

# Pesticide Stewardship Partnership (PSP) Advisory Committee Meeting

First Meeting  
Friday, November 15, 2019  
10:00 AM – 2:00 PM  
ODA Building, 3<sup>rd</sup> floor conference room  
635 Capitol St NE  
Salem, OR 97301

## **Abbreviations**

ODA = Oregon Department of Agriculture  
OFIC = Oregon Forest and Industries Council  
OFS = Oregonians for Food and Shelter  
OEC = Oregon Environmental Council  
OFB = Oregon Farm Bureau  
OSU = Oregon State University  
DEQ = Oregon Department of Environmental Quality

## **Attendance (Affiliation)**

In-person: Stephanie Page (ODA), Matthew Bucy (ODA), Lisa Arkin (Beyond Toxics), Seth Barnes (OFIC), Bryan Harper (Board of Agriculture), Katie Fast (OFS), Karen Lewotsky (OEC), Mary Anne Cooper (OFB), Jeffrey Jenkins (OSU), Lisa Kilders (Clackamas SWCD), Katherine Nelson (ODA), Dani Lightle (OSU), Kirk Cook (ODA), Kevin Masterson (DEQ), Aaron Borisenko (DEQ), Rose Kachadoorian (ODA), Kathryn Nelson (ODA), Thomas Whittington (ODF)

Phone: Jennifer Wigal (DEQ), Robin Harris (Confederated Tribes of the Umatilla Indian Reservation), Steve Stewart (City of Newport Water Treatment), Brian Wolcott (Walla Walla Basin Watershed Council), Dr. Derron Coles (Blueprint Foundation)

**Call to Order:** Stephanie Page called the first meeting of the Pesticide Stewardship Partnership (PSP) Advisory Committee to order around 10 AM. Those in attendance introduced themselves, stated the organization they were representing, and provided a brief history of their involvement with the PSP program.

**Logistics:** No voting is planned for this meeting; only idea-sharing and discussion. The expected meeting frequency is one meeting every 2-3 months, until the strategic plan and other major projects are accomplished, after which frequency may decline. The initial focus of this advisory committee is the development of the PSP strategic plan. The focus of this meeting is first to provide background on the PSP program and an overview of the budget, then, to review and revise the draft list of questions that this advisory committee should address. For feedback and/or questions, contact any of the following: Stephanie Page, Rose Kachadoorian, Kirk Cook, Kevin Masterson, Karen Lewotsky, or Katie Fast.

## **Program Overview – Presentation by Kevin Masterson (DEQ) and Kirk Cook (ODA)**

Kevin Masterson (DEQ) and Kirk Cook (ODA) spoke about the history, purpose, and nature of the PSP Program. Below are summarized notes from key points and topics of discussion from the presentation.

History and Nature of Program: The PSP began in 1999 in the Hood River area, and has since expanded to several other watersheds throughout the state. USGS water quality data had indicated the presence of organophosphates in water samples. Growers were interested in addressing this issue through a non-regulatory, voluntary program that cooperated with regulatory agencies. Local expertise and water quality data are used to identify pesticide sources and potential changes in pesticide use patterns that will improve water quality. Water quality data is used to evaluate the success of PSP efforts. While the overall goal is to keep this a voluntary program, there is a regulatory “backstop,” which no PSP area has ever reached.

Relationship to Water Quality Pesticide Management Team: The PSP predates the United States Environmental Protection Agency’s (EPA’s) requirement that each state develops a Water Quality Pesticide Management Plan (WQPMP). The PSP program was incorporated into Oregon’s WQPMP, which the EPA endorsed in 2011. The WQPMP has a matrix for which actions the state should take based on water quality data. The PSP is used to implement many elements of, and is guided by, the WQPMP.

The Water Quality Pesticide Management Team (WQPMT) oversees both the PSP and the WQPMP. The Team is composed of 5 representatives from ODA, 3 from DEQ, 1 from ODF, 1 from OHA, 1 from the Oregon Watershed Enhancement Board, and 1 from OSU. ODA chairs the committee, and the OSU representative serves as a technical advisor. Each agency has 1 vote, and final votes must be unanimous.

### PSP Components:

- Water Quality Sampling and Analysis: Water samples are collected through our program partners. Sampling locations are selected in consultation with local partners. These sites are not fixed, since we want to move to areas where what’s being detected is the most concerning. For example, 2 sites in the Middle Deschutes area were moved, so the next biennium report will make it appear like the Middle Deschutes area experienced a decline in water quality.

