



State of Oregon  
IPM Coordinating Committee  
2021-2022 Biennial Report





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# State of Oregon IPM Coordinating Committee 2021-2022 Biennial Report

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Presented by Committee Member Agencies and Universities including:

Oregon State University  
Oregon Department of Agriculture  
Oregon Department of Forestry  
Oregon Parks and Recreation Department  
Oregon Department of Corrections  
Oregon Department of Fish and Wildlife  
Oregon Department of Transportation  
Oregon Health Authority  
Oregon Department of Environmental Quality  
Oregon Department of Administrative Services  
University of Oregon

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## Executive Summary

This committee recognizes that integrated pest management (IPM) offers a sustainable approach to addressing pest, disease and weed challenges for all state agency land and property holdings, and for agencies responding to statutory responsibilities to protect, health, the environment, the state economy, and the cultural and aesthetic value of Oregon's natural heritage. Implementing the statutory purview of Oregon Revised Statute 634.657, this Committee meets three times annually, with broad goals that include:

- 1. Promoting information exchange among state agencies regarding IPM methods and approaches, best practices, and program successes and challenges;**
- 2. Providing opportunities for education and training for agency personnel that advance IPM and support pest management innovation;**
- 3. Supporting agency development of adaptive management approaches to IPM; and**
- 4. Achieving improved IPM adoption and reduced risk to humans and environment through collaborative tracking & monitoring of agency IPM status, and collective response to challenges.**

Chris Hedstrom, IPM Outreach and Communications Coordinator for the Oregon IPM Center at Oregon State University, chaired this committee during the recent biennium in support of the legislature's goals of ensuring a sustainable approach to pest management among Oregon's state agencies. This structure formally connects Oregon's state agencies with the internationally recognized IPM programs, approaches, and leadership of the Oregon IPM Center. With broad programmatic themes including strategic planning and decision-support for IPM, pesticide safety, and pesticide risk management, the Oregon IPM Center is well-positioned to provide technical leadership to this Committee.

In the time since the last Committee report (2020), each agency has updated agency-specific IPM principles that apply to statutory responsibility and/or facilities management. Each agency has also formally presented their current IPM context and status to the Committee, including specific IPM successes and challenges on the ground. A summary of this information for

each relevant agency is presented in section I of this report.

In line with ORS 634.657, one area of committee discussion during this biennium related to pesticide usage among state agencies, record-keeping and tracking procedures, and policies related to public notification. All agencies follow pesticide label requirements regarding notification of pesticide applications. Many agencies take this further, particularly with respect to publicly sensitive areas, in providing the public with notification of pesticide applications, both prior to application and at the time of application. Each agency's associated procedures and policies are summarized in Section II of this report.

As a Committee, we have also outlined areas of interagency collaboration around IPM and pest management issues in an effort to demonstrate the breadth and depth of current cooperative efforts to reduce the economic, environmental, and public health risks from pests, as well as the tactics used to control them in agricultural and natural resource environments. This is outlined in section III of this report.

In section IV we highlight examples of IPM and pesticide safety-related trainings in which agency staff have participated. The Committee is an important venue for highlighting relevant training and education opportunities throughout the state.

In section V, we include meeting agendas and summaries from the last report until present. Within these, it is evidenced that the Committee has engaged in a number of important discussions about relevant programs and potential new collaborations and opportunities, including the Department of Environmental Quality's Pesticide Stewardship Partnership, and the Pesticide Safety Education Program and the potential for that program's training program to assist with state agency/university structural and facilities IPM.





## Recommendations

In the next biennium, we seek regroup as a committee to ensure that we are fulfilling our role as outlined in ORS 634.657. We intend to recruit new members from Oregon's public University systems whose positions on the committee had been vacant during the previous biennium. We would also like to renew focus on IPM implementation and best practices for the state, and to consider setting annual goals or targeted projects. We would also like to improve visibility of the Committee's roles and actions over the years since its inception.

The Oregon IPM Center is focused on being a central information hub for integrated pest management in our state. Our mission is to become the leading authority on IPM across disciplines, the first name in stakeholders seeking information and resources, and the link between all entities with an interest in integrated pest management at any scale. With this mission in mind, we are uniquely poised to continue to lead the State of Oregon IPM Coordinating Committee.

While some level of professional development can occur through regular meetings and associated staff time, the State IPM Committee currently operates on an unfunded mandate. Financial support for the work of this Committee would catalyze progress toward Committee goals and ensuring continuity and advancement of agency IPM programs.

### Goals for 2022-2024 Biennium

- Recruit new members from Oregon's public University systems whose positions on the committee had been vacant during the previous biennium
- renew focus on IPM implementation and best practices for the state
- Set annual goals or targeted projects for each agency
- Improve visibility of the Committee's roles and actions since its inception.

## COVID-19: Impacts to agency pest management & IPM programs

The COVID-19 pandemic radically altered many state agency operations, including those related to invasive species management and IPM. These changes are based on a combination of factors across agencies, including loss of revenue from state budgets, lottery funds and facility rental fees, staff layoffs and decreased capacity to accomplish natural resource work, and dramatic declines in availability of volunteer labor.

Despite these setbacks, State Agencies were able to continue their IPM work, as outlined in the individual reports in this document. The State IPM Committee continued to meet remotely over the prior biennium at least twice annually to discuss successes and challenges. The first in person meeting since 2020 was held in July 2022, hosted by Oregon Department of Agriculture in Salem, OR. It is anticipated that future meetings will be in-person or hybrid to accommodate representatives unable to travel due to schedule or location.





# 2020-2022 Committee Members

## Oregon State University

Chris Hedstrom, Committee Chair, IPM Outreach Coordinator, Oregon IPM Center, joined October 2020

Silvia Rondon, State IPM Coordinator, Director, Oregon IPM Center, joined July 2022

## Department of Transportation

Will Lackey, Committee Co-Chair, Vegetation Management Coordinator

## Department of Parks and Recreation

Noel Bacheller, Committee Secretary, Natural Resource Coordinator/Botanist; Oregon Parks and Recreation Department

## Department of Forestry

Wyatt Williams, Invasive Species Specialist, Oregon Department of Forestry

## Department of Agriculture

Helmuth Rogg, Director, Plant Protection & Conservation Programs Area; State Plant Regulatory Official, Left ODA July 2021

Carri Pirosko, Integrated Weed Management Coordinator

Max Ragozzino, Biological Control Specialist, joined July 2021

## Department of Administrative Services

Daren Dickey, Landscape Manager, Department of Administrative Services

## Department of Fish and Wildlife

Colin Tierney Restoration and Monitoring Biologist, Oregon Department of Fish & Wildlife, Left ODFW 2022

David Stroppel, Willamette Valley Open Fields Coordinator, joined Dec 2022

## Department of Corrections

Chad Naugle, Sustainability Programs Manager, Oregon Department of Corrections, Left ODOC 2022

Kathleen Fitts, Sustainability Manager, joined January 2022

## Department of Environmental Quality

Kevin Masterson, Agency Toxics Coordinator, Oregon Department of Environmental Quality, Left DEQ 2022

David Gruen, Columbia River Coordinator, joined July 2022

## Oregon Health Authority

Curtis Cude, Environmental Public Health Surveillance Program Manager, Oregon Health Authority

Alan Martinez, Occupational Health & Pesticide Exposure Program Coordinator, Joined July 2022

## University of Oregon

Jeremy Chambers, Safety & Risk Services, passed Jan 2022

Steve Stuckmeyer, Director of Environmental Health and Safety, Joined Dec. 2022

Kevin Farthing, Associate Director of Environmental Services, Joined Dec. 2022



Oregon State University  
Oregon IPM Center



Oregon  
Department  
of Transportation

Oregon  
Health  
Authority





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## I. Agency IPM Principles and Programs

Using examples highlighted in the USDA's National Roadmap for IPM, each agency discussed and outlined its own "IPM Principles," detailing the IPM context for each agency, and how IPM is interpreted and employed in this context.

Each agency formally presented its current IPM status, including specific successes and challenges related to IPM on-the-ground. This information is presented in the following section for each relevant agency.

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**OREGON  
DEPARTMENT OF  
AGRICULTURE**

# Oregon Department of Agriculture

## Principles and Fundamentals of IPM

1. Exclusion and Prevention: quarantine and early detection, rapid response
2. Education and Outreach
3. Detection, Survey, and Mapping
4. Control, Containment, and Eradication: manual, mechanical, cultural, chemical, biological
5. Restoration and revegetation
6. Monitoring

## Model for IPM implementation

ODA focuses upon exclusion and prevention, starting with quarantine and "early detection, rapid response" (survey, detection, eradication and monitoring). Preventative strategies minimize risks to human health and the environment, and they are the most economically sound approaches. Examples of this model include frequent surveys for sudden oak death, early detection of spongy moth, response to A-rated weeds (i.e. oblong spurge) and ongoing eradication of Japanese beetle

## Key goals

ODA's goal is to prevent pests, plant diseases and weeds from entering the state. Priority lists of weed species including the 100 Most Dangerous Invaders list, maintained by the Oregon Invasive Species Council (OISC), and the State Noxious Weed List maintained by the State Weed Board, set priorities and offer guidance. Two-thirds of the species on the Dangerous Invaders list fall within ODA's mandate.

Regular staff meetings provide an opportunity for ODA staff to employ the IPM decision-making process, both when new exotic pests are accidentally introduced to the state, as well as for ongoing pest projects. As these projects progress, staff must continually reevaluate which tools are necessary for eradication, containment, control, or restoration objectives. In the early stages of an A-rated noxious weed eradication project, broadcast herbicide applications are often utilized to reduce large populations to levels that can either be spot-treated by backpack applications or hand-pulled. Another common scenario involves the implementation of different methods based on parameters of sites spread across a larger landscape (multiple property owners: private, county, state, federal).

For example, partners working to eradicate Alyssum, an A-rated weed which spread across the Illinois Valley in southern Oregon, use hand-pulling exclusively on federal lands and along the

Illinois River, implementing group volunteer pull events annually. Several of the most heavily infested fields were initially broadcast sprayed and have been transitioned to manual methods only through based on achievements in reductions. Repeated tillage has been implemented in some fields where growers preferred non-chemical methods. Each year, partners involved with an Alyssum Working Group reevaluate which tools are best at each site across the landscape. The decision-making process that is promoted through an engaged IPM process is the foundation of ODA pest projects.

Another successful example is the Spongy moth story. In the mid 1980s, the largest Spongy moth (*Lymantria dispar*) infestation west of the Mississippi was found in Lane County. More than 19,000 Spongy moths were caught in pheromone traps. Oregon Department of Agriculture decided to apply a low-risk, biological control agent to eradicate the Spongy moth population that stretched over 250,000 acres. Over a period of four years with three aerial and ground treatments each year of the naturally occurring soil bacterium *Bacillus thuringiensis kurstaki*, (Btk), which is a natural enemy of butterfly and moth caterpillars, the Spongy moth population was eradicated.

