## Amend OISC Bylaws, Article III, Section 2

1

## **Agreed Rotation**

YEAR	CHAIR	VICE-CHAIR	
2005	ODFW	SeaGrant	
2006	SeaGrant	ODA	
2007	ODA	PSU	
2008	PSU	ODF	
2009	ODF	SeaGrant	
2010	SeaGrant	ODEQ	
2011	ODEQ	ODFW	
2012	ODFW	ODA	
2013	ODA	PSU	
2014	PSU	ODF	
2015	ODF	SeaGrant	
2016	SeaGrant	ODEQ	
2017	ODEQ	ODFW	
2018	ODFW	OSMB	
2019	OSMB	ODA	

## **Actual Rotation:**

Year	Chair	Agency	Vice-Chair	Agency
2011	Rian Hooff	DEQ	Rick Boatner	ODFW
2012	Rick Boatner	ODFW	Dan Hilburn	ODA
2013	Dan Hilburn	ODA	Mark Sytsma	PSU
2014	Mark Sytsma	PSU	Wyatt Williams	ODF
2015	Wyatt Williams	ODF	Ryan Hooff	DEQ
2016	Ryan Hooff	DEQ	Rick Boatner	ODFW
2017	Rick Boatner	ODFW	Glenn Dolphin	OSMB
2018	Glenn Dolphin	OSMB	Helmuth Rogg	ODA
2019	Helmuth Rogg	ODA	Mark Sytsma	PSU
2020	Catherine de Rivera	PSU	Wyatt Williams	ODF
2021	Rick Boatner	ODFW	Troy Abercrombie	WIS
2022	Rick Boatner/Troy Abercrombie	ODFW	Christina Moffit	FSSR

3

## Propose Rotation:

Year	Chair	Vice-chair
2023	Sea Grant	OSPR
2024	OSPR	ODEQ
2025	ODEQ	ODF
2026	ODF	OSMB
2027	OSMB	ODA
2028	ODA	PSU
2029	PSU	ODFW
2030	ODFW	Sea Grant
2031	Sea Grant	OSPR
2032	OSPR	ODEQ
2033	ODEQ	ODF
2034	ODF	OSMB
2035	OSMB	ODA
2036	ODA	PSU
2037	PSU	ODFW
2038	ODFW	Sea Grant
2039	Sea Grant	OSPR

Δ

## Propose Rotation:

Year	Chair	Vice-chair
2023	OSMB	Sea Grant
2024	Sea Grant	OPRD
2025	OPRD	DEQ
2026	DEQ	ODA
2027	ODA	ODF
2028	ODF	PSU
2029	PSU	ODFW
2030	ODFW	OSMB

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## Proposal:

- Rotation of ex-officio members as Chair and Vice-chair and that we add a 2nd Vice-Chair.
- The 2<sup>nd</sup> Vice Chair would be nominated from the ten appointed term sits to assist in the leadership of OISC.
- Accept the rotation schedule as proposed.

## Forest Facts: 2020 Labor Day Fires: Post-fire challenges with invasive plants



Beachie Creek Fire, December 7 2020, three months after the unprecedented Labor Day fires of 2020. Source: W. Williams, ODF Forest Health

## Fire recap

The Labor Day fires of 2020 posed significant challenges to landowners, homeowners and the public. On the afternoon of Monday, September 7, high winds out of the eastnortheast were at sustained speeds of 20 to 30 mph with gusts up to 50 to 60 mph. Peak gusts were recorded over 100 mph at Timberline Lodge on Mt. Hood. With much of Oregon experiencing drought conditions and historically low fuel moistures and relative humidity, five mega fires (over 100,000 acres each) quickly grew over the next 3 days. The five megafires rank in Oregon's top 20 largest wildfires since 1900 and, combined, they burned nearly 850,000 acres of forests. Eleven lives were lost and more than 4,000 homes were destroyed during Oregon's unprecedented 2020 wildfire season.

Oregon's 2020 Labor Day Megafires	Acres burned
Archie Creek	131,542
Beachie Creek	193,573
Holiday Farm	173,393
Lionshead	204,469
Riverside	138,054

## **Challenges**

Once fires were contained and rescue operations were completed, assessment of the toll on of the forests was conducted. The 2020 Labor Day fires affected all landownership types: small private woodland owners, industrial forest owners, state-managed forests and federal forests. All owners had unique challenges, consisting of stabilizing hillsides; repairing roads, stream culverts and other infrastructure; conducting salvage logging; and replanting with tree seedlings. Among the

ongoing challenges for landowners and land managers are invasive plants that compete with tree seedling establishment or those that affect riparian areas and other systems.



