OISC
OREGON INVASIVE SPECIES COUNCIL

ANNUAL REPORT 2023

Invasive species impact Oregon's infrastructure, economy, and the natural resources that Oregonians hold dear. Public and private partnerships are essential to strategically tackle invasive species.

The Oregon Invasive Species Council (OISC) acts as a catalyst to provide leadership and support collaborative efforts to protect Oregon from invasive species across the network of its members representing state and public agencies, tribes, scientists, land managers, industry leaders, educators, and members of the public.

BY WORKING TOGETHER TO ADDRESS INVASIVE SPECIES CHALLENGES, WE WILL:

PROTECT OREGON'S NATURAL RESOURCES AND ECONOMY

Invasive species pose a serious statewide threat to Oregon's economy, infrastructure, food and water systems, and environment. They have been known to impact agriculture, forestry, hydropower, water delivery systems, outdoor recreation opportunities, and tourism.

KEEP OREGON'S PEOPLE AND PLACES HEALTHY

Invasive species can jeopardize public health and transform ecosystems, resulting in widespread economic and environmental harm. Out-of-control invasive pests can lead to increased pesticide use and associated concerns affecting people and the environment.

SAVE MONEY THROUGH PREVENTION

Global trade and transportation accelerate the risk of the introduction of new invasive species. By publicizing and blocking pathways of introduction, we can prevent entry and avoid costly containment.

To learn more about invasive species threats and the accomplishments of programs across the state, please visit: www.oregoninvasivespeciescouncil.org

CONTACT THE OREGON INVASIVE SPECIES COUNCIL
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COLLABORATION MAKES INVASIVE SPECIES PREVENTION POSSIBLE

Prevention or eradication of invasive species is possible when there are adequate resources to work across organizations, sectors, and regions to achieve early detection and rapid response. The OISC provides a forum for communication and coordination to advance collaborative efforts such as this:

TEAMING UP FOR CLEAN WATERS: ODFW & OSMB UNITE FOR WATERCRAFT INSPECTION SUCCESS

In 2023, the Oregon Department of Fish and Wildlife (ODFW) conducted 16,428 watercraft inspections to prevent the spread of aquatic invasive species. Of these, 336 vessels were found to be contaminated with aquatic vegetation, marine or freshwater organisms, or other biofoulings, and were promptly decontaminated on-site.

Additionally, nine vessels were discovered to be contaminated with quagga or zebra mussels, requiring comprehensive decontamination, including manual removal followed by hot water high-pressure treatment. For vessels remaining in Oregon, follow-up inspections or decontaminations were conducted at the owner's residence prior to launching. For vessels traveling to other states, the respective states were notified to ensure further inspection and compliance. This proactive approach underscores ODFW's commitment to protecting Oregon's waterways and preventing the spread of invasive species.

Established by the Oregon Legislature in 2009 through House Bill 2220, the Aquatic Invasive Species (AIS) Prevention Program plays a critical role in safeguarding Oregon's waters. Funded by the AIS Prevention Permit user fee for boaters, the program is a collaborative effort between the Oregon Department of Fish and Wildlife (ODFW) and the Oregon State Marine Board (OSMB). ODFW oversees watercraft inspection staff activities, while OSMB manages the permit system and law enforcement coordination.

The September 2023 discovery of quagga mussel veligers in Idaho's Snake River highlights the ongoing need for the AIS Prevention Program to prevent new introductions and limit the spread of aquatic invasive species.

Education and outreach are vital components of the program. Through in-person interactions at inspection stations, public events, and training sessions, as well as the distribution of printed materials, the program raises awareness of invasive species impacts and promotes responsible boating practices to protect Oregon's natural resources.