## IPM Performance metrics

ODA activities in IPM strive to meet state benchmark #90 – "ODA IPM activities strive to meet state benchmark #90 – "number of the top 100 plant pests, diseases or weed species excluded each year". The OISC publishes a report card showing how well invasive species are being excluded, with a target of slowing the rate of establishment to less than one per year. This target has been achieved every year to date. Further, pesticide use record-keeping is required by Department of Agriculture, and is managed through a PURS records system.

Eradication projects conducted by ODA are often funded by Federal partner agencies. If federal money is involved, an Environmental Impact Statement (EIS) or Environmental Assessment (EA) and Pesticide Use Proposals (PUPs) are completed to examine the environmental and human health risks. An environmental assessment includes the following topics: Purpose and Need for Action, Public Involvement and Issues, Affected Environment, Alternatives, Environmental Consequences, Recommendation of the USDA APHIS and Oregon Department of Agriculture, and Conclusion. ODA plays a direct role in noxious weed management via its program of early detection and rapid response that may bring about eradication of invasive threats if addressed early and comprehensively enough. ODA supports an invasive plant biological control program and

has deployed 74 biological control agents against 29 target invasive plant species. ODA supports important agricultural industries that are active in national and international trade pathways that help to sustain the Oregon economy. This includes monitoring and certification of nurseries to address invasive insects including Japanese beetle diseases such as sudden oak death, and certification of commercial seed to limit contamination by invasive species.

More indirectly, ODA plays a role in invasive species management via registration of pesticides that can be used in critical situations without undue risk to human health and the environment. It also licenses pesticide applicators and administers a program of continuing education credits for applicators to ensure that pesticide use is conducted as effectively and safely as possible. This is backed up by compliance investigations that address complaints about pesticide use. Finally, through the State Weed Board, ODA implements a weed severity classification system in reviewing and distributing grants funds for weed management projects. Grant requests are evaluated on the basis of IPM criteria, thus ensuring that pesticides are only used in those circumstances

where they are most needed.

Oregon Department of Agriculture administers a pesticide incident reporting process, and employs a number of pesticide investigators: details can be found at: <https://www.oregon.gov/oda/programs/Pesticides/Pages/PesticideFertilizerComplaints.aspx>

The Pesticide Analytical Response Center investigates incidents and has wide representation from State Agencies (<https://www.oregon.gov/ODA/programs/Pesticides/Pages/PARC.aspx>). Biennial reports are provided to the legislature, which include details of incidents and responses.

The ODA has enforcement responsibilities, and if violations take place, a number of actions can be taken including imposition of civil penalties, withholding pesticide applicator licenses, and referral to a Federal Agency: <https://www.oregon.gov/ODA/shared/Documents/Publications/PesticidesPARC/PesticideInvestigationEnforcementBrochure.pdf>

## Current IPM Activities

- Noxious Weed Management Program
- Biological Plant Control Program (weed & insect pests)
- Via the State Weed Board:
  - a. Maintains a Noxious Weed List
  - b. Oversees a Noxious Weed Grant Program
- Certification and monitoring of nurseries for diseases
- Certification of commercial seed to limit weed seed contaminates
- Pesticide registration for the state
- Licensing and training of pesticide applicators across the state
- Investigates pesticide complaints
- Collaborator in Oregon's Pesticide Analytical Response Center (PARC)
- Serves in a lead enforcement role when pesticide violations occur

## Current Challenges

- Newly realized safety concerns agency wide
- Impacts from COVID-19 & wildfires (staff & budget)
- High turnover in admin, staff & management
- Emerald ash borer's new invasion
- Reliance on general and lottery funds for some core programs
- Overreliance on federal funds to maintain core programs
- Understaffed in several programs





# Oregon Department of Fish & Wildlife



1. Our mission is to protect and enhance Oregon's fish and wildlife and their habitats for use and enjoyment by present and future generations.

a. IPM mostly concerned with fish and wildlife species, but may include habitat.

2. There are three FTE devoted to the invasive species program, led by Invasive Species Coordinator.

3. The Oregon Conservation Strategy (OCS) references several regional/national plans, mostly AIS.

4. OCS provides management approaches to include when developing an IPM program. These are: 1) Education, 2) Prevention, 3) Assessment/risk analysis, 4) Early detection, 5) Rapid response, 6) Containment, 7) Restoration, and 8) Adaptive management (described in table on the following page).



5. State statutes and administrative rules prohibit the unauthorized import of undesirable or invasive species (Wildlife Integrity Program and Div. 56 Rules):

1. ODFW's Wildlife Integrity Program regulates the importation, possession, and transportation of non-native wildlife species.

2. Division 56 Rules provides a list of prohibited species.

6. The OCS has one stated Goal: Prevent new introductions of species with high potential to become invasive, and reduce the scale and spread of priority invasive species infestations. The actions are:

Action 1.1. Focus on preventing the introduction of new invasive non-native species through collaborative efforts.

Action 1.2. Increased public awareness, reporting, and funding.

Action 1.3. Through collaborative efforts, continue to develop early detection and rapid response plans to facilitate swift containment of new introductions.

Action 1.4. Establish a system to track the location, size, and status of infestations of priority invasive species.

Action 1.5. Focus on eradication of invasive species in Strategy Habitats and other high priority areas where there is a clear threat to ecosystems and a high probability of success.

Action 1.6. Work with the ODA, the Oregon Invasive Species Council, and other partners to develop an invasive species implementation tool that evaluates the ecological impact and management approaches for invasive species identified as priorities in the Conservation Strategy.

Action 1.7. Develop and test additional techniques to deal with invasive species, and share information with landowners and land managers.

7. Prevention is communicated and coordinated at all levels of the agency.

8. When new species are discovered, the invasive species team is notified and action is taken if possible.

9. Primarily run through the invasive species shop for new infestations or small local populations.

10. Certain disease related issues are coordinated through the vet lab.

## ODFW Approach for Invasive Species Management

Management Approach	Objective
Education	Inform the public about the impacts and costs of invasions.
Prevention	Preventing new species introductions is a top priority and the most cost-effective approach to protecting native species, ecosystems, and productivity of the land from invasive species.
Assessment / Risk Analysis	Defining the level of concern and risk associated with new introductions through an assessment process will help to identify the worst invaders and management priorities.
Monitoring	The importance of surveying cannot be overestimated when looking for first-time infestations of undesirable non-native species or evaluating efforts to control existing occurrences.
Early Detection	Early discovery of infestations of previously undocumented non-native species is critical to controlling their spread and achieving complete eradication.
Rapid Response	Immediate treatment of new, isolated infestations will maximize eradication success and decrease the likelihood of populations expanding beyond the initial area of introduction.
Containment	Preventing invasive species from 'hitchhiking' via vulnerable pathways will slow the advance of established invasive species into unaffected areas. Some invasive species are tolerable if infestations can be contained and their impacts minimized.
Restoration	A system-wide approach to treating invasive species should consider habitat restoration as part of the ecological healing process. Helping native species and ecosystems recover is an important step following the removal of harmful species.
Adaptive Management	Land managers or landowners should change course on management prescriptions if treatments are not working. Monitoring the results of control actions is an important part of this process.





# Oregon Parks & Recreation Department



## Agency IPM organization & management context

Oregon Parks and Recreation Department properties cover 134,000 acres (209 square miles) in over 360 “parks” around the state. Properties include State Parks, State Natural Areas/Sites, State Heritage Sites/Areas, State Scenic Corridors, State Recreation Areas/Sites, Willamette River Greenway, State Scenic Viewpoints, State Natural Sites, and State Waysides. While most properties are owned by the department, some of these properties are leased from other landowners. A small amount of land is leased to other land managers. In addition to traditional land ownership and management, OPRD is involved in State Scenic Waterways, State Trails, and the Ocean Shore Recreation Easement. These are other land management responsibilities that involve other underlying land ownerships not tallied in the 134,000 acres reported above.

OPRD responsibilities include the management of a variety of natural and developed environments – including natural habitats, developed landscapes, buildings, roads, trails, boat ramps, and other facilities. Management is divided into 4 regions and 36 Management Units around the state. Each Management Unit is responsible for its own Integrated Pest Management with assistance from the department’s Stewardship Section and Invasive Species Committee. Each Management Unit is responsible for maintaining an IPM Plan for the unit according to the statewide template created by the Invasive Species Committee.

The agency Invasive Species Policy and accompanying Procedures documents detail agency IPM roles and responsibilities and lay out the make-up and terms of the Invasive species Committee membership. The Invasive Species Committee is made up of one manager and one ranger per region in addition to the Central and Regional Park Resource Program Managers, Central Natural Resource Specialist, Natural Resources Specialists assigned to field locations, Ocean Shore Specialist, and OPRD Safety & Risk Manager or designee. The committee is chaired by a manager from a field unit, region, or district.

## Pests

OPRD’s pest management concerns span many environments including building interiors, developed landscapes and ornamental grounds, natural habitats, and hardscaped infrastructure. Pests of concern depend on particular settings and can include non-native invasive plants and animals in natural areas or developed landscaping; hazardous native or non-native plants having thorns, toxins, or high flammability (such as gorse, poison hemlock, and poison oak); hazardous animals such as hornets, wasps, and

rattlesnakes; and infrastructure and facilities pests such as ants, rats, mice, ground squirrels, gophers, moles, skunks, termites, and bedbugs. Additionally, OPRD’s natural areas and landscaping can be threatened by insect and disease infestations that threaten natural habitat, ecological health, and developed plantings.

## Projects and Funding

OPRD has limited resources and has to rely heavily on prioritization and triage. The agency has no dedicated weed and pest management budget. Costs of pest management are paid through a combination of park maintenance and operations funds, external grants, and an internal stewardship funding pool that is competitively awarded to a wide array of natural resource projects covering everything from weed management to hydrology. In the last biennium the internal stewardship funding pool awarded approximately \$280,000 to projects involving significant invasive species management. Some of this funding was directed to restoration planting after weed control.

OPRD and its partners receive external grant funding for projects on OPRD land involving invasive species management every biennium. The amounts vary from year to year. These projects are often restoration related, and control costs are a portion of the overall package. Costs have been approximately \$1M/biennium for the last 3 biennia.

OPRD makes frequent use of volunteer and Department of Corrections labor to manage invasive plant issues. Volunteer groups often include Americorps, OYCC, school groups, Boy Scouts, and Girl Scouts.

The full annual cost of invasive species management is not currently known because staff and volunteer time spent on manual or mechanical control are not currently tracked in a way that makes it possible to quantify costs specific to weed management itself across the agency, and because invasive species management is very often a portion of larger restoration projects in which it is difficult to separate control activities from other aspects such as grading, planting, supplies, etc. Prioritization and triage are based on considerations that include: health and safety (fire risk, injury risk, pathogens); ecological drivers (system-modifying weeds, rare species and priority natural habitats threatened by weed infestations); feasibility (availability of control resources, partnerships); and Early Detection and Rapid Response (“EDRR”, striking threats while they are still small and manageable).