Foxglove in a timber harvest unit. Inset: foxglove rosettes crowd out a recently planted Douglas-fir seedling. Source: W. Williams, ODF Forest Health

### Invasive plants: noxious vs exotic

Noxious weeds are a subset of exotic invasive terrestrial, aquatic and marine plants that have been declared in Oregon statute (ORS 569.350) to be a menace to the public because of their rapid spread, economic costs and ecological impact. The Oregon Department of Agriculture's Noxious Weed Board maintains a current list of the state's official noxious weeds (OAR 603-052-1200). As of 2020, there are 140 species of exotic invasive plants on the Oregon noxious weed list.

Oregon's noxious weeds are categorized based upon their current population status as well as

economic considerations. A-listed weeds are the highest priority with the most significant economic ramifications, and these weed species occur in small enough numbers where eradication is possible. B-listed weeds are those that are regionally abundant but whose further spread threatens economies and the environment. A-listed weeds require mandatory control programs, regardless of the land ownership. B-listed weeds do not require mandatory control measures, but they are prohibited by ODA to sell, purchase or transport in the state. ODA maintains a competitive grant program of approximately \$1.7 million dollars per biennium in state lottery funds for community organizations, such as soil and water conservation districts and watershed councils, to control A- and Blisted weeds. This grant program funds approximately 35-50 noxious weed control projects annually across the state.

There are many exotic invasive plants in Oregon's forests that are not on the state's official noxious weed list. Many of these invasive plants are major reforestation pests and some have changed wildfire cycles in the western United States. Some exotic plants have been here for decades and are ubiquitous. Some are new invaders that have arrived recently and their pest status is still being evaluated. Other exotic plants are either beneficial (i.e. crop or horticultural plants) or do not appear to be



Three months after the beginning of the Labor Day fires of 2020, invasive weeds such as perennial rye grass, woodland groundsel and blackberry are growing among old Himalayan blackberry canes inside the Beachie Creek fire. Source: W. Williams, ODF Forest Health.

The noxious weed, false brome, is a perennial grass that can grow in the forest understory and outcompete native plants. Source: Wyatt Williams, ODF Forest Health

Woodland groundsel is one of the worst reforestation pests in western Oregon, despite not being on the state's noxious weed list. Source: Forest Starr

pests. Any person or agency can petition ODA to add exotic invasive weeds to the Oregon Noxious Weed List. Doing so increases public funding and reduces the trade of these plants in the open market.

## Noteworthy invasive plants in the footprint of the 2020 Labor Day fires

Below is a table of some of the most important noxious weeds and other invasive plants that occur in the western Cascade Mountains, or those that are being surveyed for early detection and rapid response. Whether deemed "noxious" or not, some of these invasive plants are major pests of reforestation practices while others are considered to pests of natural habitats because they reduce browse for wildlife or alter stream habitats for native salmonid fish species.

Invasive plant	Scientific name	Noxious weed status	Resource threat*
Bull thistle	Cirsium vulgare	В	R
Canada thistle	Cirsium arvense	В	R
English hawthorn	Crataegus monogyna	В	R/U
English holly	Ilex aquifolium	NONE	U
English ivy	Hedera helix	В	U
False brome	Brachypodium sylvaticum	В	U
Foxglove	Digitalis purpurea	NONE	R
Garlic mustard	Alliaria petiolata	В	U/EDDR
Gorse	Ulex europeaus	В	F/R/EDRR
Herb Robert Geranium	Geranium robertianum	В	U
Himalayan blackberry	Rubus armeniacus	В	R
Japanese knotweed	Fallopia japonica	В	S
Orange hawkweed	Hieracium aurantiacum	A	R/U/EDDR
Orchard grass	Dactylis glomerata	NONE	R
Oxeye daisy	Chrysanthemum leucanthemum	NONE	U
Perennial rye grass	Lolium perenne	NONE	R
Perennial vetch	Vicia cracca	NONE	R
Reed canary grass	Phalaris arundinacea	NONE	S
Scotch broom	Cytisus glomerata	В	R
Spurge laurel	Daphne laureola	В	U
Tansy ragwort	Senecio jacobaea	В	R/U
Velvet grass	Holcus lanatus	NONE	R
Wall-lettuce	Lactuca muralis	NONE	R
Woodland grounsel	Senecio slyvaticus	NONE	R
Yellow archangel	Lamiastrum galeobdolon	В	U