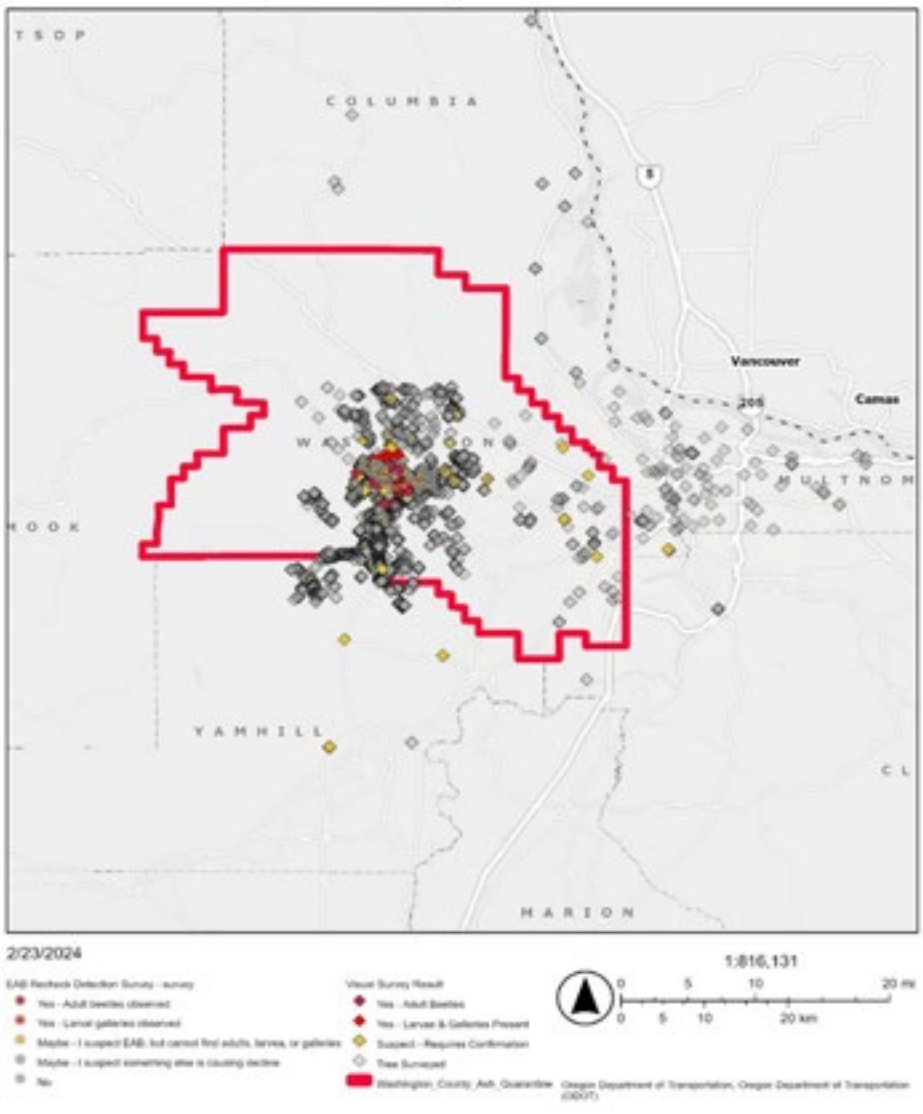
Snake River, from Idaho.

COLLABORATION REDUCES THE IMPACTS OF NEW INVASIVE SPECIES

Invasive species infestations have wide-reaching consequences. A rapid response increases efficiency, improves communication, and spreads workloads. The OISC provides a forum for communication and coordination to advance collaborative efforts such as this:

ODF TAKES ACTION: MONITORING AND MANAGING THE EMERALD ASH BORER THREAT

In 2023, the Oregon Department of Forestry (ODF) collaborated with state, federal, and local partners to monitor and manage the Emerald Ash Borer (EAB) infestation in Oregon. Efforts were coordinated through the Oregon Department of Agriculture (ODA) and the Emerald Ash Borer Task Force, with surveys revealing that EAB occupies a 10.4 square-mile area centered in Forest Grove. Of over 5,200 ash trees inspected since July 2022, 3.6% (190 trees) were found infested.



Ash trees surveyed for emerald ash borer by Oregon Department of Agriculture and partners. By the end of 2023, EAB was known to occupy a 10-square mile area centered on the town of Forest Grove, Oregon. Since 2022, more than 5,000 individual trees have been inspected.