## Training

OPRD provides pest management training to its employees whose work responsibilities may include pest management. Training is provided through both internal and external sources. The Invasive Species Committee and Stewardship Section both provide periodic workshops on topics such as weed identification, pest management techniques, mapping and tracking software, IPM plan recommendations, forest insects and disease, biocontrols, record-keeping, calibration, restoration and establishing competitive native vegetation, prevention, etc. These workshops often provide continuing education unit credits for certified pesticide applicators and/or arborists.

## Integrated Pest Management Plans

OPRD policy requires each management unit to maintain its own individual IPM plan based on a statewide template developed by the Invasive species Committee. This allows for each unit to tailor their strategies and priorities to their unique environmental and social setting rather than prescribing a one-size-fits all approach across the state. OPRD properties span all of Oregon's diverse ecoregions – each of which has different realities in terms of pests, priorities, capacities, opportunities and constraints. The decentralized IPM plan approach allows each unit to adapt its program to its unique setting.

## Challenges and needs

OPRD would benefit from increased funding for weed and pest management in an ecological restoration context. OPRD staff time is very limited, and significant projects require contracting and consulting. Most parks have very little staff time available for management of resources outside of the vicinity of developed areas such as campgrounds and day use areas. Remote areas of large parks generally receive very little attention due to this labor shortage.

OPRD would also benefit from improved ability to uniformly and efficiently track staff and volunteer time spent on IPM activities. IPM activities that involve financial costs, contracts, and the associated paper trail are relatively easy to quantify, but are likely smaller overall investments than the currently under-tracked IPM activities accomplished by OPRD staff, volunteers, and others in monitoring for, maintaining, and managing smaller emerging issues on a daily basis before they rise to the level of requiring contracts and costs to manage them. This tracking difficulty results in under-representation of the role of prevention, monitoring, and manual/cultural/mechanical methods of IPM that make up a large portion of OPRD's management of minor issues. The records are skewed towards bigger projects.

## IPM Principles - Oregon State Parks and Recreation

- **Identify conservation elements within parks** and plan around their sustainability as a primary focus. Conservation elements can include important habitats, species, cultural resources, scenic resources, and recreational uses. By focusing on resources of the highest value and importance, we manage our resources efficiently and prioritize what is most important. This advances the OPRD mission of providing and protecting outstanding natural, scenic, cultural, historic, and recreational sites for the enjoyment and education of present and future generations.
  - **Understand the site management objectives;** establish short- and long-term priorities. Determine site objectives for pest management; use Specific, Measurable, Achievable, Realistic, and Time-based (SMART) objectives when choosing tools. Plan for preservation of conservation elements and the systems that support them.
  - **Prevent species from becoming a pest at your site.** Prevention is the first line of defense against any pest species.
  - **Identify and monitor the pest species.** Know the life history and the conditions that support the pest(s). Perform appropriately timed monitoring to determine the presence and intensity of pest threats.
  - **Understand the physical (air, water, food, shelter, temperature, and light) and biological factors** that affect the number and distribution of pests and any natural enemies.
- Conserve natural enemies when implementing any strategy. Avoid disturbances and practices that allow pests to flourish or become established.
  - **Review available tools and best management practices (BMP) for pest management.** Tools and strategies can include: 1) no action, 2) physical (manual and mechanical), 3) cultural, 4) biological, and 5) chemical. Understand the right time and place for application of the various tools.
  - **Establish the “action thresholds.”** Decide on the level of pests or damage that will trigger a management action to control the pest population. Some pests may be more tolerable than others.
  - **Obtain approval, define responsibilities, and implement preventive, BMPs** and control treatments in accordance with applicable laws, regulations, policies and an Integrated Pest Management Plan.
  - **Practice adaptive management.** Evaluate results of implemented management strategies through monitoring; determine if objectives have been achieved, and modify strategies, if necessary.
  - **Maintain written records.** Document decisions and the treatments implemented, and record monitoring results.



# Oregon Department of Transportation



The ODOT mission is to provide a safe and reliable multimodal transportation system that connects people and helps Oregon's communities and economy thrive.

## Integrated Pest Management

Integrated Pest Management (IPM) is an effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices. IPM programs use current, comprehensive information on the life cycles of pests and their interaction with the environment. This information, in combination with available pest control methods, is used to manage pest damage by the most economical means, and with the least possible hazard to people, property, and the environment. Since 1991 ODOT has formally implemented an Integrated Pest Management (IPM) program for controlling vegetation along state highways. Because the 'pest' in the ODOT context is vegetation, the term we use is Integrated Vegetation Management (IVM).

## Vegetation Management

Vegetation management is one of the many activities that ODOT performs to keep the State highway system functioning and safe. Roadside vegetation is managed for a variety of reasons. Roadside vegetation management for safety includes maintaining adequate sight distances such as sight lines around curves, to increase visibility of animals, people, signs, guardrails, and vehicles entering the right-of-way. Encroaching vegetation reduces the width of the travel way. This can be a hazard to cyclists and pedestrians, as it forces these users into the travel lane. The encroaching vegetation can also be unsightly.

Managing vegetation reduces the effects of standing water and ponding, therefore reducing damage to the pavement by allowing for the free flow of water. Standing water on roadways can create potholes and erode the edge of the pavement. Once cracking develops, the condition can significantly worsen. Ponding can also lead to hydroplaning.

Finally, ODOT is required by ORS 569 to prevent the spread and establishment of noxious weeds. ODOT works closely with the Oregon Department of Agriculture as well as county weed boards in the management of noxious weeds.

ODOT manages right-of-way vegetation in a safe and sustainable manner by using a combination of mechanical, cultural, biological and chemical methods:

Mechanical: using equipment such as mowers, chain saws, brusher mowers, etc.

Cultural: incorporating native or more appropriate plant material to out-compete unwanted vegetation; using weed-free mulch and straw; project design considerations

Biological: using a natural predator to control the noxious weed or unwanted vegetation (e.g., weevils on Scotch broom)

Chemical: applying EPA-approved chemicals per product label

## ODOT IVM Program

ODOT is responsible for nearly 9,000 highway miles and more than 75,000 acres of right-of-way.

ODOT has divided the state into five regions and 14 maintenance districts. The ODOT Maintenance and Operations Branch leads and supports the highway maintenance districts by developing and implementing programs to ensure efficient, effective and consistent maintenance and operation of Oregon's transportation infrastructure. The Maintenance and Operations Branch is home to the ODOT Statewide Vegetation Management Coordinator. The ODOT Statewide Vegetation Management Coordinator is involved with all vegetation activities and directly supports each of the 14 maintenance districts.

To outline and document the vegetation management program, ODOT has developed a Statewide IVM Plan. In addition, each of the 14 ODOT maintenance districts prepare an annual IVM plan. A general IVM plan template was developed to give guidance to maintenance personnel as well as to promote statewide consistency. The District IVM plans are frequently updated to address any changes in management strategies.



## Challenges

- No dedicated staff – Vegetation management is just one of the many roadside activities performed by ODOT personnel. Often, other activities such as winter maintenance, paving, shoulder blading, striping etc. take precedence over vegetation management.
- Competing Interests – The ODOT system intersects all parts of the state including urban and rural areas, forests, farmland, State parks, BLM and US Forest Service. ODOT highway maintenance often conflicts with adjacent landowners.
- Building Maintenance and IPM – ODOT owns as well as leases a multitude of buildings that are home to DMV, Project Development, Environmental, Maintenance and Motor Carrier. Facilities IPM is not addressed in the ODOT Statewide IVM plan.

## ODOT IPM Resources

- ODOT Statewide IPM Policy
- ODOT Statewide IVM Plan
- ODOT District IVM Plans
- ODOT District IVM Plan Template
- ODOT Maintenance Guide
- ODOT Water Quality and Habitat Guide “Blue Book”
- ODOT Environmental Management System

Publications can be found at:

<https://www.oregon.gov/odot/Maintenance/Pages/Environmental-Programs.aspx>







# Oregon Department of Forestry

## Adaptive IPM Strategies:

IPM is a foundational element of the practice of forestry. From creation of new forest stands, to management of those stands over time, a guiding principle is to create healthy conditions that inhibit the introduction or growth of pests that would interfere with management objectives. Accordingly, IPM is broadly integrated into management activities across both Private Forests and State Forests divisions within the agency:

- Private Forests Division administers the Oregon Forest Practices Act for reforestation laws on non-federal forestlands. Reforestation laws do not dictate how to achieve desired objectives (i.e. do not promote pesticides). However, specific to the use of pesticides (one of the several IPM tools), the FPA seeks to ensure that:
  - Pesticides used on forestlands do not occur in the soil, air or waters of the state in quantities that would be injurious to water quality or to the overall maintenance of terrestrial wildlife or aquatic life; and,
  - Riparian management areas and sensitive resource sites receive adequate protection during herbicide applications.
  - Pesticide applications on forestlands are documented by the agency along with other reforestation activities under a "notification of operations" through an online platform: FERNS.

- ODF staff from the Private Forests Monitoring Unit as well as field foresters ensures that landowners are following tenants of FPA through compliance audits and enforcement.
- Field staff in the Private Forests Division (e.g. Stewardship Foresters) work with landowners to encourage IPM in meeting objectives of forest plans and in meeting requirements of FPA.
  - Many but not all of the 50+ Stewardship Foresters attend workshops and maintain Oregon Pesticide Applicator licenses
- Forest Health Unit staff have received education in IPM tactics and provide the following services for the agency in regards to injurious forest insects, disease and exotic weeds:
  - Annual aerial survey of forest insect and disease activity across approximately 30 million acres.
  - Ground based surveys
  - Education and outreach
  - Landowner technical assists
  - Training for ODF Stewardship Foresters, public, and other agencies
- State Forests Division: Achieve greatest permanent value for Oregonians for state-owned and state-managed forestlands while maximizing revenues consistent with protecting environmental values. IPM helps achieve these goals in an economic and environmentally sound manner.





## IPM Success, Challenges and Needs

### Successes

- ODF Private Forests staff work to monitor and assess pesticide-related water quality issues through the interagency Water Quality Pesticide Management Team (WQPMT). Led by the Oregon Department of Agriculture (ODA), this team is focused on the implementation of the state Pesticide Management Plan to monitor and respond to pesticide detections in surface and ground water. The key program for collecting pesticide-related water quality information is the Department of Environmental Quality's (DEQ) Pesticide Stewardship Partnership (PSP), though ODF conducts periodic studies of how effective rules are at protecting water quality. ODF provides technical, outreach and funding support to the PSP efforts.
- ODF is an ex-officio member agency of the Oregon Invasive Species Council and has invested dollars and staff time to ensure this group's success of its mission to provide a comprehensive and coordinated effort to prevent and control highly-destructive invasive species in the state.
- Subscription services for FERNS notifications. Landowners, citizens, neighbors can be sent automatic notifications before a forest activity (e.g. pesticide application) occurs in a chosen location.
- Research and development of early detection systems for high-priority invasive forest pests and disease, such as the causal agent of sudden oak death and emerald ash borer (EAB). Early detection programs have an overall goal of limiting establishment and spread of new pests, thereby decreasing the use of pesticides. The Forest Health Unit is a leader of the interagency Oregon Forest Pest Detector program which aims to detect new pests early. The unit also conducts a variety of ground and aerial surveys to detect new infestations of *Phytophthora ramorum*, the causal agent of sudden oak death. In 2022, over 600 acres of infested tanoak were identified in the Port Orford region for local eradication treatments to slow the spread of this inva-

sive pathogen. In June of 2022, Forest Health staff responded quickly to the first detection of emerald ash borer on the west coast. Staff work closely with partner agencies on the EAB Task Force. New detections of the Mediterranean oak borer were accomplished in conjunction with Oregon Department of Agriculture.

