

# Monitoring and Prioritizing Contaminants of Emerging Concern in Columbia River

University of Washington Tacoma

Andy James  
Dave Wark  
Hayley Mathews  
Zhenyu Tian

Columbia River Basin Restoration Program Working Group

# University of Washington Tacoma at Center for Urban Waters



Photo credit: Cody Char

## Water Quality Research

- Investigate the occurrence, treatment, and effects of Contaminants of Emerging Concern
- Improving methods for source tracking and source apportionment
- Stormwater treatment and impacts

## Ecosystem Modeling

- Food web interactions
- Habitat (aquatic resources) requirements and status

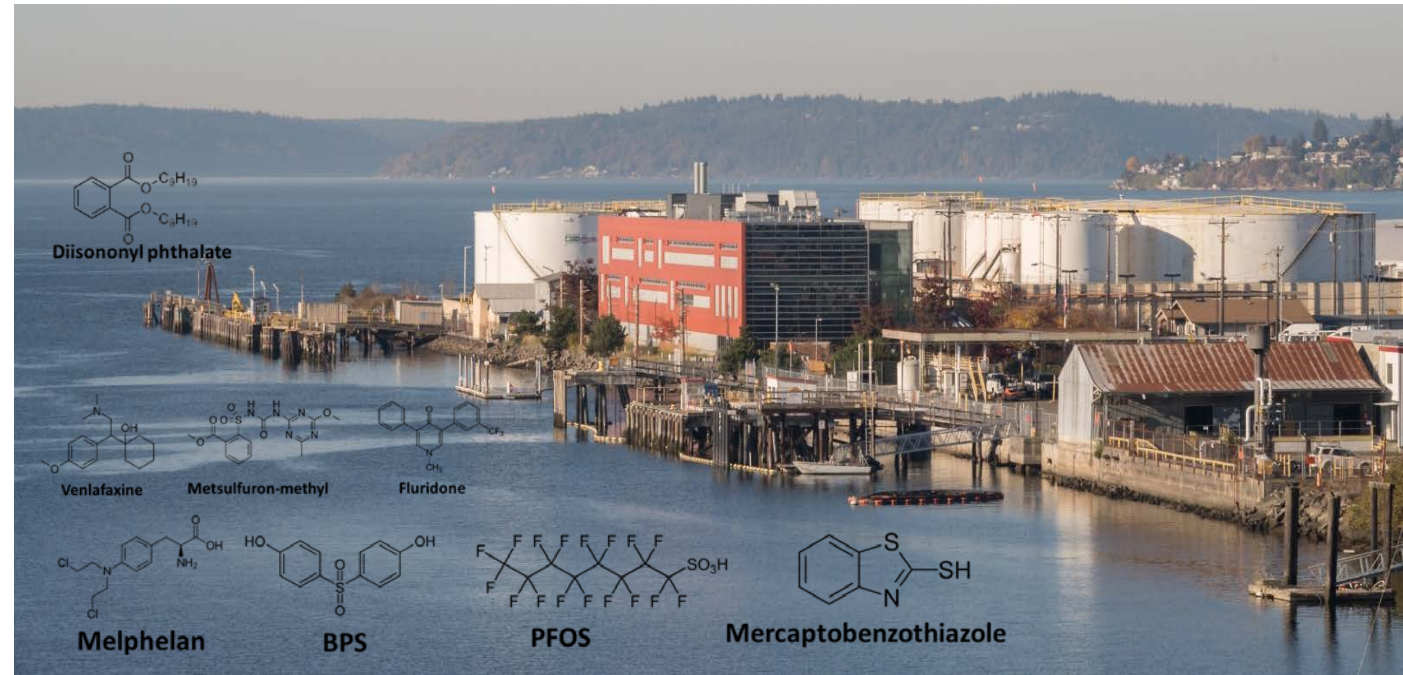
## Ecosystem Recovery and Adaptive Management

- Evaluating the effectiveness of restoration/recovery/protection programs and activities
- Improved integration of science in policy and management

## Project:

Characterize the occurrence of Contaminants of Emerging Concern in the Lower Columbia River using High Resolution Mass Spectrometry methods

Utilize multiple measures of biological impacts to understand their potential for harm



Tian et al, ES&T, 2019

## Motivation:

- Exposure to some CECs have been associated with ecosystem health impacts
  - Endocrine disruption, reduced survival, pre-spawn mortality syndrome
- Improving our understanding of CECs is a priority of ecosystem recovery programs