

Pesticide Stewardship Partnership (PSP) Advisory Committee Meeting

Third Meeting
Wednesday, April 29, 2020
9:00 AM – 1:00 PM
GoToMeeting

Abbreviations

DEQ = Oregon Department of Environmental Quality
OAN = Oregon Association of Nurseries
ODA = Oregon Department of Agriculture
ODF = Oregon Department of Forestry
OFB = Oregon Farm Bureau
OEC = Oregon Environmental Council
OFIC = Oregon Forest and Industries Council
OFS = Oregonians for Food and Shelter
OHA = Oregon Health Authority
OSU = Oregon State University
WQPMT = Water Quality Pesticide Management Team
WWBWC = Walla Walla Basin Watershed Council

Attendance (Affiliation)

GoToMeeting: Lisa Arkin (Beyond Toxics), Troy Baker (WWBWC), Seth Barnes (OFIC), Matthew Bucy (ODA), Kaci Buhl (OSU), Nicole Crane (Oregon Wheat Growers League, Columbia Gorge Fruit Growers Association), Scott Dahlman (OFS, Oregon Farm Bureau), Chandra Ferrari (Trout Unlimited), Bryan Harper (Oregon State Board of Agriculture), Audrey Hatch (Oregon Watershed Enhancement Board), Tyler Ernst (OFIC), Robin Harris (Confederated Tribes of the Umatilla Indian Reservation), Todd Hudson (OHA), Rose Kachadoorian (ODA), Lisa Kilders (Clackamas Soil and Water Conservation District), Karen Lewotsky (OEC), Kevin Masterson (DEQ), Stephanie Page (ODA), Brenda Sanchez (ODA), Thomas Whittington (ODF), Brian Wolcott (ODA)

Phone: Sarah Cloud (Deschutes River Alliance), Kirk Cook (ODA),

Actions for Next Meeting

- **Kevin and Kirk**
 - Provide a copy of the draft 2017-2019 biennium report (when ready) to the WQPMT and PSP Advisory Committee
 - Prepare a draft explanatory document on how we interpret data and arrive at conclusions, and a draft SOP on how we prioritize areas.
- **Stephanie**
 - Download comments log from this meeting and send to Kirk and Kevin (to get all feedback regarding the strategic plan draft)
- **All committee members:**
 - Comments and questions regarding the draft strategic plan to Kirk and Kevin by **May 15th**
 - Feedback on the South Umpqua PSP pilot report to Kirk and Kevin by **May 15th**

Call to Order: Stephanie Page called the meeting to order at 9:02 AM

Welcome and Introductions

New members have joined the Advisory Committee

- Chandra Ferrari (Trout Unlimited)
- Jeff Stone (OAN)

Program Updates – Kirk Cook and Kevin Masterson

COVID-19 impacts to PSP

Some partners postponed sampling for 1-2 weeks to acclimate to the new normal (e.g., coolers had been delivered to offices that were now closed). All watersheds have resumed sampling with partner support, and monitoring is on schedule.

Work has continued on grants and grant amendments. Kirk Cook and Heather Hawes (ODA Procurement and Contracts) have been working to get caught up while staffing is reduced. Kirk has informed some of our grantees that we are willing to consider grant extensions given the circumstances.

Three PSP areas are currently engaged in strategic planning. Part of the strategic planning process is to assemble a coordinating council and hold meetings to develop sections of the strategic plan. There has been difficulty getting people to meetings (e.g., some people are unfamiliar with video conferencing). Efforts are underway to increase participation in the Clackamas area, where getting people to attend meetings has been particularly challenging. Kirk is planning to do outreach with OSU Extension. Efforts are being made to bring pesticide dealers and environmental groups to the table.

Kirk is in the process of preparing the 2017-2019 biennium report, which will summarize all of the PSP's accomplishments between July 1, 2017 and June 30, 2019. Kevin Masterson is currently reviewing the draft. Once that is complete, it will be sent to the WQPMT and PSP Advisory Committee. The Advisory Committee will see a draft hopefully next month.