### Challenges

- Stewardship Forestry training and education: Increasing responsibilities and knowledge of changing FPA rules required for compliance checks and enforcement. Shortage of time and staffing levels leaves fewer resources for IPM continuing education training
- Limitations with FERNS notification system makes it difficult to please all users. Some users request more precise notifications in terms of window of time for an application and other aspects of how herbicide activities are logged in the system.

### Needs

- When making silvicultural recommendations, ODF staff provide training and landowner assistance in IPM that does not involve the tactic of applying pesticides. These tactics are difficult to capture and report, unlike pesticide applications (e.g. acres treated or amount of chemical applied), but important to capture.
- Staffing levels make it difficult to accommodate increases in IPM tracking and reporting. Wildfire severity has pulled agency resources towards emergency fire protection. Dedicated funding for an IPM coordinator (e.g. silviculturist) is an agency need.







# Oregon Department of Corrections

These IPM guidelines are the foundation for ODOC pest management planning and implementation.

## Foundations for a successful ODOC IPM Plan include:

Understanding of site specific-management objectives; short and long-term priorities.

- i. Complete on-site analysis and inventory landscape and pesticide chemicals
- ii. Develop site-specific IPM program with contracted IPM vendors or OSU Extension Office
- iii. Work with procurement to create a pesticide red list (not approved), as identified by EPA or determined by OSU Pesticide Properties database
- iv. Establish key performance measures (KPM) and policies that support these
- v. Track KPM metrics
- vi. Establish a Pest Management Strategic Plan (PMSP)
- vii. Provide program leadership and guidance
- viii. Increase demand for prison IPM
- ix. Establish site or regional IPM Coordinators
- x. Establish pesticide applicator certification program to help with re-entry job placement.
- xi. Align prison IPM with other EPA, State and OSU programs

## Outreach and education

- i. Strengthen relations with Federal, State, universities and Western Region IPM Center
- ii. Build partnerships and consensus with stakeholders, such as communities and decision-makers.
- iii. Establish an iLearn training module for staff to complete
- iv. Have IPM as a standing agenda item at Operation meetings
- v. Establish an IPM team at the site or incorporate into Safety Committee responsibilities
- vi. Share best practices and IPM vendor reports with staff
- vii. Encourage staff to attend IPM meetings or participate in IPM educational opportunities
- viii. Communicate IPM topics regularly through the staff and adult in custody newsletters

## IPM in Practice includes strategies for:

**Pest prevention:** Prevent species from becoming a pest at your site.

- i. Minimize issues by maintaining institution cleanliness

- ii. Ensure no debris inside the perimeter fence
- iii. Manage gardens, landscaping, yards and indoor spaces from becoming a threat
- iv. Maintain regular pest service to perform inspections
- v. Monitor pest reports from occupants
- vi. Identify repairs that could alleviate pest problems
- vii. Address conditions that provide pests with food, water and shelter
- viii. Utilize landscape designs to eliminate pest-conducive conditions
- ix. Remove trash and overgrown vegetation
- x. Plant native endemic plants to minimize potential pests
- xi. Hold periodic meetings for staff on IPM principles and implementation

**Pest avoidance:** Understand the physical (air, water, food, shelter, temperature, and light) and biological factors that affect the number and distribution of pests and any natural enemies.

- i. Use IPM strategies that include proper watering, mowing, soil testing and soil aeration
- ii. Repair building deficiencies that may lead to pest problems
- iii. Maintain clean environment by keeping all spaces free of crumbs, food scraps, standing water, and debris that could harbor pests

**Pest monitoring:** Identify and monitor for pests, including:

- i. Rodents
- ii. Fruit flies
- iii. Yellow jackets
- iv. Bed bugs
- v. Ants
- vi. Mosquitos
- vii. Nuisance wildlife
- viii. Noxious weeds
- ix. Invasive species

**Pest suppression:**

Review available tools and best management practices (BMP) for pest management.

- i. Have IPM vendors share BMPs for all site coordinators

Establish "action thresholds" that consider the following:

- i. Health hazard
- ii. Nuisance
- iii. Diseases
- iv. Public safety
- v. Stewardship
- vi. Economic threat

Obtain approval, define responsibilities, and implement IPM in accordance with applicable laws, regulations, policies and IPM Plan:

- i. ORS 634.650 – 665. (Integrated Pest Management – State Agencies)
- ii. ORS 569.175 – 990 (Noxious Weed Management) Especially 569.185 (State Department of Agriculture authority; rules; integrated weed management approach.)
- iii. ORS 579 (Plant Pest and Disease Control; Invasive Species)

Practice adaptive management.

- i. Assess problem
- ii. Design solution
- iii. Implement
- iv. Monitor
- v. Evaluate
- vi. Adjust

Maintain written records:

- i. For each building or property detailing monitor techniques, location, and inspection schedule
- ii. Record monitoring results and inspection findings including recommendations.
- iii. Record citizen/occupant complaints, inspection date, IPM action taken and follow up with complainant

### IPM Challenges and Needs:

1. ODOC does not have site IPM Coordinators.
2. IPM is not identified as a key performance measure for the agency.
3. There are no metrics or tracking currently established for IPM.
4. Need to establish more outreach and education to staff and AICs.
5. Request assistance from the State IPM Coordinating Committee with an IPM strategic plan, and/or have another agency as a mentor.
6. ODOC will establish an IPM guidelines document until an IPM strategic plan can be created.

### ODOC Current IPM Strategies and Success:

1. ODOC's Contract Office has the authority to write requests for proposal and invitation for bid for required IPM products and services. The term of the contracts is two years, with option to renew at the end of each term. ODOC has several IPM vendors that service our institutions and property grounds.
2. The pest coverage includes:
  - Rodents: mice, rats, voles, moles, gophers & nutria
  - Various ants
  - All Arthropods
  - Fly species
  - Fleas
  - Landscape insect and weed pests
  - Landscape disease pests
3. Facilities Services that oversee the farmlands has leased our nearly 1,000 acres of farmland to local farmers and food banks. The lessee is required to control noxious weeds as part of the contract. This has saved ODOC nearly \$60,000 in chemical usage since 2013.
4. ODOC has incorporated biological strategies such as owl boxes to reduce the use of rodenticides, and added beneficial insects to institution gardens.
5. ODOC works with several state agencies, non-profits and consultants that train our adult in custody (AIC) work crews about wetlands maintenance, habitat restoration and weed

- identification and control.
6. AIC work crews are hired by state agencies and non-profits for habitat restoration, noxious weed control and making Gypsy/Nun moth traps.
7. Sustainable gardening classes teach AICs IPM as part of the Certificate of Home Horticulture.
8. ODOC converted to green janitorial chemicals in March 2015.

ODOC's primary goal will be to establish an IPM Strategic Plan (IPMSP) within the next five years. Until this is established, ODOC will use an IPM principles document. This document will assist with completing objectives for management planning, creating standards that can be implemented operationally. ODOC will focus on developing an IPM program with the following objectives:

- Educate staff and develop site IPM Coordinators
- Educate AICs that are on the habitat restoration work crews
- Agencies that hire crews will need to have educational component for weed identification, equipment certifications and ensure personal protective equipment is worn for health and safety.
- Expand invasive weed identification binder for various habitats the crew provides maintenance
- Establish chemical applicator certification program for reentry job placements



# Oregon Department of Administrative Services



The Department of Administrative Services (DAS) is the lead administrative agency for Oregon's state government. DAS oversees a number of functions to support state government including human resources, budgeting, asset management, risk management and more. DAS also leads by developing and implementing statewide policies that carry out legislation, executive orders and administrative rules. The DAS Procurement Services Division provides statewide price agreements for over 400 categories of products and services. These price agreements are used by both state agencies and other units of government around Oregon.

As part of its Enterprise Asset Management Division, DAS owns and manages a portfolio of over 40 buildings in Salem and across Oregon. These buildings range from laboratories, landscape and maintenance facilities to large office buildings. The agency also owns over 1,000 acres of land. While some of this is vacant land, other areas, particularly around buildings, are landscaped with lawn and plant beds.

The mission of the DAS IPM program is to:  
**Manage pests using principles of sustainability that address environmental quality while protecting public health and being cost efficient.**

To DAS, IPM is the coordinated use of pest and environmental information with available pest control methods to prevent unacceptable levels of pest damage by the most economical means with the least possible hazard to people, property, and the environment. DAS's pest management concerns generally include building interiors, developed landscapes, ornamental grounds and hardscaped infrastructure. Pests of concern depend on particular settings and can include non-native invasive plants and animals in developed landscaping; hazardous native or non-native plants; hazardous animals such as hornets and wasps; and infrastructure and facilities pests such as ants, rats, mice, ground squirrels, gophers, moles, skunks, termites, and bedbugs. Additionally, DAS landscaping can be subject to insect and disease infestations that threaten ecological health and developed plantings.

## IPM and Statewide Policy

This Principles of IPM Document provides a framework for the DAS team to conduct additional management planning, formalize IPM standards and practices, measure and monitor results and continually engage and train staff in IPM best practices. DAS also intends to explore with the IPM Coordinating Committee options for statewide policy and procedures to formalize IPM across the state government enterprise. This would help integrate and embed IPM practices for all agencies, as well as institutionalize IPM best practices in the face of future staff turnover. This policy process would entail additional

stakeholder engagement among Committee members, as well as stakeholders beyond the Committee.

## Guiding Principles

The DAS IPM Program is guided by the following principles:

- Understand site management objectives and establish short- and long-term priorities. Use Specific, Measurable, Achievable, Realistic, and Time-based (SMART) objectives when choosing IPM approaches.
- Prevent species from becoming a pest to begin with. Prevention is the first line of defense against any pest species.
- Identify and monitor pest species. Know the life history and the conditions that support pest(s). Understand the physical (air, water, food, shelter, temperature, and light) and biological factors that affect the number and distribution of pests and any natural enemies. Conserve natural enemies when implementing any strategy.
- Build partnerships and consensus with stakeholders, such as other state agencies, subject matter experts and decision-makers.
- Consider all available tools and best management practices (BMP) for pest management. Tools and strategies can include: 1) no action, 2) physical (manual and mechanical), 3) cultural, 4) biological, and 5) chemicals (which come last in the order of preference).
- Establish the action thresholds. Decide the level of pests/damage at which DAS will implement a management action to control the pest population.
- Obtain approval, define responsibilities, and implement preventive, BMPs and control treatments in accordance with applicable laws, regulations, policies and this DAS IPM Program.
- Practice adaptive management. Evaluate results of implemented management strategies through regular monitoring; determine if objectives have been achieved, and modify strategies, if necessary.
- Maintain written records. Document decisions and the treatments implemented, and record monitoring results.
- Conduct continuous outreach and education. Inform staff of the pest management issues in and around a site, and prepare informative materials for outreach to visitors and others, if appropriate.
- Understanding Site Management Objectives
- To DAS, good IPM starts with understanding management objectives for a given site and incorporating the following steps:
  - Complete an on-site analysis and inventory landscape and pest activity, scouting for problems in the landscape or building.
  - Establish site or IPM Coordinators where feasible.
  - Establish a Pest Management Strategic Plan (PMSP) for the

particular site using the DAS Guiding Principles to inform treatment strategies.

