Impacts of Persistent Organic Pollutants on Aquatic Ecosystems and Human Health

October 4 and 5 in Vancouver BC

Instructor: Dr. Fran Solomon, Adjunct Professor, University of British Columbia, Vancouver BC; and Western Washington University, Huxley College of the Environment on the Peninsulas

Organic chemicals are discharged to the natural environment from various human activities, and have the ability to biomagnify in food webs and persist in fatty tissues of organisms. Many of these chemicals are found in everyday household products and have toxic effects from the molecular to the organism to the ecosystem level, including endocrine disruption.

If you are an environmental professional working on toxic chemical pollution prevention and control, environmental education, or environmental policy, this two-day overview course will be valuable for your professional development.

The course will begin with a description of the sources, properties, and metabolism of persistent organic pollutants (POPs), exposure pathways for fish and humans, principles and mechanisms of toxicity, and factors affecting toxicity. We will then focus on specific groups of POPs, such as pesticides, polychlorinated biphenyls, polybrominated diphenyl ethers, bisphenol-A, phthalates, and perfluorinated compounds, and their impacts (e.g., carcinogenesis, neurotoxicity, immune defense system suppression, and endocrine disruption) on fish, other aquatic organisms, and humans.

There will be interactive in-class exercises, including small group discussions of case studies that illustrate the concepts presented during the course.