The DEQ Organic Chemistry Lab analyzes the samples for about 130-135 pesticides and pesticide degradates. These cover the most commonly used (but not all) pesticides. Running the samples through the Organic Chemistry lab is labor-intensive and costly. An effort is being made to make this process more transparent, to get the data out quicker, and to make the data the most useful for local growers.

Monitoring focuses mainly on surface water, but stream bed sediments, benthic organisms, and total solids may also be sampled. Macroinvertebrates may be analyzed soon (macroinvertebrate monitoring is mentioned in the WQPMP). At this time, fish tissue sampling is not being considered, but DEQ will consider it if it becomes a concern. This type of bioaccumulation was more of an issue with

legacy pesticides, while the PSP focuses on current-use pesticides. Options for dealing with legacy pesticides are more limited, but other programs do address them. PSP is a surface water-focused program but can include groundwater monitoring. However, there are other programs that deal with groundwater quality (e.g., DEQ Statewide Groundwater Monitoring Program).

Discharge and flow data are considered along with water quality data. These data help remove the complexity introduced by dilution. Additionally, they allow us to focus on load, which is a more comprehensible concept for many members of the public. Considering both load and concentration also provides a more complete picture of pesticides in the watershed (e.g., concentration may stay the same but load is decreasing).

EPA Region 10 developed a region-wide matrix for deciding when we should be concerned about a pesticide in water samples. This builds an evaluation matrix developed in Oregon in 2013, and on a list of 54 pesticides of concern developed by EPA in 2007. 98% of test results are non-detect or show very low concentrations of a pesticide. Acute toxicity (one instance of high exposure) and chronic toxicity (multiple instances of low exposure) benchmarks have been developed by EPA for vascular and non-vascular plants, fish, etc. We use the lowest benchmarks for the most sensitive organisms. Human health benchmarks are not used because we are being conservative and looking at worst-case scenarios. The benchmarks we use now are protective of human health. Endangered species concerns are woven in to these benchmarks.

Water quality data are used to inform OSU Integrated Plant Protection Center, to defer potential regulatory action to the PSP program, to internally develop watershed-specific strategic plans, and to modify which pesticides are of statewide high or medium concern.

- Technical Assistance Grants: Funds PSP partner activities (e.g., sampling, education, outreach, and Strategic Plan development). Funds grants for projects that will reduce pesticide loading. In recent years, there has been a move toward giving more of this money to our PSP partners for education, outreach and special projects.
- Waste Pesticide Collections: Free pesticide disposal events are put on for growers. Since these collection events continuously receive legacy pesticides, and some end-use products eventually become unregistered, there is no foreseeable end to this component of the program.
- Administrative Costs: Fund ODA administration of PSP and technical assistance to PSP partners.

PSP Areas: There have been 12 PSP areas, 2 of which are pilot areas. The South Yamhill PSP area wrapped up in 2016. The South Coast pilot area is set to not continue. The South Coast pilot area was selected because it encompasses multiple land uses. The agricultural pesticide data looked good, but growers have switched to newer-generation pesticides that are not being monitored in this program. We could revisit this area in the future if the list of pesticides and degradates we analyze changes. In this case, leaving the pilot area did not mean a problem did not exist, it meant we did not find that for which we were looking.

The current best candidate for a future PSP area is Tualatin, which the Tualatin River Watershed Council is interested in. This watershed is a good candidate for the program because it contains both agricultural and urban land uses. The major obstacle to starting a PSP area in Tualatin is a lack of resources. For example, the DEQ Organics Lab can process about 40 samples per week and is near capacity. Dr. Coles mentioned that the Blueprint Foundation works with Friends of Tualatin River National Wildlife Refuge and Tualatin Riverkeepers.

PSP Area Prioritization and Selection Criteria: Criteria used to select PSP areas include land use, which pesticides are used, whether a watershed is known to have existing water quality issues, if other stressors (e.g., salmon-bearing streams) are present, the hydrology of the area, and stakeholder interest. This is a voluntary program – we need interest in addition to environmental concerns.

GIS data (specifically the National Land Cover Database and the National Crop Land data layer) is utilized as part of this selection process. We are cooperating with Washington State, which maps its crop land to the field level every 3 years, to further refine this data. Many counties now have sophisticated GIS departments, which further help refine this data.

Relationship with Local Partners: Aside from acting as sample collection partners, lead partners often act as a conduit to stakeholders.

Project Completion Criteria: Many factors are considered when evaluating whether a project is “completed,” and advice is sought on these criteria. When an area reaches the “green square” (Low Level of Concern) of the Decision Matrix Based on Water Monitoring Data (2019), we move to maintenance monitoring. In the maintenance monitoring stage, water samples are taken less frequently. Advice is sought on what all constitutes maintenance monitoring, and under which circumstances (and when) maintenance monitoring should end. It is worth noting that new pest pressures impact when a project concludes, because they can change pesticide use patterns.

