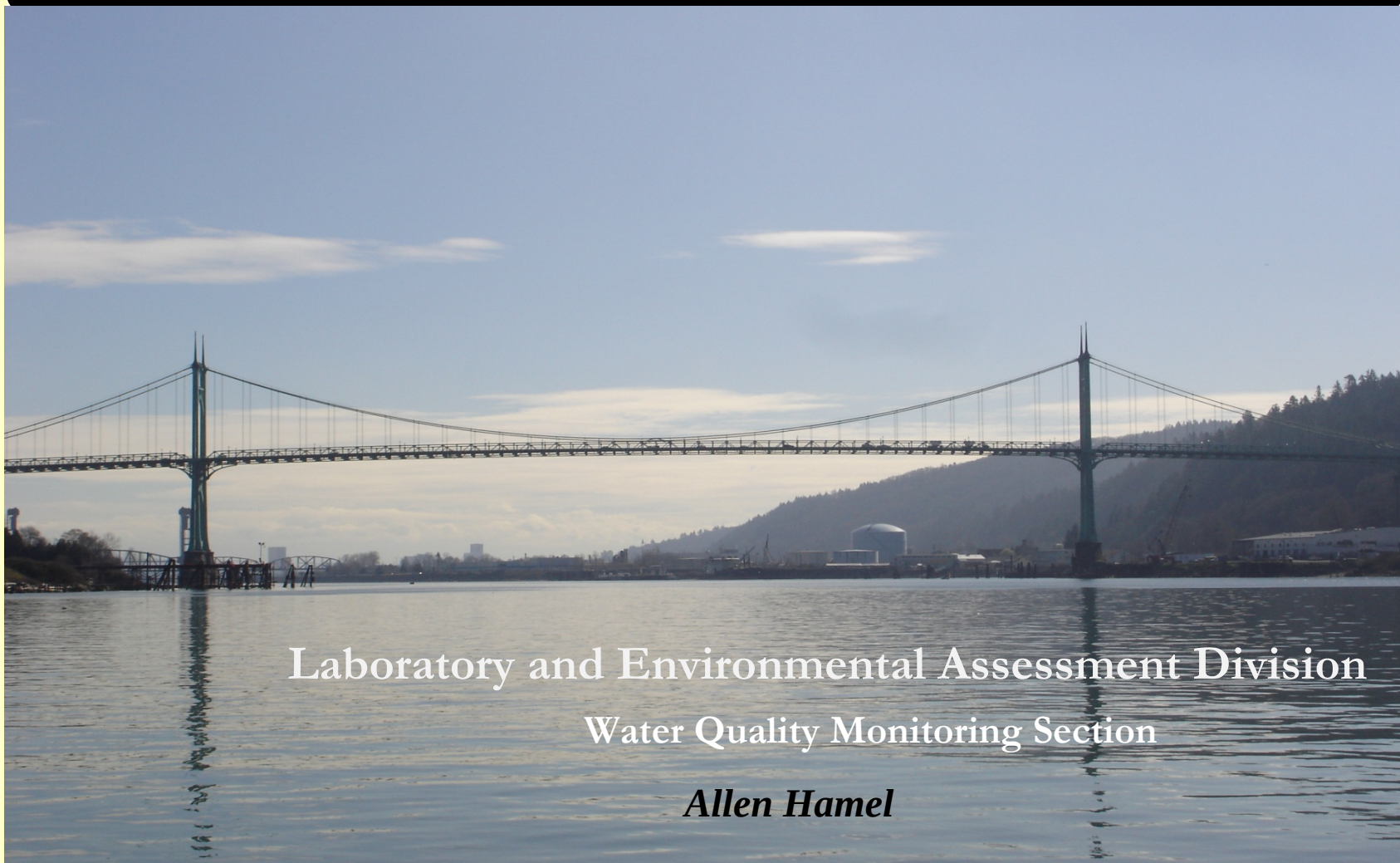




Oregon State Department of Environmental Quality

Selected PBDE Congener Concentrations in Fish

February 2010



Laboratory and Environmental Assessment Division
Water Quality Monitoring Section

Allen Hamel



Overview

Why monitor for toxics?

- Public concerns prompt Legislature to provide DEQ with funding to monitor toxic contaminants in Oregon's surface waters and aquatic resources .

