Oregon Department of Environmental Quality

Willamette Basin Toxics Monitoring Summary

This summary combines results from DEQ's Toxics Monitoring Program sampling in the Willamette River Basin from 2008 to 2010 and 2016 in three media types: water, sediment and fish tissue. This is the first comprehensive report on DEQ's toxics sampling in the Willamette River Basin.

Key Objectives:

- Get a snapshot of pollutants in the Willamette River to help understand trends
- Use this information to identify potential sources
- Make this information available to the public
- Work with internal DEQ groups, community groups, and Oregon residents to identify opportunities for reducing these pollutants

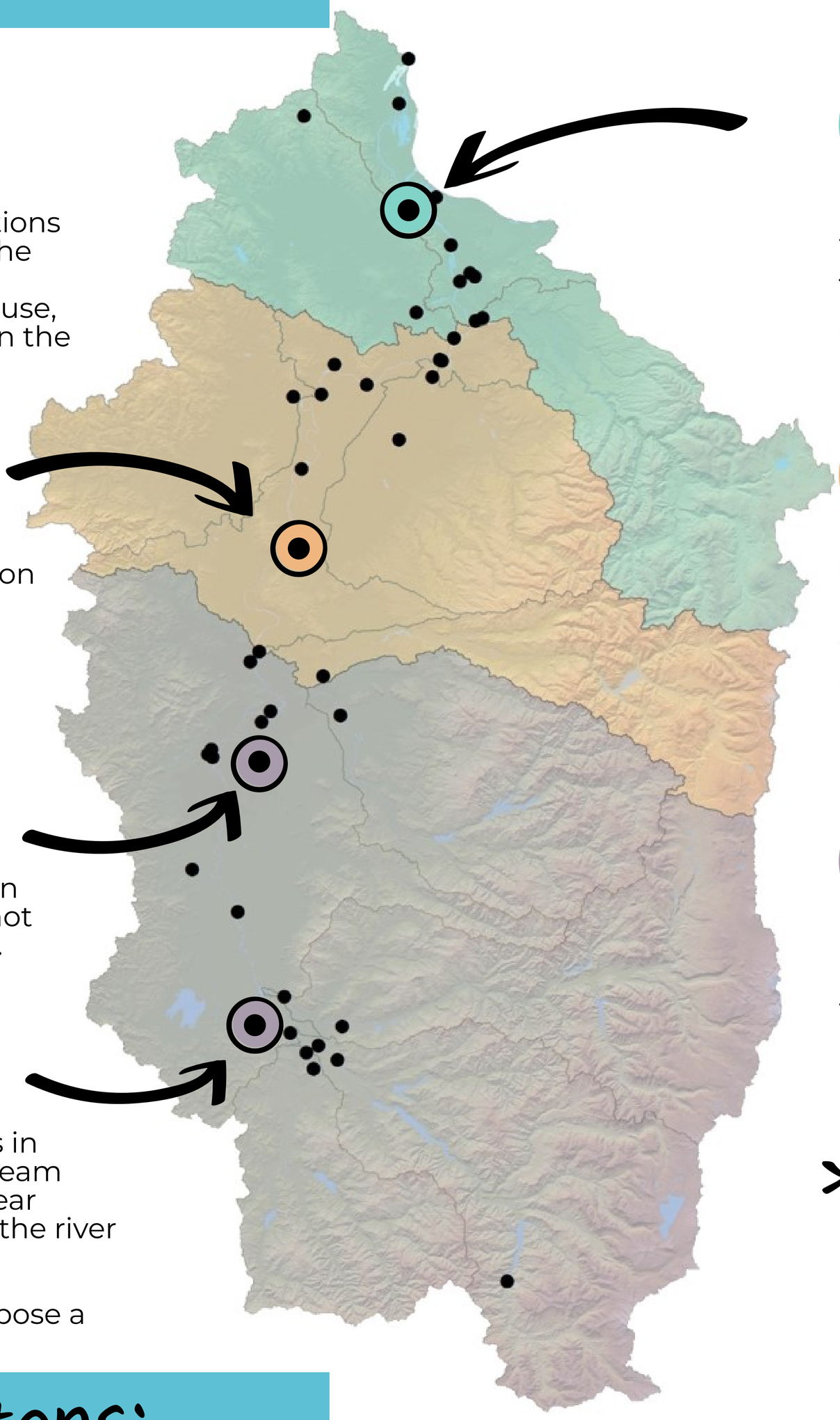
Sample Collection:

- **Water samples:** 180 samples, 31 locations
- **Sediment samples:** 22 samples, 22 locations
- **Tissue samples:** 36 samples, 24 locations
- **Chemical groups included:**
  - Current-use pesticides, consumer use products, combustion by-products, dioxins and furans, flame-retardants, industrial chemicals, legacy pesticides, PCBs, and metals

Key Findings:

- DEQ did not find evidence of toxics that pose an immediate risk to human health or the environment
- It is safe to swim in the Willamette River
- Oregon Health Authority issues fish advisories about when its safe to eat fish
- DEQ staff selected 11 monitoring locations to become a part of the Water Toxics Monitoring Program's trend network

Sub-basin Findings:



Lower Willamette

Legacy pesticide concentrations remain high in water from the Lower Willamette. Legacy pesticides are banned from use, indicating residual sources in the basin.

Mid Willamette

Mercury found in crayfish at the Willamette River at Marion St. location exceeded DEQ's human health criterion*.

Upper Willamette

High concentrations of the herbicide, diuron, detected in water from Lake Creek do not pose a risk to human health.

Upper Willamette

DEQ detected 152 chemicals in sediment collected downstream from a stormwater outfall near Maurie Jacobs Park. Across the river at Maurie Jacobs Park, DEQ detected only 18 chemicals. Chemicals detected do not pose a risk to park users.

Lower Willamette

Mercury found in crayfish at the Willamette River at St. John's Bridge location exceeded DEQ's human health criterion*.

Mid Willamette

Concentrations of DDT exceeded its sediment benchmark across the Mid-Willamette basin. Concentrations at this level are not expected to adversely affect human health.

Upper Willamette

Levels of chemicals measured in crayfish and mussels from the Upper Willamette are too low to harm the health of people who eat them.

* DEQ's human health criterion for mercury assumes a consumption rate of 175 grams per day and regularly consume up to two liters of unfiltered water from the waterbody.

Next Steps:

Results from this study will be used to inform the programs and projects below, which may include additional sampling

Toxics Monitoring Network

A continuation of this sampling on a yearly, statewide basis that aims to identify trends in chemical concentrations

Permitting and Regulatory Programs

Data from this report will help inform and direct projects in the TMDL, NPDES, and stormwater programs

Toxics Reduction Strategy

The strategy complements and supports ongoing efforts in DEQ's air, land and water quality programs by improving integration, sharing best practices and filling any identified gaps

Integrated Report 303(d) list

A reporting of the status of Oregon's waters and a list of water bodies that do not meet water quality standards

To view the full report or for more information on DEQ's Water Quality Toxics Monitoring Program visit:
https://www.oregon.gov/deq/wq/Pages/WQ-Monitoring-Statewide.aspx