Success in Current Pesticide Stewardship Areas: Monitoring in the Wasco watershed near The Dalles began again after malathion use was reinstated to combat spotted wing drosophila. Malathion levels and frequency of malathion detection have been decreasing since 2011. Success in this PSP area could be in part due to its more homogenous land use (it is primarily a cherry-growing area). There are also only 2 aerial applicators, which made communication and behavior change easier.

The Walla Walla area has seen success in reducing diuron, a widely-used, general-use herbicide. Diuron was historically used by the irrigation district on dry ditch banks, in accordance with label directions. Diuron has a 180-day half-life, so applications made in February to then-dry ditch banks can result in high concentrations of diuron in the water later. There has been an increase in the use of mechanical control and spot spraying, which has contributed to this success. In this area, there is interest in becoming salmon-safe certified.

In the Amazon area, propiconazole has historically been an issue. Propiconazole is a fungicide that can be used in both urban and agricultural settings, in residential areas,

and on wood products. Propiconazole concentration in this watershed peaked in 2015, and has declined since then, in part due to the outreach efforts of the Watershed Council. The frequency in which propiconazole is detected has not declined as starkly.

PSP areas with the greatest improvement in water quality tend to have largely homogenous land use, the use of the same or similar active ingredients throughout the area, and strong partnerships. Improving water quality in complex watersheds with heterogeneous land use is more challenging.

#### Pesticides and Degradates by Land Use:

Managed Forest Areas: Diuron is frequently detected, despite not having forestry uses. It is possible that it may be used in rights-of-way application.

Urban Areas: The 5 pesticides detected in the waters of urban areas with the highest concentration relative to EPA benchmarks (“aquatic life ratios”) are all insecticides, but the 5 pesticides detected most frequently are all herbicides. Chlorpyrifos had the third highest aquatic life ratio, despite the fact that chlorpyrifos has not been labeled for urban use since 2006. Some potential explanations for its high aquatic life ratio are that it may be used on golf courses, and that it may be leached from treated sod or nursery plants (though the amount detected makes this seem unreasonable). Vector control would not be responsible for this. Some chlorpyrifos-containing products could still be in possession, but they would be illegal to use. Fipronil had the fourth highest aquatic life ratio. Some potential explanations are that fipronil is present in wastewater, potentially due to dog waste getting into sewers or it washing off dogs that have received flea treatments. Ethoprop had the fifth highest aquatic life ratio, despite being a product to which homeowners would not have access.

Agricultural Areas: The pesticides detected most frequently and the pesticides with the highest aquatic life ratios in agricultural areas overlapped well with the those for urban areas. However, the bifenthrin aquatic life ratio was lower for agricultural areas than it was for urban areas.

#### Changes to PSP Program:

WQPMT Increasing Transparency: WQPMT meeting minutes are posted on the [ODA's Water and Pesticides webpage](#). Biennial reports are expanded to provide more information on individual watersheds and PSP areas, and are posted on PSP websites. Upcoming agendas are posted, technical reports are published, and a mobile-friendly database is in development. Implementation of this Advisory Committee is part of the effort to increase transparency.

Strategic Plans: A grant was given to the Middle Rogue PSP for the development of the first PSP strategic plan. In addition to acting like an operations plan, the strategic plan will provide a roadmap for the program in that watershed. Walla Walla, Clackamas, and Amazon PSPs will begin developing strategic plans at the beginning of this biennium.

Among other things, a strategic plan requires the designation of critical areas within a watershed and the identification of which pesticides are of most concern. Finally, the plan requires that a coordinating council be formed that will bring pesticide users together to use data to develop goals. The council will then plan outreach and measure its effectiveness, identify best management practices, and get partners to sign a letter of commitment.

Questions: It was roughly estimated that 80-90% of the pesticides tested as part of this program have benchmarks set by EPA's Office of Pesticide Program (OPP). These benchmarks are developed from registration data, and can be adjusted. They are not enforceable, but serve as a guidance for other states. We have an agreement with Washington State that every six months either they or we check for changes in benchmarks. These changes tend to occur around pesticide reregistration, and can change how we interpret the data. This was the case with imidacloprid, which is now of much more concern. Aminocyclopyrachlor may be the only pesticide of high or moderate concern that is missing a federal benchmark, but this would have to be checked.