- Align DAS IPM with EPA, State of Oregon and OSU programs and DAS statewide policy on Green Chemistry Procurement Policy.

## Pest Prevention

Pest prevention is a top priority for the DAS IPM Program, recognizing that prevention to begin with is less costly, avoids environmental impact concerns and protects public health. DAS prevention steps include the following:

- First assess pest problems through policy, design and plant selection.
- Secondly assess cultural practices, physical means, mechanical practices, biological controls and use of natural and synthetic pesticides.
- Understand the physical (air, water, food, shelter, temperature, and light) and biological factors that affect the number and distribution of pests.
- Establish thresholds for action and tolerance level for different pests in a general or specific form. These thresholds vary according to plant, pest and site and considering health hazard, nuisance, disease, public safety, stewardship and economic threat.
- Use IPM strategies in DAS landscapes that include proper watering, mowing, soil testing, mulching and soil aeration.
- Repair building deficiencies that could lead to future pest problems.
- Maintain a clean environment by keeping spaces clean that could harbor pests. Pair with communication and education to building occupants.

## Pest Monitoring

DAS will identify and monitor for pests, including:

- Rodents
- Fruit Flies
- Yellow Jackets
- Bed Bugs
- Ants
- Nuisance Wildlife
- Invasive Species
- Noxious Weeds

## Pest Suppression

- Review available tools and BMPs for pest management.
- Explore first the feasibility of mechanical control, then biological control, then as lowest preference chemical control.
- For chemical suppression, identify the minimum quantity needed to effectively address suppression.
- Obtain approval, define responsibilities, and implement IPM in accordance with applicable laws, regulations, policies and IPM Plan:
  - o ORS 634.650 – 665. (Integrated Pest Management – State Agencies)
  - o ORS 569.175 – 990 (Noxious Weed Management) Especially 569.185 (State Department of Agriculture authority; rules; integrated weed management approach.)
  - o ORS 579 (Plant Pest and Disease Control; Invasive Species)





- Practice adaptive management to learn from experiences and adapt practices to prevent or suppress pests. This includes a circular, ongoing process to:
  - Assess the problem
  - Design a solution
  - Implement the solution
  - Monitor outcomes
  - Evaluate the effectiveness of solutions
  - Adjust future solutions as warranted

## Conduct Interagency Collaborations

DAS will work with members of the IPM Coordinating Committee to explore a landscape and pest management statewide policy to formalize practices in this report. DAS will also continue to support interagency collaborations on IPM through the Interagency Sustainability Coordinators Network, the state facility manager network, and through its tenant engagement efforts (other agencies as tenants of DAS buildings).

## Monitor and Maintain Records

Maintenance of records will help DAS measure, monitor and adapt its IPM program. These steps include:

- Document decisions and the treatments implemented, and record monitoring results.
- Follow up on IPM action taken and evaluate and record outcomes for each building or property where IPM is applied. Include monitoring techniques, location and inspection schedule.
- Keep records of pesticide applications in centralized applications.
- For pest control contracted services, require the contractor to maintain and make available to DAS location and date of chemical applications, amount and treatment chemical used.
- Send out project alerts to DAS staff and tenants when treatments are scheduled, and make available MSDS sheets.
- Compile a periodic report of monitoring results and inspection findings, including recommendations for adapting techniques, and make available to DAS managers and leadership.
- Record citizen/occupant complaints and quickly follow up. Include the inspection date, IPM action taken and follow up with complainant.

## Communication and Training

DAS will provide IPM training to its employees whose work responsibilities include pest management. Training will be provided through external sources, such as pesticide certificate training, as well as internal sources, such as the DAS iLearn platform. iLearn allows for development of online training modules that staff can take, along with a quiz demonstrating subject matter competency. iLearn is available to all state agencies, so any IPM training developed by DAS would be available to others.

DAS will also make available to staff existing IPM programs provided by others, such as periodic workshops on topics such as weed identification, pest management techniques, mapping and tracking software, IPM plan recommendations, insects and disease, biocontrol, record-keeping, calibration, restoration and establishing competitive native vegetation, prevention, and more. Such workshops often provide continuing education unit credits for certified pesticide applicators and/or arborists.

## IPM Challenges and Needs

Like many agencies, DAS IPM efforts are constrained by staff and budget resources. This is particularly true now, with significant budget cuts for the remaining 2019-21 Fiscal Year, and future cuts likely for the 2021-23 Fiscal Year. Some specific challenges include:

- DAS IPM staff is very limited, which makes it challenging to address current IPM issues while also responding to new IPM issues, such as future building and landscape design or new buildings added to the DAS portfolio.
- More effectively integrating IPM into project design. This includes enhanced coordination with the DAS Planning and Construction Management team on plant selection and overall landscape design.
- Continually educating and engaging the over 950 DAS staff, as well as tenants, on pest prevention with limited resources.
- Having the capacity to coordinate on integrating IPM into state contracts and RFP language.
- Ongoing tension in management objectives for state agency grounds between aesthetics (e.g., highly visible lawns and beds) and pest management.

## Department of Administrative Services: IPM Successes

In 2015 DAS successfully implemented a yearly mulching program to reduce chemical usage in all of its landscape beds. This effort has helped in the reduction of weeds while also requiring less spraying.

DAS is in the process of developing a Sustainable Procurement program and new statewide procurement policy that will address the triple bottom line of sustainability. This provides an opportunity to address all statewide price agreements, including those related to IPM, and recommend changes to support and enhance statewide policy, such as the DAS Green Chemistry Policy, as well as other statutes, executive orders and rules. The new Pest Control and Integrated Pest Management (IPM) Services agreement was effective as of 07/01/2022. This would affect both DAS procurements as well as those of other agencies and Oregon public sector entities that use statewide price agreements.

# Oregon Health Authority

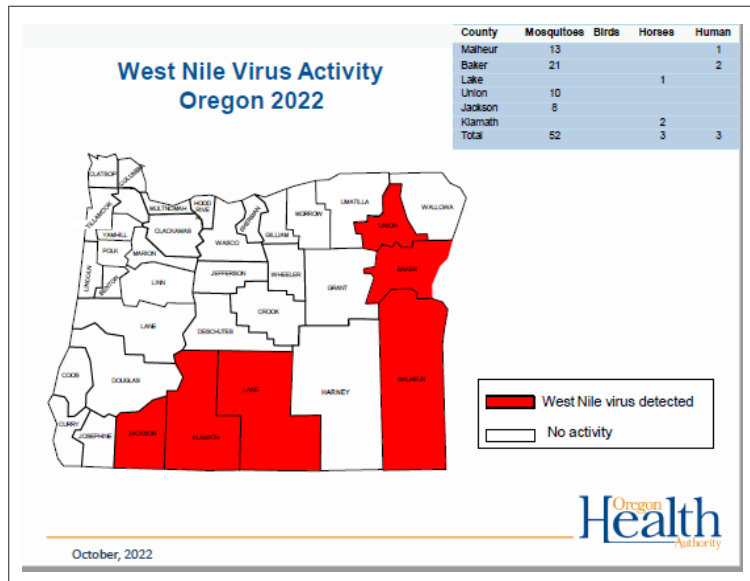


Oregon Health Authority Public Health Division Activities in Relation to Integrated Pest Management

Oregon Health Authority (OHA) Public Health Division (PHD) conducts two major activities in relation to integrated pest management: vectorborne illness surveillance and pesticide exposure safety and tracking.

## Vectorborne illness surveillance

OHA practices a One Health approach, which recognizes that human health is connected to the health of animals and the environment. PHD's Acute and Communicable Disease Program (ACDP) conducts surveillance of vectorborne illnesses (e.g., West Nile Virus) as it occurs in animals and humans. This is facilitated by requiring healthcare and veterinary clinics and laboratories to report results to OHA. These results are in turn shared with the Center for Disease Control and Prevention (CDC) as well as with the public. An example, available from <https://www.oregon.gov/oha/PH/DiseasesConditions/DiseasesAZ/WestNileVirus/Pages/survey.aspx>, is provided below.



ACDP plays a role in vectorborne illness prevention by reviewing mosquito control district plans.

## Pesticide Exposure Safety and Tracking

PHD Environmental Public Health section's Pesticide Exposure Safety and Tracking Program (PEST) investigates cases of acute pesticide injury and illness in order to determine factors contributing to the exposure, determine the certainty of linkage between exposure and illness, and assess illness severity. This

information is aggregated, analyzed and shared with partner state agencies and with CDC and EPA in order to continue to improve pesticide-related policies and reduce exposure and illness.

OHA and PEST are members and co-chair of the Pesticide Analytical and Response Center (PARC), an interagency committee that coordinates, collects and analyzes information about reported pesticide incidents which may affect humans, animals or the environment. Member agencies conduct investigations in their respective areas and authorities.

Like with vectorborne illness, PEST surveillance efforts are facilitated by requiring healthcare providers and local public health authorities to report pesticide poisonings to OHA. However, since pesticide poisoning symptoms generally resemble symptoms from other conditions, and there are no readily available lab tests to diagnose a pesticide exposure, OHA rarely receives reports from healthcare. OHA primarily receives reports from the Oregon Poison Control Center, PARC and self-referral.

PEST does not track health outcomes related to long-term (chronic) exposure to pesticides. It is important to note that PEST does not provide medical advice, nor does it conduct environmental or regulatory investigations; we refer externally as applicable.