South Umpqua PSP Pilot Update

Report

The Advisory Committee received a copy of the South Umpqua PSP Report from Kirk. Kirk, Kevin, and Thomas Whittington worked on this extensively, and agree on the wording and content. They are still waiting on comments from some partners, which will be incorporated into the report. Kirk is interested in the Advisory Committee's feedback and comments on the report's content.

To summarize, low levels of herbicides have been detected in several of our monitoring stations in the South Umpqua. The only detections that approached a water quality benchmark were for atrazine, which was classified as pesticide of moderate concern in this PSP based on detection frequency. Based on

the overall monitoring data, stakeholder participation, and achievable results, it was decided that the South Umpqua PSP Pilot would be concluded and a final report produced. The South Umpqua pilot area will no longer appear on ODA's map of PSP areas.

Next Steps - Education

Kirk will collaborate with ODA to develop a 2-hour educational program based on the PSP findings to be held in the Roseburg area. It will cover the pesticides seen in the South Umpqua and the mechanisms through which they can end up in the water. Labels of these pesticides and proper pesticide use will be covered. Kirk will work with Rose Kachadoorian to ensure that attendees have the ability to earn pesticide recertification credits.

Seth Barnes asked how the audience for this program would be identified. Rose suggested that we could identify who would possibly be using the products with active ingredients detected in this PSP pilot. It will be easier to reach out to licensed applicators, because ODA has their contact information and they are required to take recertification courses. ODA has a good history of reaching out to licensed applicators. It will be more challenging to reach out to unlicensed applicators, but we could potentially collaborate with OSU Extension Service on this. Stephanie stated that, in order for our educational efforts to be successful, local users must be looped-in to this audience identification process.

Kirk also stated that the program will discuss herbicide groups rather than specific active ingredients, in order to broaden the potential audience. By doing this, we could attract applicators from the agricultural, forestry, and rights-of-way sectors.

Kaci Buhl stated that, when key products are identified, she would like to know so that she could incorporate them into Pesticide Safety Education Program activities. Kirk supports this, and will follow up with Kaci soon regarding a collaboration with PSEP in the Roseburg area.

Seth stated that a pesticide detected somewhat frequently but below its benchmark could indicate high use that is in accordance with best management practices and the pesticide label. He raised the point that we could educate users on the product labels, but they may already be following them. Kirk thought this was a good point, and stated that there have been instances where an active ingredient or degradate is detected frequently but very much below its benchmark. One problem in this area is that applications are being made over many different land uses. Therefore, applicators in one sector may be following the label, while applicators in other sectors may be struggling. We have not yet been able to tease this out, but education might help this.

Possible Next Steps – POCIS Monitoring

POCIS monitoring is being considered as a way to assess the efficacy of the aforementioned education. A POCIS is a passive sampler that would be left in the water for 28-30 days. Pesticides in the water would pass through the sampler and attach to a membrane. This monitoring could take place sometime after the

course is held (e.g., end of this year or the beginning of next). If the POCIS monitoring detects pesticides, the possibility of grab sampling can be explored. We are currently speaking to partners about this follow-up, which so far seems viable.

POCIS is less labor-intensive than grab sampling, and does not require us to identify spray times. However, POCIS can only identify which pesticides are present. It would not be able to identify pesticide concentrations. Furthermore, data from a POCIS membrane cannot confidently be extrapolated to the whole water body.