**Budget Overview (Stephanie Page, ODA):** The ODA Pesticide Program receives General, Other, and Federal funds. General Funds are received specifically for PSP. Other Funds are the primary source of funds for the Pesticide Program. Of the program's Other Funds, 10% go to PSP, and this 10% is matched 1:1 by the General Fund. Federal Funds are received through a cooperative agreement with EPA. When ODA had to propose 10% cuts across fund types as a routine part of the legislative budgeting process in early 2019, PSP was one of the General Fund sources that came up on the potential cut list, in part because there are so few programs at ODA that receive General Funds from which to choose.

The Pesticide Program must maintain 3 months' worth of operating cash at all times. PSP is among the expenditures that can affect this cash balance. Fee increases can affect this cash balance, but there will be no fee increases in 2020. Legislative priorities, EPA cooperative funding levels, and legal costs are among the reasons why funding can shift. The budget for the program has increased in ODA's budget from the time it was first funded in 2013-2015 and the current biennium. Enhanced stakeholder engagement in budget discussions is critical.

### **Reviewing Draft Question List**

The advisory committee brainstormed questions that this committee should answer (to add to the draft list that has already been developed). The committee also brainstormed issues that should be addressed as they develop a strategic plan for the program. The questions and issues are as follows:

- How should lower-level pesticides be managed?
- How should new pest pressures and formulations be dealt with?
- What should it mean for a PSP to be "done" or "closed?"
- What should the difference be between designating somewhere as a location where a PSP is unnecessary vs. an area where a PSP is no longer needed?
- What does maintenance monitoring look like? In an area, when do we switch to maintenance mode, and when should we discontinue maintenance monitoring?
- What do we do if, in a PSP area, pesticide levels remain high while partner engagement remains low?

- How should this program account for new chemistries on the market, and the lab's ability to test for those?
- How should we assess the effectiveness of our educational efforts?
  - Assessments should ask questions less like "Was this presentation good," and more like "Did you implement the action we discussed? Why? Was it effective?"
  - **POTENTIAL FUTURE ACTION:** Collaborate with OSU Extension Service to see how they evaluate the success of their education and outreach. Do they repeat these evaluations over time to evaluate long-term knowledge retention?
- Should the criteria for identifying new PSP areas incorporate the existence of other water quality programs in the area? Are there opportunities to collaborate with these programs?
- How much info and data must we have for a pilot area before it can become a full-fledged PSP area?
- In "Watershed Pesticide Vulnerability/Risk Criteria matrix: Weighting criteria for PSP eligibility," (see slides) the environmental justice row does not have weighted points. How can we incorporate environmental justice considerations into the weighted component of this eligibility system?
- How do we incorporate cultural concerns (e.g., cultural importance of salmon) into our accounting of environmental justice?
- How do you compare high-scoring areas? For example, if two high-scoring areas have different levels of community interest, how do you choose between them?
- Should we have a reprioritization review (why was a watershed prioritized, and would it still be prioritized today)? If so, what would this look like?
- In our selection criteria, should we prioritize areas that have multiple pesticides of concern, rather than just a few?
  - Note: ODA has limited IT resources for database development. We review our prioritized database list, because priorities can change.
- If an area doesn't want to make a strategic plan, should they be a PSP area?
- Could exploratory monitoring be funded by applying for a grant from EPA's Columbia River toxics clean-up program? If so, how could we go about applying for this?
- If groundwater is to be monitored in a PSP area, how should we collaborate with DEQ, which has already identified several Groundwater Management Areas? How should this relationship be approached and what should it look like?
- Could this program align with the 100 year water vision and other water quality improvement endeavors?

**Ideas for Future Meetings:** If we want to collaborate with other programs, we should have one-on-one meetings or presentations for each potential partner program. At each meeting, we should receive a primer of a program that interfaces with the PSP (one program per meeting). We should then prioritize the potential partners that have the most or best options for collaboration. A PSP case study should also be presented.

**Plan for Next Meeting:** Before the next meeting, review the draft charter and the Middle Rogue strategic plan. At the next meeting, we will evaluate the template of this strategic plan and identify any changes or improvements that should be made before we recommend this template for other PSP areas. The Middle Rogue plan has already been approved by WQPMT, so

feedback will be incorporated into future plans. At the next meeting, more time will be spent revising our list of questions, grouping them for clarity, and then turning the draft list into something more developed. Furthermore, we should examine the specifics of the Lower Umpqua PSP, where monitoring has been suspended but the program itself has not been completely suspended. The next meeting will be Thursday, January 16<sup>th</sup> from 9 AM – 1 PM. GoToMeeting will be an option.

**Meeting Adjourned:** Meeting was adjourned shortly before 2 PM.