The first season of the **Slowing Ash Mortality (SLAM)** program was implemented to slow EAB spread and sample population density. ODA girdled 109 ash trees within a 2-mile radius of the initial infestation, creating population "sinks," while nearly 200 nearby ash trees were treated with systemic insecticides. Dissections of girdled trees revealed 17 infested trees harboring 221 EAB larvae, primarily along Council Creek, with additional detections near the Tualatin River and Gales Creek. Infested material was destroyed to prevent further spread.

Statewide monitoring included 153 traps deployed in partnership with USDA APHIS, which found no EAB outside the infested area. Public reporting through the state's invasive species hotline resulted in 77 reports, 8% of which confirmed EAB presence, all within Forest Grove. These efforts highlight the importance of continued surveillance, rapid response, and collaborative management to mitigate the spread of this destructive invasive pest.

2023 USFWS HIGHLIGHTS: DEFENDING ECOSYSTEMS FROM INVASIVE SPECIES

In 2023, the U.S. Fish and Wildlife Service (USFWS) in Oregon implemented diverse invasive species management projects across its National Wildlife Refuge (NWR) and Fisheries and Aquatic Conservation programs, emphasizing multi-program collaboration.
Key highlights include:

- **Brook Trout Eradication Using YY Technology:** Biologists collaborated with regional partners to evaluate YY technology for eradicating nonnative brook trout in streams and lakes, advancing efforts to restore native fish populations.
- **Aquatic Invasive Species (AIS) Monitoring:** The Columbia River Fish and Wildlife Conservation Office conducted AIS monitoring at six National Fish Hatcheries using environmental DNA (eDNA) and visual surveys, detecting species like New Zealand mudsnail and testing the effectiveness of early detection tools.
- **Habitat Restoration and Volunteer Engagement:**
    - At Tualatin River and Wapato Lake NWRs, a Habitat Restoration Specialist led invasive plant removal, native planting, and pollinator garden installations, mobilizing over 100 volunteers and fostering partnerships with local organizations.
    - At Bandon Marsh and Oregon Islands NWRs, the South Coast Strike Team treated invasive plants, restored coastal prairies, and conducted early detection surveys. Key accomplishments included mechanical and chemical treatments of species like Scotch broom and Himalayan blackberry, and solarization trials for yellow flag iris.
- **Seabird Habitat Restoration:** A pilot project on offshore islands treated invasive plants such as wild radish and New Zealand spinach to improve nesting habitats for seabird species like burrow-nesters, marking the first invasive species control effort on refuge islands.
- **Smooth Brome Mapping at Malheur NWR:** Staff mapped invasive smooth brome in critical meadow habitats using high-resolution imagery, aiding future management strategies for invasive plant control.
- **Tansy Ragwort Control at William L. Finley NWR:** Intensive herbicide treatments effectively controlled this noxious weed in two grassland units, reducing seed production and supporting long-term restoration goals.

These initiatives underscore the USFWS's commitment to invasive species management through innovation, collaboration, and community engagement to protect Oregon's ecosystems.

Bandon Marsh National Wildlife Refuge. Photo Credit: Rick Obst/Flick

OISC NEW MEMBER SPOTLIGHT: WEST MULTNOMAH SOIL & WATER CONSERVATION DISTRICT

Michelle Delepine, Conservationist & Invasive Species Program Coordinator with the West Multnomah Soil & Water Conservation District has joined the OISC as a 2024 appointed member vice chair Representing an entity in Clackamas, Multnomah, Washington, or Yamhill Counties with the purpose of responding to invasive species concerns.

We are excited to spotlight the West Multnomah Soil & Water Conservation District, whose efforts in 2022-2023 made remarkable strides in invasive species prevention and habitat restoration. The District surveyed an impressive 3,900 acres across more than 350 sites for aquatic and terrestrial invasive plant species, successfully treating Early Detection-Rapid Response (EDRR) target species on 12.3 acres.

Their proactive monitoring included regular inspections of eight sites for Emerald Ash Borer from spring to fall, as well as canopy weed removal and the elimination of invasive ivy and clematis from trees. Additionally, the District undertook extensive projects to control invasive species like blackberry, reed canary grass, and knotweed, while restoring streamside and pond habitats by planting native trees, shrubs, and herbaceous plants. These initiatives not only combat erosion and improve water quality but also enhance wildlife habitat and promote forest health by thinning trees and reducing competition.

