Statewide Toxics Monitoring Program

Toxics Monitoring in Oregon: A Statewide Approach

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Statewide Toxics Monitoring Program

- **Monitor** and **interpret** occurrence and levels of toxic pollutants in Oregon’s water, sediment, and aquatic species.

  Program goals:
  - ✓ Statewide
  - ✓ Comparable
  - ✓ Relevant
  - ✓ Sustained
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Softshell clam
*Mya arenaria*

Native oyster/Olympia oyster
*Ostrea lurida*

California mussel
*Mytilus californianus*

Images courtesy of ODFW website
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Sediment

Water

Clams

Sediment
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<table>
<thead>
<tr>
<th></th>
<th>Water</th>
<th>Sediment</th>
<th>Fish</th>
<th>Shellfish</th>
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<tbody>
<tr>
<td>Consumer product constituents</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Current Use Pesticides</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legacy Pesticides</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Flame Retardants</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Combustion byproducts</td>
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<td>X</td>
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<td>X</td>
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<td>Metals</td>
<td>X</td>
<td>X</td>
<td>Mercury only</td>
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<tr>
<td>Industrial Intermediates</td>
<td>X</td>
<td>X</td>
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<td>Steroids and Sterols</td>
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</table>
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Number of chemicals detected by basin:

- **Hood**
- **Willamette**
- **Sandy**
- **Umatilla**
- **Owyhee**
- **John Day**
- **Deschutes**
- **Rogue**
- **Malheur**
- **Powder**
- **Klamath**
- **Grande Ronde**
- **Umpqua**
- **Walla Walla**

Legend:
- Industrial Chemicals *
- Flame retardants *
- Legacy Pesticides *
- Combustion By-Products
- Consumer Product Constituents
- Current Use Pesticides
- Metals
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2012 Umatilla Sub-Basins Total Arsenic

Umatilla Sub-Basins

Total Arsenic
- Detected, Exceeded
- Detected, None Exceeded
- None Detected, None Exceeded

Counties
Sub-Basins (4th Field HUCs)
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2012 Umatilla Sub-Basins Total Copper

Umatilla Sub-Basins

Total Copper
- Detected, Exceeded
- Detected, None Exceeded
- None Detected, None Exceeded

Counties
Sub-Basins (4th Field HUCs)

Prepared by P. Bryant, ODEQ
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Although we have analyzed some data, challenges/limitations exist.

Data gaps:
  – Things we do not analyze for: Roundup, other current use pesticides
  – Fish collection inconsistent approach – but partnerships are the key to pursuing more data collection.
  – Method development 2014 – scaled back sample collection as we evaluate statewide data and program

Adaptive approach and feedback driven evolution
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Toxics Monitoring

Groundwater

Toxics Reduction Strategy

Toxics Rulemaking

Pesticide Stewardship Partnership

http://www.deq.state.or.us/toxics/
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Connection to other DEQ Programs and Partnerships

Oregon Health Authority

Portland State University

Oregon Department of Agriculture

Oregon Fish & Wildlife
Next Steps

• Identify problems areas and areas needing protection

• Collect, analyze and interpret data

• Share internally and externally

• Data analysis is just taking shape
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http://www.deq.state.or.us/lab/wqm/toxics.htm

OR

Questions?
Wade Peerman 503-693-5743
Selected References


• Hope, BK, Pillsbury, L, Boling, B. A state-wide survey in Oregon (USA) of trace metals and organic chemicals in municipal effluent. Sci Total Env 2012 (417-418):263-272