assistant and student leader on campus. He received the Terence Freitas College Service award for student outreach and community service on and off campus. Chris is currently pursuing a certificate in Geographic Information Systems, and will be pursuing a M.S. in Biology.

To register and secure your spot, or for more information, contact
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Headwaters to Sea: Summer Salmon Institute Daily Agenda



July 18, 2011

Red Barn Classroom at Pt. Reyes National Seashore, 70 Bear Valley Rd.
Pt. Reyes Station, CA 94956

Day 1: Oceans and Watersheds: The Salmon Connection

- 9:00 am Welcome, Introductions, Goals for the Day; Carrie Sendak
- 9:20 am Defining a Meaningful Watershed Experience and Pedagogy; Carrie Sendak
- 9:45 am Salmon Biology, Ecology, and Decline
- 10:45 am 15 Minute Break
- 11:00 am Jennifer Stock, Education and Outreach Coordinator, NOAA/National Marine Sanctuaries
- 11:30 am Discussion: Climate Change effects on ocean food production
- 12:00 –12:45 Lunch

Exercise PM: Headwaters to Sea: Journaling your Watershed

- 1:00 pm - 4:30 pm Tour of the Lagunitas Watershed from the undammed headwaters (Woodacre) to the sea (Tomales Bay). Techniques on journaling and mapping watershed using a watershed journal.
- 4:30 pm Reflection and Daily Evaluation
- 5:00 pm Adjourn classroom



Headwaters to Sea: Summer Salmon Institute Daily Agenda



July 19, 2011

Red Barn Classroom at Pt. Reyes National Seashore, 70 Bear Valley Rd.
Pt. Reyes Station, CA 94956

Day 2. Taking Action for Salmon Conservation and Restoration

9:00 am Welcome, Introductions, Goals for the Day; Carrie Sendak

9:20 am Discussion/Implementation – oceans and watersheds

10:00 am Michael Reichmuth, Fisheries Biologist, Point Reyes National Seashore

11:00 am Restoration classroom activity

12:00 –12:45 Open discussion with Instructors

Exercise PM: Restoration Processes and Techniques in the San Geronimo Creek Watershed

1:00 pm - 4:30 pm Visiting restoration sites, invasive species identification and removal methods, tree planting and mulching techniques, and propagating plants at the nursery

4:30 pm Reflection and Daily Evaluation

5:00 pm Adjourn classroom



Headwaters to Sea: Summer Salmon Institute Daily Agenda



July 20, 2011

Red Barn Classroom at Pt. Reyes National Seashore, 70 Bear Valley Rd.
Pt. Reyes Station, CA 94956

Day 3: The Essential Salmon Habitat: Plants, Water, Bugs, Oh My!

- 9:00 am Welcome, Introductions, Goals for the Day, Carrie Sendak
- 9:20 am Discussion/Implementation - restoration
- 10:00 am Matt Sagues, Resource Specialist, Marin County Open Space
- 11:00 am Rob Carson, Water Quality Program Manager, Tomales Bay Watershed Council
- 12:00 –12:45 Lunch

Exercise PM: Get to know your native plants and stream invertebrates

- 1:00 pm Native Plant Hike – Identification and Propagation
- 3:00 pm Invertebrate Sampling on San Geronimo Creek
- 4:30 pm Reflection and Daily Evaluation
- 5:00 pm Adjourn classroom
- Optional:
- 5:15 pm Hike through Marin Open Space or Samuel P Taylor Park



Headwaters to Sea: Summer Salmon Institute Daily Agenda



July 21, 2011

Red Barn Classroom at Pt. Reyes National Seashore, 70 Bear Valley Rd.
Pt. Reyes Station, CA 94956

Day 4. Hydrological Conservation in your Watershed

- 9:00 am Welcome, Introductions, Goals for the Day, Carrie Sendak
- 9:20 am Discussion/Implementation – salmon habitat
- 10:00 am Jeff Adams - Permaculturist and former Water Sustainability Coordinator for SPAWN's 10,000 RainGardens Project
- 11:00 am Activity - Rainwater harvesting function and design for your school
- 12:00 –12:45 Lunch

Exercise PM: Building a rain garden at the SPAWN office on Lagunitas Creek

- 1:00 pm-4:30pm Rain Garden Design and Implementation
- 4:30 pm Reflection and Daily Evaluation
- 5:00 pm Adjourn
- Optional:
- 6:30 pm Barbecue Dinner and Guest Speaker at SPAWN office and restoration site



Headwaters to Sea: Summer Salmon Institute Daily Agenda



July 22, 2011

Red Barn Classroom at Pt. Reyes National Seashore, 70 Bear Valley Rd.
Pt. Reyes Station, CA 94956

Day 5. The Salmon Watershed Quality Audit

Classroom AM:

9:00 am Welcome, Introductions, Goals for the Day, Carrie Sendak

9:20 am Discussion/Implementation – water conservation

10:00 am Todd Steiner, Executive Director of SPAWN

Exercise AM:

11:00 am Salmon Audit to Action on your Campus

12:00 –1:00 Lunch

Exercise PM: Exploring ways to take action to help the salmon on your campus

1:30pm – 4:00pm Tour of environmental action by students at Manor School in Fairfax, CA .

4:00 pm Final Evaluations, *A Summer Salmon Institute* Completion Ceremony

5:00 pm Adjourn



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Teachers!

Did you know? Salmon provide a critical connection between oceans and inland watersheds, transporting nutrients to support both ecosystems.



Join Us for the 2nd Annual

Salmon Institute

*FREE Teacher Training & Professional Development
July 18th – 22nd, 2011*

From Headwaters to Sea... Join SPAWN in the Lagunitas Creek watershed in West Marin for a weeklong series of hands-on workshops exploring salmon as the connection between ocean and watershed health. Learn the science and develop skills to implement meaningful watershed activities in the classroom and create field experiences to empower your students to become stewards of the Earth. We'll discuss the natural history and conservation of endangered coho salmon, watershed ecology, habitat and riparian restoration skills, and water conservation. Get hands-on training, standards-based curriculum, and continuing support throughout the year.

... Come learn beside Lagunitas Creek: home to the largest wild run of endangered coho salmon in Central California!

Space is limited; reserve your spot early!

Continuing Education Credit from Dominican University is available, as well as stipends for those who teach in Title One Schools. Call (415) 663-8590 x 109, email: carrie@spawnusa.org, or visit www.spawnusa.org/bwet for more information.