Scott Dahlman expressed concern over whether POCIS monitoring would yield useful information, since it does not provide pesticide concentrations. Kevin explained that POCIS is useful in this situation because of the uncertainty regarding when pesticide applications are happening. Without additional data on application timing, POCIS is the most cost-effective option. Additionally, POCIS has also been useful in other PSP areas alongside grab sampling. Kirk stated that while grab sampling may be better, the continuation of grab sampling did not seem viable in this area and that POCIS is a good compromise. Scott thanked them for their answer but still expressed concern that POCIS results will give an incorrect impression that education was unsuccessful (e.g., concentrations are reduced, but pesticides are still present). Rose Kachadoorian stated that, even if POCIS detects a pesticide in this watershed, it does not mean that our educational efforts were unsuccessful. For example, residues contained in soil could be washed in due to heavy rain, or the pesticide could have a long half-life. We will just have to be cognizant of the limitations of POCIS when interpreting data. Rose stated that the topic of how we evaluate the success of our education and outreach fits into the process management system in which ODA's Natural Resources Policy Area is currently engaged. Lisa Arkin supported POCIS as a reasonable and cost-effective measure of the success of our educational efforts.

Rose suggested that if one pesticide keeps popping up, we could identify substitute pesticides. We could also think critically about the underlying situation – is there a severe pest problem? Are label directions unclear? Are label restrictions inadequate, etc.? This educational program will be broad, but we can deliver more focused education later.

Thomas stated that, for some PSP areas, the goal is not just to get pesticides below their benchmarks; it's to see fewer active ingredients in the watershed.

Scott expressed concern that the follow-ups we have discussed could give the impression that, once we establish a PSP pilot or area, we will stay in that pilot or area until we find a problem. Stephanie stated that this area has concluded, grab sampling has ceased, and this is follow-up work. Kevin stated that he has not yet encountered this belief among the stakeholders with whom he has worked.

Kevin also stated that this was a pilot area, and raised the question of what our expectations are for pilot members compared to area members. Stephanie stated that we need clear criteria for when we will exit each area in which we work. Kirk brought up that the strategic plan discusses exit criteria, and that our

decision matrix based on water monitoring data has a “floor” of exit criteria we could consider (no detection frequency >35%, no detection >50% of aquatic life benchmark). Stephanie stated that we should be clear up-front on criteria for engagement and what would be needed for us to sunset the area.

2019 Monitoring Season Chlorpyrifos Trends

Water quality monitoring data from all PSP watersheds between 2013 and 2019 for chlorpyrifos was presented. Chlorpyrifos has been a concern for the PSP program since the program's inception. Chlorpyrifos has been detected in multiple PSP watersheds, with levels in most years being above the benchmark. Detections peaked around 2017 with 36 detections. In 2019 there were only 16 detections across all PSP areas. However, the median concentration detected appeared to increase in 2019 compared to 2018. Data from most monitoring stations indicates improvement or no change. The 2017-2019 biennium report will include graphs of these data. We should see an overall improvement compared to the 2015-2017 biennium.

Case Study: Walla Walla PSP – Kevin Masterson, Brian Wolcott, Troy Baker

Context

The Walla Walla Basin spans across northeastern Oregon and southeastern Washington. About 1/3 of the basin is on the Oregon side. This is a predominately rural area, with a large area of dryland wheat. In the uplands, there is private and public forestry. Tree fruit, alfalfa, hay, and some nurseries (for the landscape industry) are grown on the floor where there is irrigation. The tree fruit growing area is North of Milton-Freewater and set on an alluvial fan. Tree fruit is vital to the economy of this area, which is a large apple and cherry producer for Oregon. However, there is a transition occurring from tree fruit to vineyards. The vineyards typically have cobbly soil that facilitates quick movement of water through the soil.

The irrigation district had historically de-watered part of the Walla Walla river. The Fish and Wildlife Service did not want this process to continue due to steelhead and bull trout being threatened species. Around 2009/2010, the Walla Walla river was re-watered, and some farmers lost their water rights. This and an earlier project involving riparian buffers and streamside temperature data collection prompted concern among growers regarding implementation of management measures that were focused on regulatory actions. This seemed to be a concern when DEQ approached the Walla Walla Basin community with the possibility of the PSP area.