Initial 3 years

Willamette River Basin

Mainstem and tributaries

Long-term

All major basins, state-wide



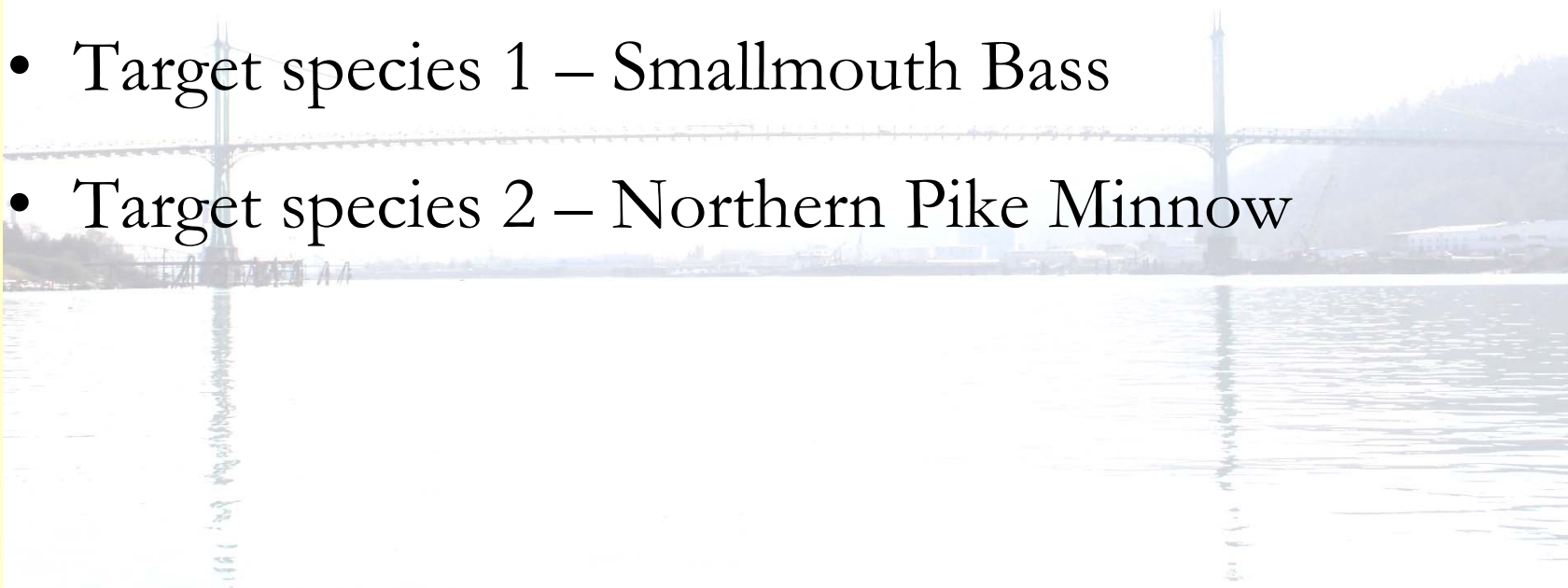
Program Objectives

- Monitor Oregon's surface waters and aquatic resources for a broad array of known or suspected toxic contaminants
- Document the concentrations of toxic pollutants found in Oregon waters and aquatic resources and interpret findings relevant to criteria to protect human health and environmental quality
- ***Support pollutant reduction strategies*** and assess progress towards meeting established criteria



FISH SAMPLE DETAILS

- 12 Sample Sites
- Single species composite fillet samples
- Target – 5 fish per composite
- Target species 1 – Smallmouth Bass
- Target species 2 – Northern Pike Minnow





SITES

Fish Collection Reaches

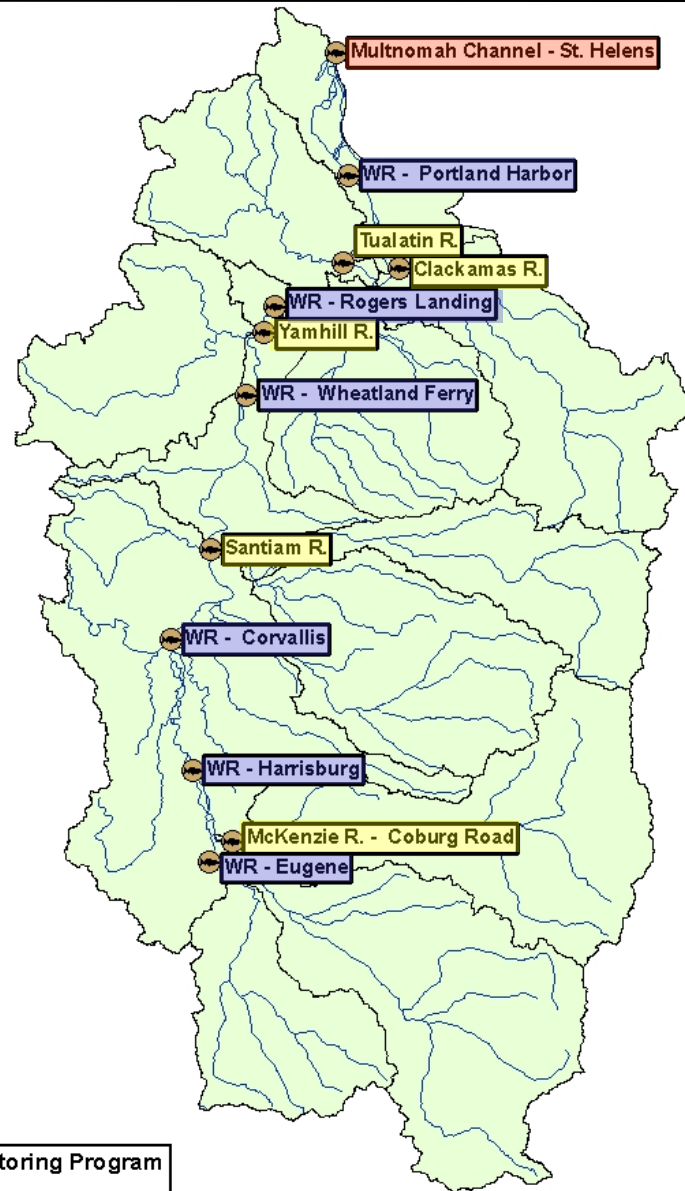
Multnomah Channel (1)