We celebrate their impactful work and look forward to their continued success in fostering sustainable landscapes and healthy ecosystems.

Phragmites on shore in Multnomah Channel. Photo Credit: West Multnomah Soil & Water Conservation District.

PUTTING OREGON'S STATEWIDE INVASIVE SPECIES STRATEGIC PLAN TO ACTION

While there is no central authority for the management of invasive species, there are many agencies & organizations actively working to protect Oregon from invasive species. Below is a snapshot of the impressive work carried out by on-the-ground invasive species managers.

SOUTH SLOUGH RESERVE, NATIONAL ESTUARINE RESEARCH RESERVE

In 2023, 1,121 5-spine green crabs were removed from Coos Bay as part of ongoing efforts to manage this invasive species. Despite these efforts, green crab numbers continued to rise, with hotspots identified at the Coos Bay waterfront and Joe Ney Slough, likely due to favorable habitat structures and food availability. High crab densities in these areas are negatively impacting local ecosystems, leading to reduced populations of clams, oysters, juvenile native crabs, and eelgrass habitat.

Notably, recruits in 2023 were larger than in previous years, potentially due to improved growing conditions in the estuary. Trapping remains a critical tool for reducing green crab densities and mitigating their ecological impacts. However, with the return of El Niño conditions, significant increases in recruitment are expected this winter, which may drive rapid population growth in the coming years. Continued and expanded management efforts will be essential to address these challenges.

Crab Trapping in Coos Bay. Photo Credit: Shon Schooler.

2023 NOXIOUS WEED CONTROL: A YEAR OF PROGRESS AND COLLABORATION

In 2023, the Noxious Weed Control Program saw a leadership transition with Troy Abercrombie stepping in as Program Manager, bringing over a decade of expertise in conservation and noxious weed management. Key achievements included updating the State Noxious Weed List, launching 75 weed control projects, and treating 349.5 acres. Biological control efforts involved 67 releases across 335 acres, with 17 agents monitored statewide. Outreach was a priority, with 23 presentations and 95 consultations conducted. During Oregon Invasive Weed Awareness Week, the program engaged thousands of Oregonians to join the fight against invasive weeds.

ODA'S 2023 WINS: BATTLING INVASIVE SPECIES TO PROTECT OREGON

Biocontrol Breakthroughs: ODA IPPM's Record-Breaking Year: In 2023, the ODA IPPM Biocontrol program reached new heights, distributing over 45,000 beneficial insects to 27 sites across Oregon—16 of which were new. These insects, reared to combat invasive pests like brown marmorated stink bug, spotted wing drosophila, and emerald ash borer, were provided free to growers who reported pest reductions and enthusiasm for the program. Innovations in rearing methods enabled expansion to more growers. ODA facilitated the release of USDA APHIS-reared parasitoids targeting emerald ash borer, marking a collaborative effort to protect Oregon's ecosystems.

Vine Mealybug: Battling Oregon's New Vineyard Threat: The vine mealybug *(Planococcus ficus)*, a major vineyard pest and vector for damaging leafroll viruses, was first detected in Oregon in 2021 after decades of successful exclusion. By 2023, eight facilities—primarily in Jackson and Linn counties—were under quarantine, subject to restrictions to prevent the pest's spread. In response, Oregon State University and industry partners provided free treatments, including Movento and mating disruption pheromones, while the Oregon legislature funded expanded delimitation trapping and a voluntary statewide survey. Of 946 male mealybugs trapped in 2023, 837 were vine mealybugs, with new detections in Linn and Douglas counties. Delimitation efforts will continue to protect Oregon's vineyards from this costly invader.

EAB Quarantine: Protecting Oregon's Trees from Emerald Ash Borer: In 2023, the Oregon Department of Agriculture (ODA) established a permanent quarantine to contain the emerald ash borer (EAB), regulating the movement of ash, white fringe tree, and olive plant materials. Nurseries in Washington County, the current quarantine zone, must comply by either halting host species sales outside the area or entering an ODA compliance agreement. Within the county, nurseries must inform customers about quarantine rules to prevent the spread of this destructive pest.