Education and outreach put on by OSU Extension and the Blue Mountain Horticultural Society (a grower organization) helped overcome barriers. In addition, many local growers knew growers that had participated in the Hood and Wasco PSP programs. Through them, they heard that the PSP program was a non-regulatory and cooperative program. The WWBWC council had previously received grant money, which helped show that this program could help the community.

Partners in this PSP area include the Walla Walla Basin Watershed Council, OSU Extension, Blue Mountain Horticultural Society, pea and wheat growers, Salmon-Safe, DEQ, and ODA.

Monitoring

The Walla Walla PSP area began in 2005 after the Hood and Wasco pilot programs. Monitoring sites have been expanded to encompass the upper parts of the watershed, where peas and wheat are grown. Growers in that area were interested in the program and in becoming salmon-safe certified. The initial focus of this PSP was on organophosphates used in tree fruit (mainly apples). The current priorities are chlorpyrifos and carbaryl, whose concentrations have fluctuated with no sustained trend.

Sampling in this area has shifted from monitoring large areas to focusing on distributary systems. There is a diversion, and flow rate can range significantly over short timespans.

Pesticide Detections

Between 2010 and 2019, pesticide detections decreased (from 140 to 40). In 2015, glyphosate and a glyphosate degradate (AMPA metabolite), along with some fungicides, were added to the monitoring program. Some growers switch pesticides, and we may not currently be able to analyze some of the pesticides that are used.

When chlorpyrifos is detected it is usually close to its benchmark, due to its toxicity. Chlorpyrifos concentrations spiked in 2017 because of one very high detection, but they have dropped since then.

Carbaryl, which is used for tree fruit thinning in mid-Spring, has gone up and down in concentration. The 2019 detection was higher than that in previous years, and exceeded the benchmark.

We have seen sustained improvement with diuron and malathion. The median and average concentrations of diuron have dropped sharply since 2011. Diuron had been used on dry irrigation banks in compliance with the label. However, about a month after applications were made, water would flow through and diuron concentrations would increase. Diuron concentrations corresponded with when the diversion was on, and flow rate was high. These data motivated the irrigation district to switch to mechanical controls along with spot-spraying with a less toxic and less persistent herbicide. This demonstrates that monitoring, communicating results and education can lead to meaningful changes in practices.

Malathion detection began in 2010, around the same time that spotted wing drosophila damage began to be seen on cherries (which are grown in this area), blueberries, etc. There have not been any malathion detections since 2016.

Glyphosate and glyphosate degradate peaked in 2016 and then dropped to 0 in 2018. Metribuzin and metolachlor were detected from 2014-2015, but their detections also dropped to 0 in 2018.

PSP Actions

There were four pesticide waste collection events in Milton-Freewater between 2007 and 2017. These events resulted in 46,000 pounds of chemical waste being collected, alongside thousands of pounds of empty plastic containers being collected for recycling. Trainings have been regularly offered on spray drift prevention techniques. Mixings locations have been established.

A proactive tax on fruit coming in for packaging has funded a pest monitoring program. This was motivated by the interest of local growers in knowing when pests were appearing, so that they could make more targeted pesticide applications. Emerging pests have showed up (e.g., a codling moth outbreak that stopped apple shipments to Taiwan). There is a lot of pressure on the Walla Walla area to control that insect, in order to prevent consequences to fruit growing across the Pacific Northwest. Control methods that would not result in pesticide detections had to be identified. Since codling moth, spotted wing drosophila and brown marmorated stink bug have emerged, and OSU Extension has helped local growers identify means of control.

Weather stations that provide publicly accessible temperature and wind speed data were also established. These data can be used to identify temperatures that lead to pest emergence and possible entry into fruit (which would, in turn, let the applicators know which life stage to target). Additionally, the wind speed information can be used to identify at what times applicators should avoid spraying, due to greater risk of drift.

A backyard tree program was established, in which local growers provide trainings on how to manage backyard fruit trees in a way that reduces their potential to be a vector for pest outbreaks. In addition to providing assistance, if community members had unmanaged backyard fruit trees that they did not want or need, they helped replace them with a landscaping tree.