The most recent (2014) analysis of pesticide poisonings included the following findings:

- Most reported work-related instances of acute pesticide poisoning occur to bystanders not directly working with pesticides or pesticide equipment.
- Over 70% of "likely" exposures occurred in residences, and most of those exposures were connected to a pesticide event at the residence (i.e., not as a result of drift from neighboring properties).
- 30% of residential pesticide drift cases come from adjoining homes, 20% from adjoining agricultural operations.
- Agriculture-to-agriculture and forestry-to-residential drift cases present concern as well.
- What to do if someone is sick or injured from a pesticide exposure
- Get help if someone is sick or injured by calling:
  - o Oregon Poison Control Center (800) 222-1222
  - o 911
  - o Health care provider
- Leave the area
- Wash off the pesticide if your skin or hair was exposed
- Write down key information
- Report it by dialing 211 or email to [parc@oda.state.or.us](mailto:parc@oda.state.or.us)



# Oregon Department of Environmental Quality



Oregon DEQ's primary connections to integrated pest management are through implementation of environmental quality programs focused on reducing pesticide impacts to water resources, and a ballast water program intended to prevent introduction of invasive aquatic species to Oregon

## Reducing Pesticide Impacts to Water Resources

DEQ has led or co-led (with the Oregon Department of Agriculture) the Oregon Pesticide Stewardship Partnership Program (PSP) since 2000. The PSP Program uses pesticide water quality monitoring data to drive voluntary, collaborative actions to reduce the occurrence and concentration of pesticides at the watershed level. These actions are implemented by local partners, in conjunction with state agencies and OSU, and can include a range of IPM and pesticide risk reduction measures. At the statewide level, an inter-agency team oversees the implementation of the PSP Program. A more information can also be found on DEQ and ODA's PSP web pages:

- <https://www.oregon.gov/deq/wq/programs/Pages/Pesticide.aspx>
- <https://www.oregon.gov/ODA/programs/Pesticides/Water/Pages/PesticideStewardship.aspx>

DEQ's Drinking Water Protection Program is focused on assisting public water systems and communities with protecting their sources of drinking water from contamination, including pesticide contamination. Drinking water protection is implemented in Oregon through a partnership of DEQ and the Oregon Health Authority. The program addresses over 2500 public water systems in Oregon. Source water protection is accomplished by effective state public health programs, environmental protection, land use policies, pro-active land stewardship, and by implementation of local drinking water protection efforts by communities and public water suppliers. DEQ and OHA encourage community-based protection and preventive management strategies to minimize risks to public drinking water resources from future contamination. These strategies can include IPM and pesticide risk reduction measures. More information can be found on this web page: <https://www.oregon.gov/deq/wq/programs/Pages/DWP.aspx>

## Ballast Water Program

Since 2002, DEQ has authority under the Oregon Legislature to implement and enforce ballast water management regulations in an effort to reduce the risk of introducing new aquatic invasive species. The discharge of ballast water, an incidental operation often necessary for vessel stability and safety, can be a pathway for transporting aquatic species into habitats outside their native range. This can result in the introduction and subsequent proliferation of invasive species, a form of biological pollution that poses significant economic and environmental risks.

In response to these threats posed by the shipping transport of aquatic non-indigenous species, the 2001 Oregon Legislature established the Oregon Ballast Water Program (Oregon Revised Statute 783.620-992). The Legislature subsequently modified the program several times since 2003 and DEQ oversees the program under Oregon Administrative Rule 340-143. Oregon's ballast water management legislation prohibits discharge of ballast water into state waters, except under specified conditions. These regulations apply to all commercial vessels greater than 300 gross tons that are equipped with ballast water tanks. Oregon requires that vessels submit ballast water management reporting forms to DEQ at least 24 hours before entering state waters. In addition, ship owners must develop a vessel-specific Ballast Water Management Plan and maintain a shipboard ballast water handling log that may be reviewed as part of compliance verification inspections. More information can be found on the Ballast Water Program web page:

<https://www.oregon.gov/deq/wq/Pages/Ballast-Water.aspx>



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## II. Pesticides: Use Tracking & Public Notification

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Per HB 3364, the Committee is tasked with evaluating the need for notification of pesticide use, and the policies for notification as part of agency/university IPM plans. The Committee initiated this discussion during the last biennium. As part of this discussion, each agency also summarized their pesticide tracking and record-keeping practices, as well as any public notification policies and considerations. These discussions are broadly summarized below. Please refer to each respective agency for more specific information regarding this topic.

### Oregon Department of Transportation

Pesticide notification for ODOT treatments follows all labeled requirements and regulations. Public access to information regarding ODOT pesticide treatments is provided through the phone information service (1(888)996-8080). Pesticide treatment areas are provided using beginning and ending mileposts along with local landmarks.

Some local maintenance districts are able to provide pre-notification in certain areas. Local districts maintain a weekly schedule of past and future treatments. The public can contact their local ODOT maintenance district for pesticide application information and schedules.

Due to the extent of mileage covered, which can commonly be up to 75 miles, notification at the time of treatment (for example, placarding) would be a challenge. The number of signs as well as the labor required to set up/take down placarding for each treatment would be cost-prohibitive for the agency.

ODOT tracks pesticide use centrally, but this centralized information is not posted online because of the format of the records. The data format would be difficult to understand in a public records request, but individual applicator records might be more accessible.

### Oregon Parks and Recreation Department

Pesticide application records are kept at the management unit level in association with IPM paperwork. Individual applicators record their applications, but there is no agency-wide repository or tracking system.

Pesticide notification processes follow pesticide label requirements at a minimum. In some instances of partnership and/or sensitive public areas, notification includes early and interactive outreach.

### Oregon Department of Agriculture

For insect management programs, pesticide applications (performed by commercial contractors) are tracked in a database. For aerial applications, there is a pre-application notification process, and many forms of outreach including “robocalls” to the affected public. Signage is used in some cases, and ground-based applications require consent if entering private property. ODA keeps no in-house records for insect applications since work is done by commercial contractors with their own record-keeping responsibilities.

The noxious weed program has centralized record keeping for pesticide applications using ArcCollector software. This program works in partnership with many local, county, and state-wide partners that may have their own pre-application notification systems.

ODA grantees have a reporting requirement for pesticide use. ODA also has a notification system for pesticide applicators related to emerging issues and concerns, for educational purposes and to relay regulatory changes or updates.

### University of Oregon

Public universities are not held to the same IPM notification criteria as K-12 and community college educational institutions. Signage indicating pesticide treatment is used as required by the label. Notification of building managers is necessary for contractor entry and escort. Pesticide use tracking is accomplished through “Smart Sheets” record-keeping for every pesticide application.

### Department of Administrative Services

DAS keeps accessible, centralized records of facilities management/pesticide applications, although some management is contracted. Any notification of pesticide treatment would be in line with product labels, and project alerts are commonly sent to staff in affected buildings.



## Oregon Department of Fish and Wildlife

Pesticide applicators for ODFW keep individual records. There is no centralized process for tracking and record keeping. ODFW provides pre-treatment notifications in certain cases associated with concerned public, and treated areas are often indicated with signage.

As a policy, ODFW chooses the least toxic pesticides, and generally doesn't use restricted use chemicals, chemicals that require notification, or chemicals that require anything beyond basic personal protective equipment (PPE). ODFW makes an effort to time applications to minimize risk and exposure.

## Oregon Department of Forestry

ODF pesticide use mainly involves the use of herbicides. ODF receives notifications from private and non-federal forest management for pesticide applications that relate to timber harvest. Notification must be submitted at least 15 days (up to one year) prior to an application. These notifications are submitted through the ODF web application FERNS. Anyone in the state can subscribe to/access these records by county. However, because it is pre-notification, it cannot track exactly what and how much was used.

On state forest lands, FERNS is also used by contractors. There are ODF employees that apply pesticides, but not for timber harvest or growing. Applications unrelated to timber harvesting are not under ODF regulation, but fall under ODA regulatory authority and record-keeping rules.

## Oregon Department of Corrections

ODOC uses contracted IPM vendors. Notification is internal via safety meetings, newsletters, bulletin boards, etc. Operational modifications are sometimes required in certain areas (HVAC may be interrupted), or with highly sensitive Adults in Custody (AICs). Records are kept on site.

Some AICs are being trained through a pesticide applicator license program, which provides on-site training as well as future employment opportunities post-release.

## Oregon Health Authority

Committee member represents the public health program; pesticide applications not applicable.

## Department of Environmental Quality

Committee member represents the toxics program, which does not involve active pest management. In cases where a building requires a pest treatment, staff are notified.





### III. Inter-agency IPM Collaborations

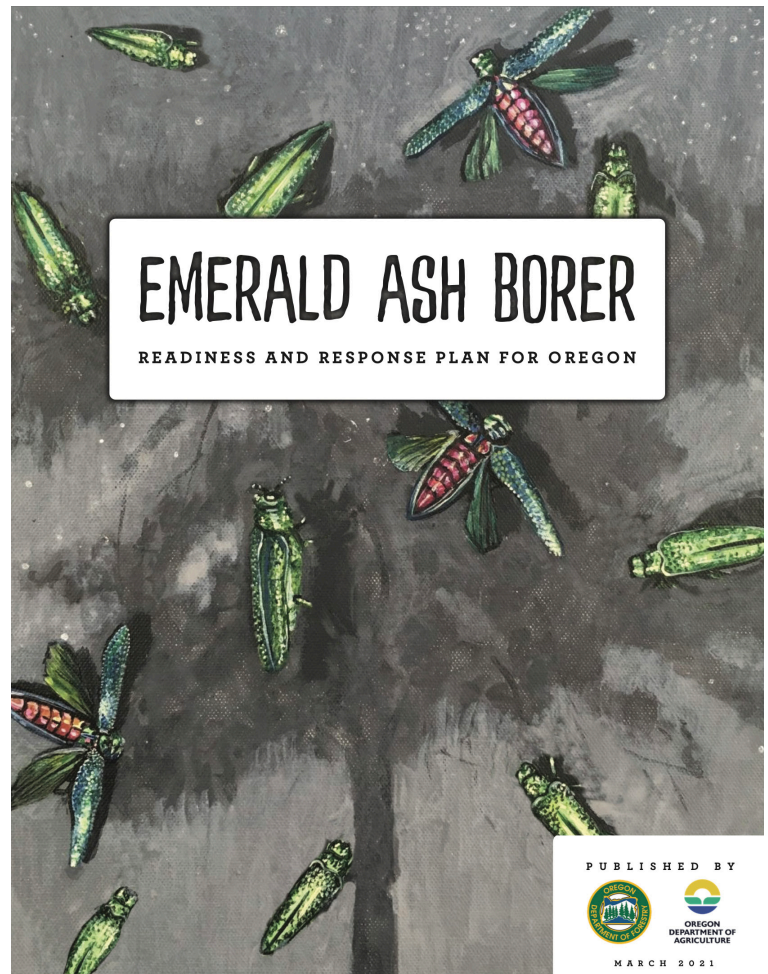
Although Oregon's state agencies have independent and specific responsibilities, most agency projects involving IPM are collaborative, uniting multiple agencies' inputs and actions. Because they share common stakeholders, state agencies recognize that collaboration better serves the public by efficiently applying knowledge, expertise, and specialization from a variety of viewpoints. Combining efforts and resources prevents special considerations of complicated projects from being overlooked. It also ensures that projects are being completed in an environmentally, socially, and economically responsible manner.

As an example, multiple agencies work in tandem to detect and respond to invasive insects that are accidentally introduced into the state. In June 2022, emerald ash borer (EAB) was detected in Forest Grove, OR. This beetle is one of the most destructive invasives pests in the North America, and has caused the death of millions of ash trees across 35 infested states since its detection in Michigan in 2002. Oregon and the Pacific Northwest are particularly at risk due to the wide geographic range and abundance of our native Oregon

ash, *Fraxinus latifolia*. In addition, susceptible ash species also make up a significant percentage of urban forests, where they are a popular option for street trees.