6 Mainstem (6)

Major Tributaries (5)



Willamette River Basin Toxics Monitoring Program 2008 Fish Collection Sites



Toxics Monitoring Program
● TMP Fish Sites

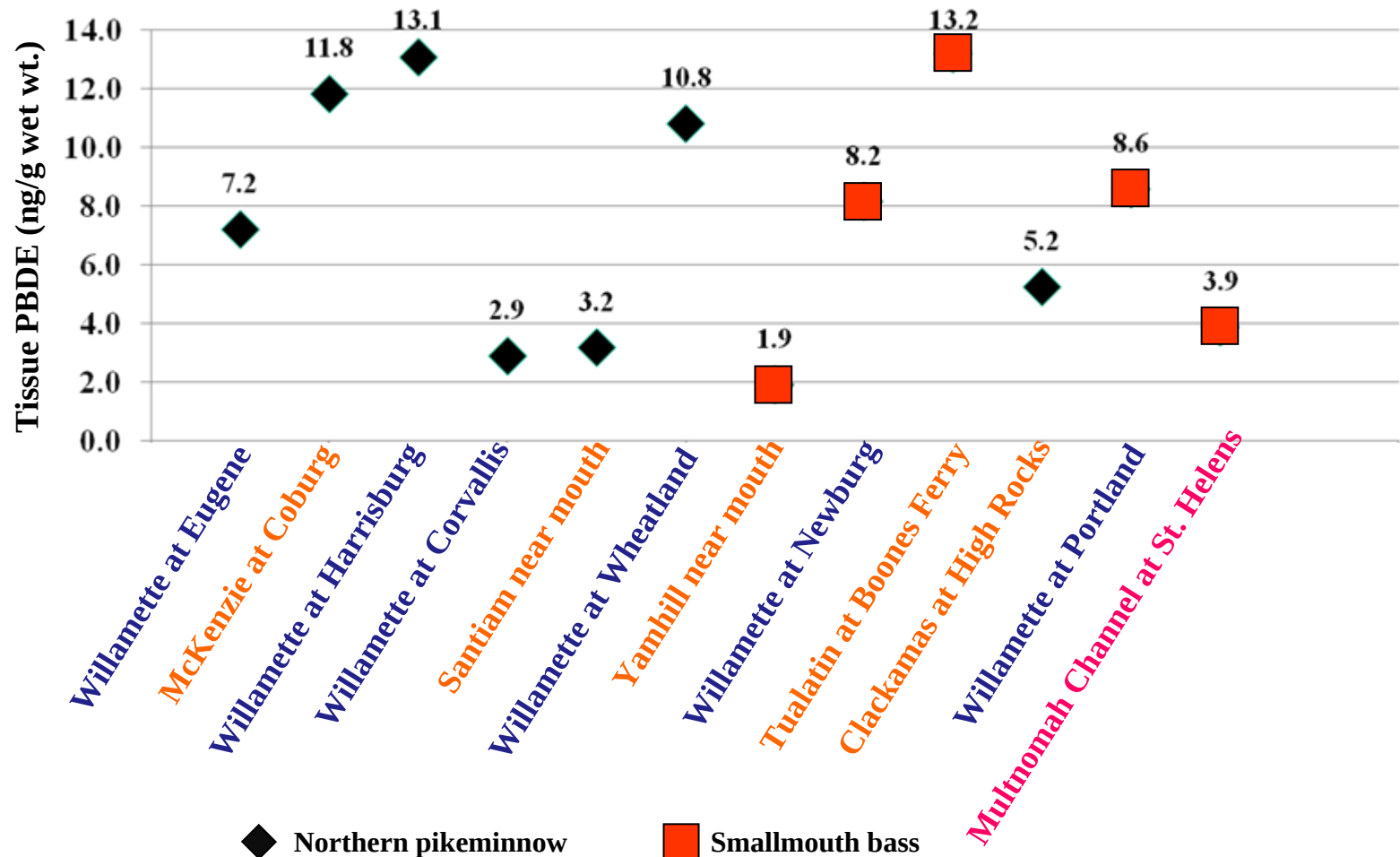


0 10 20 40 Miles



PBDE Concentrations in Fish Fillet Tissue

Sum of PBDE Congeners 47, 99, 100, 153, 154, and 183





FISH SAMPLE FINDINGS

- 70 – 80 % of PBDE found was Congener 47
- Congener 183 was found in Santiam fish only
- Mixed result for municipal wastewater influence
Tualatin site is downstream of major plants and discharges are a large percentage of streamflow.
McKenzie site downstream of no municipal plants



Proposed Statewide Implementation Schedule

Linked to NPDES Permit Review Cycle