Lessons Learned and Future Directions

It is imperative to have active partner participation – our success with diuron is owed in large part to the actions of the irrigation district.

Having few crops types in an area allows for change on a faster timeline.

Grab sampling will occur this spring, and will continue throughout the year.

Currently making a 5-year plan that will focus our future actions.

Review Draft PSP Strategic Plan – Kirk Cook and Kevin Masterson

The draft PSP strategic plan was developed by the WQPMT, incorporating the work of the Advisory Committee. Kirk went through this draft section-by-section to take committee feedback and questions

The first part of the plan provides a background of the program, the WQPMT, and the Advisory Committee. Brian Wolcott suggested adding a statement like “The program is based on a

cooperative, non-regulatory partnership that identifies issues and assists with making voluntary management changes to improve water quality.”

Key Objective 1: Use data strategically to identify areas with potential or existing problems and focus the program’s efforts in better understanding and addressing those problems. Use highest quality data to drive continuous water quality improvement and education efforts.

There is the recurring question as to how we know if we have succeeded/ if we are doing this right. The strategic plan is high-level and general, from which we can develop specific standard operating procedures (SOPs).

A question was raised as to whether this plan outlines how we would prioritize future PSP areas. Kirk stated that prioritization is discussed in the plan, but at a general level. Once SOPs are developed using this Strategic Plan as a base, the specifics of prioritization can be nailed down.

Key Objective 2: Ensure transparency, accessibility, uniformity, and integrity of program information at the local level and the statewide level, and inform key stakeholders in decision making.

The goal of this objective is to keep a history of all that we do, and to regularly inform our local stakeholders of our progress. We want to generate as much local-level participation and interest as possible, not monitor for a while, report to a few key stakeholders, and then leave.

Key Objective 3: Base decisions about PSP watershed status on standardized, transparent criteria

This objective sets the stage for the WQPMT to set guidelines and SOPs on how to deal with all PSP program elements.

Key Objective 4: Use a progressive approach that focuses extensively on stakeholder engagement, outreach, and education to address pesticide problems in water and that identifies other potential tools to deal with persistent problems.

Education and outreach are the first means of addressing water quality issues.

Key Objective 5: Expand our partnerships with other agencies and organizations to leverage resources to achieve beneficial outcomes/achieve multiple water quality objectives

Expand partnerships to leverage resources (e.g., cooperate with ODA’s Strategic Implementation Areas, collaborate with Oregon Department of Fish & Wildlife).

Suggestion was made that the plan delve more into how to collaborate with ODA’s Strategic Implementation Areas.

Key Objective 6: Incentivize strategic planning and continuous improvement in local PSP program delivery.

Suggestion was made that there should be discussion of how to set up the program for federal funding.

Other feedback from committee members:

- How we will prioritize future areas should be more explicit.
- The strategic plan is not intended to go over how to interpret data – is this something we should be addressed in another document?
 - There is interest in creating an explanatory document on how we evaluate data and arrive at conclusions (e.g., how do we determine if this is a pesticide of concern, and whether the concern is high, low, or moderate).

After this Strategic Plan will come a draft SOP on when we start and stop a pilot, in addition to the explanatory data interpretation document. Those will be reviewed at the next meeting.

A question was asked about COVID-19's potential impact on the PSP budget. The governor is requesting state agencies propose general fund budget reductions by appropriation. PSP is funded 1:1 with general funds and other funds (pesticide registration revenue). There were no updates on the future of the PSP budget at the time of this meeting.

Next meeting

The Clackamas PSP area will be presented if the timing works for Lisa Kilders and Jeff Stone.

Next meeting tentatively set for July 30 9 AM – 12 PM.

Provide your thoughts to Kirk re: draft strategic plan by May 15th.

Adjourn

This meeting was adjourned around 12 PM.