In anticipation of EAB's detection in Oregon, state agencies collaborated with the Oregon Invasive Species Council to create the Emerald Ash Borer Readiness and Response Plan. This document outlined the various roles agencies would have in the case of detection. When EAB was positively identified in 2022, Oregon's state agencies, under the guidance of the Oregon Department of Agriculture, were ready to take action in order to determine the extent of the infestation and inform the public about this invasive pest. An Oregon EAB Task Force was created, consisting of volunteers from multiple agencies and public groups including ODA, ODF, DEQ, Parks, Oregon State University, multiple soil and water conservation districts and Federal agencies.

**For more information visit [OregonEAB.com](http://OregonEAB.com)**



Emerald ash borer (upper left) is a destructive invasive insect pest that threatens Oregon's native and ornamental ash populations. 34 states in the US have suffered severe damage to trees due to this pest (left). Oregon's state agencies are working with multiple public organizations to help prepare communities as the insect spreads in the western US.



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## IV. IPM-related Trainings for Agency Staff

The State IPM Coordinating Committee is an important venue for highlighting relevant training and education opportunities throughout the state.

The following are examples of IPM and pesticide safety-related trainings in which agency staff have participated.





## ODOT

ODOT provides nearly all pesticide pre-license training for its employees. The pre-license training program began in 2013 and since its inception over 200 ODOT employees have obtained their Public Pesticide Applicators licenses. ODOT has extended this service to other State agencies including Department of Aviation and State Parks, counties including Umatilla, Marion and Lane as well as municipalities such as City of Sublimity, City of Sweethome, City of Stayton and City of Gresham. Internally ODOT also provides pesticide license recertification courses to its employees. Each spring seven regional refresher trainings are offered along with a statewide IVM conference in the summer or early fall. The pesticide pre-license training has also received accreditation from the Oregon Department of Agriculture.

Externally ODOT has worked closely with the Oregon State University Pesticide Safety Education Program, the Oregon Agriculture Chemicals and Fertilizer Association and the Oregon Vegetation Management Association to ensure that ODOT employees are provided with high quality continuing education.

## OPRD

The agency's Invasive Species Committee provide 2-3 trainings per year in rotating regions. Each training is approximately one day long and provides Continuing Education Units for certified applicators. Training content includes invasive species identification, IPM strategies for control (including prevention and manual, mechanical, cultural, biological, and chemical methods of control), ecological restoration and appropriate native species establishment for competitive control or restoring balance, and technological resources for improved monitoring and management. In the time since the last IIPMCC Biennial report, there have been 4 OPRD Invasive Species Committee IPM training events – one each for the north coast, south coast, Willamette Valley, and east of the Cascades areas.

In addition to Invasive Species Committee sponsored events, OPRD staff are encourage to participate in interagency opportunities such as the Interagency Noxious Weed Symposium, Oregon Recreation and Park Association workshops, and interagency collaborative training events that involve training and presentation from experts from ODA, ODOT, and ODF on topics such as noxious weed management and forest insects and disease. Since the last biennial report, OPRD staff have attended and presented at the Interagency Noxious Weed Symposium, co-organized two Oregon Recreation and Park Association restoration and weed management trainings (for OPRD and other local and regional park providers across the state), participated in joint training with ODOT at one training, and co-organized invasive forest pest trainings in the context of hazard tree training with ODF. ODA has participated in several of the Invasive Species Committee's trainings to provide expert presentations and interagency context.

## DAS

DAS will provide IPM training to its employees whose work responsibilities include pest management. Training will be provided through external sources, such as pesticide certificate training, as well as internal sources, such as the DAS iLearn platform. iLearn allows for development of online training modules that staff can take, along with a quiz demonstrating subject matter competency. iLearn is available to all state agencies, so any IPM training developed by DAS would be available to others.

DAS will also make available to staff existing IPM programs provided by others, such as periodic workshops on topics such as weed identification, pest management techniques, mapping and tracking software, IPM plan recommendations, insects and disease, biocontrol, record-keeping, calibration, restoration and establishing competitive native vegetation, prevention, and more. Such workshops often provide continuing education unit credits for certified pesticide applicators and/or arborists.



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## 5. Meeting Agendas & Summaries 2021-2022

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## Oregon Interagency IPM Coordinating Committee (IIPMCC) Meeting Summaries

### January 20, 2021

Virtual Meeting due to COVID-19 meeting restrictions

Notes by Chris Hedstrom, OIPMC

No Recording

In attendance:

- Colin Tierney, ODFW
- Carrie Pirosko, ODA
- Will Lackey, ODOT
- Sam Angima, OSU
- Daren Dickey, DAS
- Curtis Cude, OHA
- Nate Agalzoff (standing in for Wyatt Williams), ODF
- Chad Naugle, ODOC
- Kevin Masterson, DEQ

Noel Bachellor could not attend

Sam Angima could only attend part of the time, introductions

Jeremy Chambers (U of O) could not attend

Chad Naugle will be leaving the group, being reassigned to a non-IPM position

Agenda:

### Oregon State IPM Coordinating Committee Meeting Agenda

January 20<sup>th</sup>, 2021

1pm – 3pm

1pm	Opening, introduction
1:10-1:30pm	Check-in and Agency reports
1:30-2:15pm	Guest Speaker: David Farrer, Oregon Health Authority
2:15-2:50pm	Group Discussion: “Whatever Happened to IPM?”
2:50-3pm	Topics for next meeting, final thoughts.
3pm	Adjourn

**David Farrer, Toxicologist for the Oregon Health Authority**, has graciously agreed to be our guest speaker for the meeting, where he will be speaking about Chlorpyrifos. David is a toxicologist for the Environmental Public Health Section of the Oregon Health

Authority, and is an official member of the “Chlorpyrifos Work Group” organized by the Oregon Department of Agriculture. David has been tasked with translating the known science about chlorpyrifos to the work group, as well as the reasons why state authorities might reach different conclusions than EPA regarding its use and registration status. It’s a fascinating talk and I am very glad that he’s able to join us.

Reports: Will Lackey, ODOT is behind on pre license training, mandaotry for them to get spray licenses, effective to do them one on one a travel has been limited, covid is making this difference, backlog of 50 licenses. IPM plans from 14 districts coming I

Curtis Cude: tracking of bills: house bill 2406, bill 2192 - science review panel on pesticides - gov appointed 5 member panel, purpose is to review pesticides and devices, idf the panel determined that the device is anything but generally

PARC is hoping to recruit a citizen representative of community concerns about psestides

Uptick in self harm attempts with pesticides - retail products generally, suicide prevention and also keeping a close eye on your products - how to reduce this?

Kevin Masterson: news release for a new report, link is coming up in chat: biennium report saw a nearly 70% improvement in pesticide water quality in the streams that are being monitored, others no change or decline. Making progress, ODA DEQ, ODF, link this in the newsletter.

<https://www.oregon.gov/newsroom/Pages/NewsDetail.aspx?newsid=54048>

Carri Pirosko: covid impacted budgets: weeds, insect rtrapping, signifacatly reduceds, training impacted for pesticide applicators, training shifted to online format or cancelled, trying to hang on through the

Colin Tierney: ODFW, not much to report, eveyrthing impacted by COVID, biggest things has been a lot more windshield times no more traveling, 3 or four rigs and a lot of miles of vehicles and less working together.

Nate Agalzoff: Or dept of forestry filling in for Wyatt: part of a parc board meeting, couple of big things implementation of senate bill 1602: additional protection measures for fish in Siskiyou, additional protections measures for helicopter spraying. Post fire recovery: introduction of invasive and remove of competitive cover and increase of about average work in the area for salvage logging

Got some direction from the eboard to get additional capacity which is mostly LD but its heavily focused on suppression side of the fire equation

2192: exempted back sprayers, so not much impact to forest sector.

Chad Naugle: battling COVID inside prison. Chad's last meeting, being relocated to a new position

Helmuth Rogg: ODA preparing for the next session and getting through the budget activities.



Daren Dickey from DAS: not a lot to report, September statewide sustainability order for integrating climate change, what in this would impact the ;landscape department, DAS's is using more electrical equipment, a transition to lower carbon fertilizers to landscape practices. As far as landscaping, downtown Portland, a lot of less people, buildings are empty, less people, different this year.

David Farrer Talk: Health Effects of Acute and Chronic Chlorpyrifos Exposure

Is this a standard protocol for epidemiological studies for pesticides? Have these been done frequently? For which compounds?

Will lackey: case studies of success

Training the managers is a huge part of IPM

Discussion, initiated by Kevin Masterson and moderated by Chris Hedstrom

Whatever happened to IPM? American Entomologist, Fall 2018

- *Reaction to paper?*
- *Where might evolution play a role in your pest management strategies?*
- *IPM education: Too much focus on single tactics rather than integration of multiple tactics? Agree or disagree?*
  - *Solution?*
- *The authors make the case that managing host stress is better IPM practice than focusing on killing or managing pests directly, in terms of preventing resistance. Examples where you could implement this in your pest management plans?*
- *The authors take about tolerance levels in a food production sense (consumer tolerance and host tolerance): How does this factor into a non-ag setting?*
- *The authors make the case that there are relatively few thresholds, in an ag setting. True also for non-ag settings? How to you determine action thresholds? Examples?*
- *Public perception relating to thresholds? Examples of changes that could be made in your work? Methods of changing perception?*

## **Oregon Interagency IPM Coordinating Committee (IIPMCC) Meeting Summary**

July 12, 2021

Online Meeting

Recording: [https://media.oregonstate.edu/media/t/1\\_2150f1yn](https://media.oregonstate.edu/media/t/1_2150f1yn)

Notes by Noel Bacheller

Present: Chris Hedstrom (OSU IPPC), Noel Bacheller (OPRD), Will Lackey (ODOT), Helmuth Rogg (ODA), Silvia Rondon (OSU Extension, Oregon IPM Center, Hermiston Ag. Res. & Ext. Center), Curtis Cude (OHA), Daren Dickey (DAS), Colin Tierney (ODFW), Kevin Masterson (DEQ), Kaci Buhl (OSU, Pesticide Safety Education Program)

### **Last Meeting Recap:**

Chlorpyrifos/Dan Farrow last time. Kevin suggested review of the paper “What ever happened to IPM”. Master gardeners, Metro, etc – funding sources slim.

### **Introduction of Silvia Rondon**

New IPM Center Director, started July 1.

Working in Hermiston.

Extension entomologist

### **Roundtable:**

#### ***Daren Dickey (DAS):***

Drought has been a challenge for DAS. Lawns are browning without irrigation. Trees and shrubs are still irrigated. DAS has a sustainability office. Discussion of use of electric vehicles, including pest management and changed equipment effect on IPM

#### ***Will Lackey (ODOT):***

Training is big right now for ODOT – recert. Credits process fastergiven current circumstances (related to COVID). Noted that Wilbur Ellis price agreement was just extended by 5 years in the statewide price agreements. ODOT is also investigating electric fleet additions. Mower equipmentin particular noted as using lots of fuel. Will has run several trainings on IPM during COVID.