Railyard Defenders: Battling the Spotted Lanternfly and Pest Mollusks: In 2023, the Oregon Department of Agriculture (ODA) launched a railyard survey targeting the invasive spotted lanternfly (SLF, *Lycorma delicatula)*, a major threat to grape and hops industries, valued at $237 million and $71 million annually, respectively. The survey also targeted pest snails and the invasive tree-of-heaven *(Ailanthus altissima)*, a key SLF host. Inspections at 10 railyards statewide revealed a viable SLF egg mass on a railcar in The Dalles, marking a critical detection. Tree-of-heaven was documented at multiple sites for future sentinel tree monitoring, but no target mollusks were found.

Combating *Phytophthora Ramorum*: Safeguarding Oregon's Nurseries: In 2023, ODA managed compliance agreements with six nurseries affected by *Phytophthora ramorum* and worked with five interstate shippers across three counties under USDA protocols. Infested plants and contaminated soil were destroyed to prevent spread. ODA also hosted the annual *P. ramorum* Safeguarding Working Group Meeting, resulting in updates to the program manual. This vital work is funded by USDA APHIS PPQ.

Tracking Vascular Streak Dieback: Protecting High-Value Ornamentals: In 2023, ODA joined a USDA APHIS PPQ multi-state survey to study vascular streak dieback (VSD), an emerging disease affecting over 20 ornamental species like redbud, maple, and dogwood. Surveys at 20 nurseries across five Willamette Valley counties revealed 20% of samples tested positive. While no regulatory actions are being taken, ODA recommends nurseries adopt best practices for disease management. This survey was funded by USDA APHIS PPQ.

2023 MONITORING MILESTONES FROM PORTLAND STATE'S CENTER FOR LAKES AND RESERVOIRS

In 2023, PSU's Center for Lakes and Reservoirs conducted extensive early detection surveys for zebra and quagga mussels, along with other freshwater aquatic nuisance species (ANS), in high-risk water bodies across Oregon. Sampling efforts included 139 site visits across more than 50 water bodies, with repeat sampling where conditions allowed. Key activities included:

- Veliger Sampling: A total of 580 veliger tows were conducted statewide, including 270 in the Portland area, collecting and filtering over 1.5 million liters of water to concentrate samples for analysis.
- Environmental DNA (eDNA): Samples were collected at 65 sites, focusing on early detection of invasive species through molecular techniques.
- Adult Surveys: Dock pat-downs (136) and shoreline surveys (151) were performed to detect adult mussels and snails.
- Additional Sampling: Crayfish trap surveys (118), sediment grabs (84), aquatic vegetation rake samples (95), and calcium sampling (93) complemented water chemistry and temperature monitoring at 274 locations.

The most significant effort was focused on the Columbia River Reservoirs, with additional surveys in reservoirs such as Brownlee, Lake Owyhee, and Lake Billy Chinook. Despite intensive monitoring, no dreissenid mussel larvae or adults were detected in any samples using cross-polarized microscopy or other survey methods. These findings highlight the program's success in proactively protecting Oregon's waters from these invasive threats.

2023 Center for Lakes and Reservoirs motoring within the Boundary Reservoir on the way to Dreissenid surveys. Photo Credit: PSU's Center for Lakes and Reservoirs.

OISC 2023 ACTIVITY HIGHLIGHTS

A snapshot of 2023 OISC activities is listed below:

OUTREACH & EDUCATION

- IPPM held a woodborer identification workshop in February 2023 at the Chemeketa Community College's Agriculture Hub in Salem, OR. This was the first workshop held since before the pandemic. The ODA has a long history of holding such workshops and has been doing so for over 10 years.
- PSU CLR Provided content for a segment on green crabs (AKA 5-spine shore crabs), *Carcinus maenas*, for Oregon Field Guide, Oregon Public Broadcasting
- Interviewed with Axios on the risk of Quagga mussels to Oregon
- De Rivera taught a class on biological invasions at PSU, in which students worked with invasive species professionals to create a number of products. Products can be found on the OISC website and include pamphlets, presentations and publications, fact sheets, invasive species information Hub data, herbicide investigation, and species profiles.
- ODFW and OSMB supported in-person interactions at inspection stations, public events, and training sessions, as well as the distribution of printed materials, the program raises awareness of invasive species impacts and promotes responsible boating practices to protect Oregon's natural resources.
- The Noxious Weed Control Program held 23 public presentations and 95 consultations conducted.

