

Understanding the World's Ocean and Climate

Thanks for joining NOAA Fisheries for an exploration of our ocean and climate and how they interact. This five-part series ends today.

CHAPTER FIVE

Help protect our fisheries, marine wildlife and coastal habitat!

What can you do to help?

This fifth and final installment from NOAA Fisheries highlights what you as an individual can do to protect our valuable fisheries, marine wildlife and coastal habitat. We'll also interview a NOAA Fisheries scientist to learn more about her experiences and get a few tips on what it takes to become a research scientist.

Here are 10 ways to make a difference!

1. **Conserve water** – Turning off the faucet when brushing your teeth frees up a valuable resource for fish like salmon, which need cold, clean water to migrate and spawn.
2. **Recycle, Reuse, Reduce** – Following the three R's ultimately provides a

healthier habitat for ocean life, such as Orcas.



3. **Become seafood savvy** – Help promote sustainably harvested seafoods by asking if it was caught in U.S. waters. Get the facts at: www.nmfs.noaa.gov/fishwatch
4. **Plant an organic garden or yard** – Reducing pesticide and herbicide use in your yard keeps toxic pollutants out of our watersheds. When it rains, those toxins can travel through storm drains into streams and coastal wetlands, which are important habitats for many animals, including ocean life.
5. **Conserve energy** – In the Pacific Northwest, hydropower (i.e., dams) and burning fossil fuels are major sources of household energy. Turning off lights in unused rooms can make more water available for wildlife, reduce the greenhouse gas emissions

responsible for global warming and keep our waters cool for endangered salmon.

6. **Don't pollute** – Placing your trash or recycling in the proper containers decreases the chances that it will end up in your local watershed or in the ocean. This helps keep our waterways healthy for everyone.
7. **Get involved** – Individuals can make a big difference by contributing a few hours to local restoration and clean-up projects that improve and protect salmon habitat, including streams, marshes, wetlands and Puget Sound.
8. **View marine wildlife responsibly** – Be Whale Wise and Share the Shore! Learn more at: www.bewhalewise.org
9. **Report harassment of marine mammals and injured or stranded marine mammals** – Call the NOAA Fisheries Hotline 1-800/853-1964.
10. **Share this information with your family and friends!**



Volunteers at Codiga Park. (Photo: NOAA Fisheries)

Scientist Spotlight: Dr. Vera Trainer, Oceanographer for the Marine Biotoxins program at the Northwest Fisheries Science Center. Dr. Trainer studies harmful algal blooms off the West Coast. The blooms can cause shellfish poisoning and have adverse effects on humans, seabirds and other marine life.



Dr. Vera Trainer (Photo: NOAA Fisheries)

What does a day as a NOAA Fisheries scientist look like?

Dr. Trainer: *Fairly often I get to participate in scientific cruises investigating toxic algal blooms where I collect data for my research. Recently, I've been traveling internationally to teach methods in harmful algal bloom detection to other scientists. I also spend lots of time at a computer, meeting with people and giving presentations. I like the flexibility and variety of my job at NOAA Fisheries — I can work at home, the office, coffee shops, while traveling internationally or on research ships.*

When you were younger, did you know you wanted to be a marine scientist?

Dr. Trainer: *I knew I liked the natural world and knew I wanted to explore it more. During hikes in a forest or on a beach, I always liked to inspect small plants and animals. I decided to major in biology, a basic natural science, and in graduate school, was inspired by a couple lectures on harmful algal blooms. I knew I wanted to test my own ideas, not someone else's, which motivated me to continue my studies for a PhD.*

Why be a NOAA Fisheries scientist?

Dr. Trainer: *I try to look for what my unique role could be in the applied sciences. Working for NOAA Fisheries has changed my sense of mission or purpose. Rather than thinking about what I could do for my career, I thought about how I could impact not only my community,*

but the country as well; basically, how I could help people work together to solve a problem. There's great power and satisfaction in that.

What classes did you like in high school?

Dr. Trainer: *I had really diverse interests — music, language (German), English, writing. I did take science and math classes but they weren't necessarily the most important subjects to me. I would recommend that anyone interested in science take any class that is remotely interesting. A diverse background has served me well.*

Thanks for reading Understanding the World's Ocean and Climate.

Did you know?

In 2009, over 22,000 NOAA Restoration Center volunteers contributed more than 103,000 hours to help restore 8,575 acres of critical habitat and open 309 miles of stream for anadromous fish use. Get involved, check out: www.pugetsoundstarthere.org

Additional Resources:

- NOAA Fisheries in the Pacific Northwest and Alaska
E-mail: afsc.outreach@noaa.gov
- Alaska Fisheries:
www.afsc.noaa.gov
www.alaskafisheries.noaa.gov
- Northwest Fisheries:
www.nwfsc.noaa.gov
www.nwr.noaa.gov
- College of Exploration:
www.coexploration.org
- NIE: www.seattletimes.com/nie
- Anchorage Daily News:
nie.adn.com

Principles

Ocean Literacy Principle 6
The ocean and humans are inextricably interconnected.