#### ***Helmuth Rogg (ODA):***

Japanese beetle still remains prime focus. ODA did application earlier this year. The focus is on Portland and Lake Oswego using larvicide and foliar application (in hotspots). This effort will probably take 5-6 more years.

There is a grasshopper plague right in Lake County now. Climate change and drought have favored grasshoppers to outbreak stage. Grills of cars are filled and cars are overheating. Grasshopper almost behaving like locusts. Target control timing is juvenile stage – otherwise too late. Growth regulators (esp. diflubenzurone) are the only really effective treatment. ARS has done testing of a variety of things including prescribed fire.



Silvia noted that there is a predictive model based on 65 years of monitoring data that can be used to inform IPM intervention.

Helmuth noted that excessive bare ground from drought and overgrazing is what favors grasshopper plagues.

Silvia noted that there is big grasshopper meeting happening on July 30 in Klamath County.

This is Helmuth's last meeting.. moving to Hawaii to new job.

***Curtis Cude (OHA):***

Oregon state hospital – no knowledge of their IPM. Curtis is on IIPMCC to represent pesticide health issues, medical investigation, and policy advise.

Helmuth added that Curtis is involved in outreach materials around health issues in partnerships incl with ODA. Curtis mentioned open house events out in front of a need.

***Colin Tieney:***

Good weather tis spring has allowed for catching up on IPM. Has been busy from a spray perspective.

***Chris Hedstrom (OSI IPPC):***

Paper came out recently in environmental Entomology on neonicotinoid effects on bumblebees. Xerces.

Biocontrol not good for linden aphid. Linden aphid control is one of the IPM actions that can impact bumblebees and there have been some high-profile issues. The problem with these aphids is not that severe – mostly honeydew drops on parked cars beneath trees. Bumble harm issues were due to misapplication against label. Linden trees themselves can be poisonous to bumblebees, sp there is some potential for over-emphasis of role of pesticides in observed bumblebee death beneath and around lindens.

***Kevin Masterson (DEQ):***

The interagency pesticide management team is looking at water quality. Discussion of plans developed by local groups for Pesticide Stewardship Plans, strategic planning framework is trying to bring levels down over time – working with watershed councils, grower groups, etc.

Hoping to make connections between what has been done and what has worked... in terms of drift reduction, aerial spray changes, etc... Looking at the mix if practices, their change over time and correlations with water quality outcomes. Focusing on how to get results without strong regulatory approach.

Kevin will send the report o Chris to forward to the IIPMCC.

**Glyphosate Discussion:**

Noel gave background on why we are discussing this: added to agenda in previous meeting in light of recent developments and public interest/concern. Revisitation of agencies' experiences and internal direction.

Presentation by Kaci Buhl, director of pesticide safety education program at OSU, OSU extension service. Powerpoint covered: Glyphosate characteristics; Studies on carcinogenicity (IARC - possible, EPA – unlikely; positions of several international governments; comparisons with carcinogenicity of things like meat, alcohol, etc)

Agency sound off:

Noel (OPRD): we're hearing concerns from the public but have not closed the door on glyphosate use. Looking at alternatives, but there are no acceptable action alternatives in some situations).

Daren (DAS) : also looking for alternatives. Hearing concerns and being prepared for more concern.

Helmuth (ODA): This is largely a public emotion issue. Law suits are possible based on public perception. A lot of European countries have tried to ban.

Kaci: glyphosate is partially tied up in perceptions about Monsanto. It is the most widely used pesticide in the world – so draws proportionate attention.

Colin (ODFW):

ODFW properties don't have a lot of public interaction, but ODFW has still received some commentary from concerned and emotional people.

Will (ODOT):

Lots of concerns from the public. #1 used pesticide at ODOT. There is no good replacement.

Kaci:

Western Society of Weed Science: everyone is looking for an alternative, but there is nothing good yet.

Curtis (OHA):

OHA looking at acute issues – eyes, skin irritation. Not looking at chronic effects. Chronic effects are extremely difficult to assess, and beyond OHA means.

Alternatives discussed:

Scythe (pelagonic acid), plant essential oils (clove, etc), Finale (Glufosinate), Axxe (Ammonium nonanoate)

None of these alternatives are labelled for aquatic use. They are all poor replacements or most uses and are more expensive. They are very often more toxic and dangerous.

Imazapyr is broad spectrum like glyphosate, but has a long soil residual that does not allow for seeding and planting for months afterwards and can spread through soil to non-target plants. Other undesirable effects in some situations.



Helmuth: looking for alternatives is important from the perspective of weed evolution of resistance to glyphosate. Kaci added that there are many cases in which there is nothing else that can be feasibly used to cycle through IPM program for a weed— which accelerates development of resistance.

Will: ODOT tried propane burning, but the control was poor, more expensive, and risky from a wildfire perspective – requiring fire support for the treatments. ODOT also tried the Waipuna stream and foam treatments and found them not to be effective.

Noel: has anyone tried tank mixing broadleaf and grass-specific herbicides to create a broad spectrum mix with low residual?... no one had.

Kaci said she would check with Andrew Hulting at OSU to see if there has been any experimentation with broadleaf and grass-specific mixes.

Noel asked the group if anyone else had heard from DOJ related to the DOC lawsuit. No one had.

Kevin: Glyphosate and AMPA (degradate) have low toxicity in water. Although they find it in testing, it is always <10% of threshold for concern. 50% detection frequency. AMPA similar.

Kaci asked Kevin if benchmarks are only acute for aquatic life. Kevin said for some life forms it is both acute and chronic. For plants only acute.

### **Annual report:**

Chris said we received no feedback on the IIPMCC annual report

**February 2, 2022**

2-4 pm

[https://media.oregonstate.edu/media/t/1\\_uwb8gtw5](https://media.oregonstate.edu/media/t/1_uwb8gtw5)

Agenda:

2pm last meeting recap

2:15 reports

2:50 new introductions

3pm Len Coop: Degree Day Modeling tools and resources

3:30 Brittany Barker: Spatial Modeling for invasive pests

In attendance:

Chris Hedstrom, OSU, OIMPC

Noel Bachellor, OPR

Will Lackey, ODOT

Colin Tierney, ODFW

Wyatt Williams, ODF

Carrie Pirosko, ODA

Max Ragozzino, ODA

Kathleen Fitts, ODOC

Josh Emerson, DEQ

Minutes from Last Meeting

Updates:

Will Lackey ODOT: Starting winter vegetation planning management. Noticing that planning is cyclical after 19 years. Routine maintenance is key. Some shortages on products, especially Glyphosate. Reminding applicators to get recertified, make sure they are getting credits.

Even with higher costs, Still cost effective

Noel Bacheller: OSP, lull for invasive species (Gorse, rush skeleton weed, restoration projects for invasive species control), planning which are high priority. Down staff. Just hired some NRSs, so should be able to staff up in Spring.

Carrie Pirosko, ODA: Noxious Weed program. Had been sharing duties as a hemp inspector. Transitioning back into noxious weeds, Will be speaking about pesticides and code enforcement in Jackson Co in Hemp, March 16 in Salem, OR. In 2020 and 2021, new biological control releases. Joel Price released a new agent on gorse and 2 agents for knotweeds. Currently in the establish and monitor stage. Currently in tribal consultation for agents for russian olive. Noxious weed program has a grant program with OSWB. Program is back after COVID delay. Lots of applicants for grants that involve IPM practitioners. Possibly a new grant program in the works for noxious weeds for post-fire recovery and new partnerships, involving field work and control. Hearing rumors of federal funds for pest management for noxious weeds. Interagency Noxious Weeds Symposium happening in Dec 2022



Max Ragozzino, ODA. BMSB biocontrol going well. Released 17,000 adult wasps (t. japonics). Working with OSU extension and USDA for release and monitoring. SWD biocontrols have been approved. Both of these are susceptible to pesticide use, and in some cases pesticide applications have wiped out populations in orchards. IPPM invasive species. 36 new exotics in Oregon. 25 likely to have established. Trapping program still in place. Japanese beetle eradication program continues to reduce populations. Houdini fly detected, velvet longhorned beetle, plum bud mite.

Wyatt Williams, ODF: Senate Bill 1602 changes the rules for reforestation rules, especially for buffers around schools and helicopter applications. E notification rules have been completely revamped to be much more user friendly, plus a subscription tab. Allows residents to be alerted to upcoming helicopter sprays. Invasive species: SOD, and a new pathologist, Gabby, getting up to speed. SOD being detected in Port Orford area outside of current quarantine area, working with ODA to establish new quarantine borders. ODF received funding from Oregon for SOD \$1.7mil HB 2663 and \$250k from USFS. Worked with ODA on spongy moth outside Ranier to delimit detections, no new detections. Training for forest pest detectors.

Colin Tierney: For a lot of IPM things and weed control, it's slowed from summer. Mild winter and lots of weeds, in for a busy spring.

Chris Hedstrom, OSU: IPM for pollinator protection videos nearly done. Focus on peer to peer advice.

Kathleen Fitts ODOC and Josh Emerson, DEQ, introduced themselves.

Presentation: Len Coop, OIPMC Degree day models, apps, and "Push" email notifications for IPM and invasive pests

Brittany Barker, OIPMC, : Expanding a spatial modeling platform with emphasis on invasive insects, plant diseases, and weeds.

**July 13, 2022**

10a – 12PM

Hosted by Max Ragozzino, ODA in Salem, OR

Hybrid meeting: [https://media.oregonstate.edu/media/t/1\\_pds0ygkq](https://media.oregonstate.edu/media/t/1_pds0ygkq)

Present:

In Person:

- Chris Hedstrom - OSU
- Max Ragozzino - ODA
- Will Lackey - ODOT
- David Gruen - DEQ
- Kathleen Fitts - DOC
- Noel Bacheller - Parks
- • Alan Martinez - OHA

Remote:

- Silvia Rondon - OSU
- Carrie Pirosko - ODA
- Wyatt Williams - ODF
- Daren Dickey - DAS

AGENDA

- Recap and Notes from last meeting: Feb 2, 2022
- Introductions for new members
  - David Gruen, DEQ
  - Alan Martinez, OHA
- Round Table: Updates
  - Colin Tierney from ODFW has taken a new career path (email)
- Updates from Agencies
- Presentation and Tour from Max Ragozzino: BMSB Biological Control
- Emerald Ash Borer - response
  - OSU Extension has put together some materials
- Biennial report - Draft by end of the year
  - Previous Goal was to focus on pesticide risk reduction
  - Goals moving forward? Ideas of projects to initiate?
    - Funding for the group for initiatives?
      - It was reported that this topic has come up before and it's not clear when and how we would ask for funding
- Other Business



#### State IPM Report Production

Compiled and Written by Chris Hedstrom April 2023

Open for public comment from February 21 to March 21, 2023

Agency Reports provided by the corresponding agency State IPM Committee members

Design, Layout and graphics by Chris Hedstrom, Oregon IPM Center

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