The most effective means to protect workers, consumers, and the environment from chemical hazards is the establishment of a chemical management system that goes beyond simply complying with local, state, and federal standards and strives to reduce or eliminate chemical hazards at the source. With the new Globally Harmonized System (GHS) for Hazard Communication, environmental health and safety professionals are reviewing their chemical inventories and hazards in the workplace. Employers are now seeking new tools to look at chemical uses and adopt ways to transition to safer alternatives.

During this full-day course, participants will learn about substitution planning, alternatives assessment, chemical selection, and tools available to support these activities. They will take part in interactive small-group workshops, exploring real-world examples of transitioning to safer alternatives and learning about best practices for facing the complexities and challenges of making these transitions.

Course Objectives
At the completion of this course, participants should be able to:
- List two assessment tools for the selection of safer chemicals.
- Discuss the implementation of informed substitution as part of a process/product redesign.
- Use the OSHA Toolkit to conduct a seven-step substitution planning process for transitioning to safer alternatives.
- Identify a process for selecting a safer chemical when scientific data gaps exist.
- Summarize the “lessons learned” from case studies where safer alternatives were implemented.

LOCATION
Center for Urban Waters
326 East D Street
Tacoma, WA 98421
www.urbanwaters.org

ACCREDITATION
American Board of Industrial Hygiene Certification Maintenance can be obtained for this activity. See “CM Credit for Education Events” at www.abih.org for credit criteria.

REGISTRATION
Register Online at osha.washington.edu
or by calling the Northwest Center at 206-543-1069
Standard Registration: $200
After Jan 15: $250
Government Rate: $150
After Jan 15: $200

INFORMATION
206-543-1069 or 800-326-7568
ce@uw.edu
osha.washington.edu
Audience
Professionals in all types and sizes of businesses (manufacturers using chemicals in their production processes as well as businesses that use products containing chemicals in their everyday operations), safety professionals, industrial hygienists, environmental health and safety directors, safety committee members, pollution prevention professionals, sustainability coordinators, hazardous waste professionals, risk managers, regulators, and other health and safety professionals.

Planning Committee
Larry Brown, Local Hazardous Waste Management Program in King County
Golan Kedan, CH2M Hill
Richard Morgan, Modumetal, Inc.
Brian Penttila, iWatchChems Consulting
Jonathan Rivin, University of Wisconsin—Extension Solid and Hazardous Waste Education Center
Jessica Schifano, OSHA Directorate of Standards and Guidance
Nancy Simcox, University of Washington (UW) DEOHS Continuing Education Programs
Jill Tepe, UW DEOHS Continuing Education Program
Saskia van Bergen, Washington State Department of Ecology
Carolyn Whitaker, SHARP (Safety & Health Assessment & Research for Prevention) Program,
Washington State Department of Labor & Industries

Supported by
NW Center for Occupational Health and Safety
UW DEOHS STAC-TEC (Sustainable Technologies, Alternate Chemistry-Training and Education Center)
Pacific Northwest Pollution Prevention Resource Center
Lake Washington Institute of Technology
Northwest Green Chemistry
King County
Green Chemistry and Commerce (GC3)
Sustainable Path Foundation

Featured Speakers
Keynote Speaker: Jessica Schifano, JD, MPH
Health Scientist in the Directorate of Standards and Guidance, Occupational Health and Safety Administration

Course Director: David Kalman, PhD
Professor of Environmental and Occupational Health Sciences, University of Washington
Agenda

7:30–8:00 am  Registration
8:00–8:05  Welcome, Nancy Simcox, Interim Director, UW DEOHS Continuing Education
8:05–8:30  Introduction, David Kalman, PhD, Course Director
           Professor, University of Washington, DEOHS
8:30–9:15  **Keynote: Past, Present and Future: Why Transition to Safer Chemicals?**
           Jessica Schifano, JD, MPH, Directorate of Standards and Guidance,
           Occupational Safety and Health Administration
9:15–10:00 **Fostering Innovation for Businesses to Use Safer Chemicals**
           Matthew Thurston, Product and Supply Chain Sustainability,
           Recreational Equipment Inc. (REI)
10:00 – 10:45  **Analyzing the Trade-Offs and Impacts of Green Chemistries**
           Richard Morgan, Senior Process Development Chemist, Modumetal, Inc.
10:45–10:55  BREAK
10:55–11:40 **Decision-Making Tools to Avoid Regrettable Substitutions**
           Ann Blake, PhD, Environmental and Public Health Consulting
11:40–12:15 pm **Case Study of Piloting and Evaluating a Transition to Safer Chemicals**
           Sara Wakai, PhD, Director of Evaluation, Center for Public Health and Health Policy,
           University of Connecticut Health Center
12:15–1:00  LUNCH
1:00–1:45  **Balancing Act: Data Gaps, Multiple Chemicals, and Other Trade Offs**
           Brian Penttila, PhD, Chemical Engineer, iWatchChems Consulting

Workshops: Case Studies for Transitioning to Safer Chemicals
(all participants rotate to each workshop; each workshop given 3 times)

1:45–2:30  **Workshop 1 – Making the Business Case for Safer Chemicals**
           Jessica Schifano
2:30–2:40  BREAK
2:40–3:25  **Workshop 2 – Using Decision-Making Tools to Promote Safer Chemicals**
           Ann Blake, PhD, Environmental and Public Health Consulting
           Saskia van Bergen, Green Chemistry Scientist, Washington State Department of Ecology
3:25–4:10  **Workshop 3 – Evaluating the Implementation of Safer Chemicals**
           Sara Wakai,
           Rick Gleason, MSPH, Lecturer, UW DEOHS
4:10–4:50  **Update on Green Chemistry from Washington State Department of Ecology**
           Saskia van Bergen
4:45–5:00  Closing and Evaluation
BEST PRACTICES FOR
Transitioning to Safer Chemicals

Notes