PARC Meeting

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Oregon Pesticide Stewardship Partnerships Update

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Pesticide Stewardship Partnership Approach

Using collaborative partnerships, local expertise and voluntary actions to produce measurable water quality improvements.
Pesticide Stewardship Partnerships: What are the key elements?

- Monitor for current use pesticides
- Identify streams with elevated pesticides levels
- Collaborate to implement best practices
- Follow-up monitoring to determine progress
Pesticide Stewardship Partnerships: Who are the Partners?

- Oregon Department of Environmental Quality
- OSU Extension Service
- Grower groups
- Oregon Department of Agriculture
- Soil and Water Conservation Districts
- Watershed Councils
- Tribes
- Agricultural Product Suppliers
5 Current Pesticide Stewardship Partnership Projects
## Current PSP Project Overview

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<tr>
<th>Project</th>
<th>Year Monitoring Began</th>
<th>Funding Source(s)</th>
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<td>Hood</td>
<td>2000</td>
<td>Warm Springs Tribe</td>
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<td>Walla Walla</td>
<td>2005</td>
<td>EPA 319 (non-point source) grants</td>
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<td>Pudding</td>
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<td>Yamhill</td>
<td>2007</td>
<td>EPA TMDL grant &amp; leftover 319 funds</td>
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Recent Pesticide Monitoring Results

• Hood and Walla Walla
  – *Improving trends for chlorpyrifos and some other organophosphates*
  – *One dominant ag land use allows for strategic focus & short term results*

• Clackamas, Pudding and Yamhill
  – *Trends aren’t discernable ...yet*
  – *Diversity of ag and other land uses poses major challenges*
2006-2008 Walla Walla Basin Monitoring
Median of Chlorpyrifos Detections

Median (µg/L)

- Little WW River, West Branch/Crockett
- West Prong Little WW River, S. of Stateline Rd.

Acute WQS = 0.083 µg/l (ppb)
Chronic WQS = 0.041 µg/l (ppb)
Detection Limit = 0.025 µg/l (ppb)
Hood River Pesticide Stewardship Activities

• Hood River Grower-Shipper Association BMP Handbook
  – *Still used to educate growers about drift reduction practices & equipment, and other ways to reduce WQ impacts*

• OSU Extension conducted Spanish language applicator trainings

• Coddling moth mating disruption program expanding $\rightarrow$ reducing reliance on chemical controls
Walla Walla Partnership: Collaborative Improvement Actions

- OSU Extension & Grower group technical assistance and outreach:
  - March 2007 Spray Calibration Workshop
  - Promoting alternatives to organophosphates and other best practices
  - One-on-one applicator training
  - Buffer strips along streams
  - Installation of weather stations by watershed council
Yamhill Basin (all sites)
Detection Frequency

(A) = Includes Detections > old limit of 0.025 ug/l
(B) = New Detection Limit of 0.01 ug/l
West Fork Palmer @ Webfoot Bridge
Average and Maximum Concentrations

Max = 0.790

Concentration (ug/l)

Chlorpyrifos Prophos Simazine Atrazine Dimethoate Malathion

(A) = Includes Detections > old limit of 0.025 ug/l
(B) = New Detection Limit of 0.01 ug/l

Chlorpyrifos Chronic WQ Standard = 0.041 ug/l
West Fork Palmer Ck. @ Webfoot Rd. Bridge
Detection Frequency

(A) = Includes Detections > old limit of 0.025 ug/l
(B) = New Detection Limit of 0.01 ug/l
Pudding PSP
Percent of Sampling Events
Pesticides Detected

- 2005: 62%
- 2006: 59%
- 2007: 67%
- 2008: 73%
Zollner Creek at USGS Gauge
Average OP Pesticide Concentrations
Zollner Creek at USGS Gauge
Average Triazine Herbicide Concentrations

![Bar Chart: SIMAZINE (ug/L) and ATRAZINE (ug/l) concentrations over years 2005, 2006, 2007, 2008. SIMAZINE concentrations are significantly higher than ATRAZINE concentrations.]
Clackamas PSP:
Percent of Sampling Events
Pesticides Detected

- 2005: 82%
- 2006: 100%
- 2007: 69%
- 2008: 47%
North Fork Deep Creek at Springwater Trail
Average OP Pesticide Concentrations

Azinphos-methyl
Chlorpyrifos
Diazinon
Prophos

2005
2006
2007
2008
North Fork Deep Creek at Springwater Trail
Average Triazine Herbicide Concentrations

Average herbicide concentrations are shown for Simazine and Atrazine at North Fork Deep Creek at Springwater Trail. The data is presented for the years 2005, 2006, 2007, and 2008.
Stewardship Activities in North Willamette PSP watersheds

• OSU conducting intensive IPM training in Pudding and Yamhill Watersheds
  – *March 20th workshops in Mt. Angel and McMinnville*
  – *Provide on-line tools to growers to track IPM actions and results*

• Clackamas “Pilot Project” for Inter-Agency WQ Pesticide Team
  – *Working with local stakeholders on outreach strategies for rural residential sector and multiple ag industries*
Ag Pesticide Waste Collections: Reducing Risks to Oregon Waters

- 2006 - 2009 Events in PSP Watersheds
  - Over 72,000 pounds of waste pesticides collected and properly disposed from 6 events
  - Mix of “legacy” and current use pesticides
  - Over 6,000 pounds of rinsed empty containers for recycling
Pesticide Stewardship Partnerships: Current and Future Challenges

WHAT’S NEXT?

• Changes in Pesticide Analytical Capabilities
  – *Expanding number of pesticides analyzed from 15 to over 100*
  – *Lower detection limits to provide more data*

• Expand scope of projects to include other of land uses (forest, urban)
  – *Working with ODF & Tribes on including managed forest monitoring sites in S. Yamhill*

• Plans to Revive Mill Creek (The Dalles) PSP in Fall 2009