PLANNING

The OISC coordinated the following cross-agency Committees and Working Groups in 2023:

- Communications
- Governance
- Legislative
- Education and Outreach

DETECTION

- Maintained Oregon's Invasive Species Hotlines, including the Squeal on Pigs Hotline serving OR, WA & ID.

Oregon ash woodland, Ankeny National Wildlife Refuge. Photo Credit: Wyatt Williams.

PROTECTING OREGON FROM INVASIVE SPECIES: BY THE NUMBERS

1,121 invasive five-spine green crab

removed from the Coos Bay.
(South Slough Estuarine Research Reserve)

109 ash trees

were girdled within a 2-mile radius of the initial EAB infestation in Forest Grove, while nearly 200 nearby ash trees were treated with systemic insecticides.
(Oregon Department of Agriculture)

100 volunteers

were mobilized under a Habitat Restoration Specialist for invasive plant removal, native planting, and pollinator garden installations.
(U.S. Fish & Wildlife Service)

139 site visits across more than 50 water bodies to survey for zebra and quagga mussels.
(PSU's Center for Lakes and Reservoirs)

16,428 boats inspected

Of these, 336 vessels were found to be contaminated with biofoulings, and were promptly decontaminated on-site. Nine vessels were discovered to be contaminated with quagga or zebra mussels, requiring comprehensive decontamination.
(Oregon Department of Fish & Wildlife and Oregon State Marine Board)

~$345K spent on projects with an invasive species control element and at least 500 acres treated.
These figures are estimated based on accrued costs and past project area.
(Oregon Parks and Recreation Department)

45,000 beneficial insects were distributed to 27 sites across Oregon for the ODA biocontrol program.
(Oregon Department of Agriculture)

Watercraft was intercepted with Quagga Mussels at the Ontario Watercraft Inspection Station from Lake Havasu, AZ. Photo Credit: Oregon State Marine Board & Oregon Department of Fish & Wildlife.

OREGON INVASIVE SPECIES COUNCIL

2023 MEMBERS

EX OFFICIO VOTING COUNCIL MEMBERS

Noel Bacheller	Oregon Department of Parks & Recreation
Chris Benemann	Oregon Department of Agriculture
Rick Boatner	Oregon Department of Fish and Wildlife
Sam Chan	Oregon Sea Grant
Catherine de Rivera	Portland State University
Glenn Dolphin	Oregon State Marine Board
Josh Emerson	Oregon Department of Environmental Quality
Wyatt Williams	Oregon Department of Forestry

EX OFFICIO NON-VOTING COUNCIL MEMBERS

Sen. David Brock Smith	Oregon State Senator
Nicole Brooks	US Customs and Border Protection
Sen. Lew Frederick	Oregon State Senator
Stacy Johnson	Bureau of Land Management
Heidi McMaster	US Bureau of Reclamation
Sean McMillen	USDA APHIS PPQ
Kathy Pendergrass	USDA NRCS
Karen Ripley	US Forest Service
Brendan White	US Fish and Wildlife Service

APPOINTED COUNCIL MEMBERS

Brian Clapp	Union County Weed Control
Edward "Chuck" Fisk	F5 Wildlife Control
Nathan Gehres	Applegate Partership and Watershed Council
Peter Kenagy	Kenagy Family Farms
Katie Murray	Oregonians for Food & Shelter
Tim Newton	Malheur County Soil & Water Conservation District
Shon Schooler	Friends of South Slough Reserve
Cheryl Shippentower	Confederated Tribes of the Umatilla Indian Reservation
Alexander Staunch	Mosaic Ecology