<sup>\*</sup> EDRR=early detection and rapid response, F=fire threat, R=reforestation pest, S=streamside pest, U=understory pest

## Best management practices for invasive weeds

ODF is a member agency of the state's Integrated Pest Management Committee. Our foresters practice and promote Integrated Pest Management (IPM). Under this practice, all possible control strategies – chemical, biological, mechanical and cultural – are taken into consideration when controlling pest

populations. The Forest Practices Act (OAR 629-670-0000 thru 629-670-0350) requires landowners to replant within 2 years following harvesting timber and that tree seedlings are "free to grown" above competing vegetation within 6 years following harvest. While the FPA does not specify how landowners control competing vegetation, many landowners chose to use herbicides. When conducting pesticide



Basal bark spot spraying for Scotch broom in the Cascade Range. Source: W. Williams, ODF Forest Health

applications on forestlands, landowners are required to submit a "notification of operations" to ODF at least 15 days prior to the application. Pesticide applicators are required to be licensed by ODA and are required to follow the product directions on the label; the label is the law. ODF promotes and practices having clean equipment entering forest road systems. Operator contracts require that equipment is cleaned prior to entering the forest to prevent the spread of noxious and invasive weeds. ODF State Forests Division requires the use of weed-free forage on statemanaged lands (OAR 629-025-0040). ODF is a member agency of the Oregon Invasive Species Council and promotes and practices interagency cooperation through early detection and rapid response (EDRR).

## **Reporting invasive plants**

If you observe a noxious weed or other invasive plant, report it through the Oregon Invasive Species Council's website:

https://www.oregoninvasivespeciescouncil.org/report-an-invader, or through the Oregon Invasive Species Hotline: 1-866-INVADER (1-866-468-2337). Call your local ODF stewardship forester for more information on reforestation laws and practices:

https://www.oregon.gov/odf/working/pages/findaforester.aspx

### **Further resources:**

Oregon Department of Forestry Fire Protection Program:

https://www.oregon.gov/odf/fire/pages/default.aspx

Oregon Department of Forestry Working Forests:

https://www.oregon.gov/odf/working/pages/replanting.aspx

Oregon Department of Forestry E-Notification for Operations on forestlands:

https://ferns.odf.oregon.gov/e-notification

Oregon Department of Agriculture Noxious Weed Program:

https://www.oregon.gov/oda/programs/Weeds/ Pages/Default.aspx

Oregon Invasive Species Council:

https://www.oregoninvasivespeciescouncil.org/

Oregon State University Extension Forestry and Natural Resources Extension:

https://www.forestry.oregonstate.edu/forestryand-natural-resources

Oregon Flora Project: https://oregonflora.org/

U.S. Forest Service Fire Effects Information System:

https://www.fs.usda.gov/rmrs/tools/fire-effects-information-system-feis



ODF pickup being cleaned to prevent the potential spread of invasive plants into and outside of fire area. Source: W. Williams, ODF Forest Health Unit



## Information Hub Update: 10 Species Profiles

Emma Scott, Rodé Krige, and Reagan Thomas



Please email suggestions and feedback to: reagan.thomas@pdx.edu



## 18 Identified Species of Concern

Established Species			
Common Name	Species Name	Type of Threat	
Cheatgrass	Bromus tectorum	Ecological	
Tansy ragwort	Jacobaea vulgaris	Health	
Scotch broom	Cytisus scoparius	Ecological	
Amphibian chytrid fungus	Batrachochytrium dendrobatidis	Ecological	
Southern pink moth	Pyrausta inornatalis	Economic	
Oak-leaf phylloxera	Phylloxera spp	Ecological	
Oak lacebug	Corythucha arcuata	Ecological	



Common Name	Species Name	Type of Threat	
Japanese beetle	panese beetle Popillia japonica Economic		
Mediterranean oak borer	Xyleborus monographus	Ecological	
Gill's mealybug	oug Ferrisia gilli Economic		
Houdini fly	Houdini fly Cacoxenus indagator Ecological		
Eastern 5-spined engraver	Ips grandicollis	Ecological	
Potential Threats (Not Yet Found in Oregon)			
Common Name Species Name Type of Threat			
Water hyacinth	Eichhornia crassipes	Ecological	
Variable leaf milfoil	Myriophyllum heterophyllum	Economic	
Water lettuce	Pistia stratiotes	Ecological	
Snake fungal disease Ophidiomyces ophiodiicola Ecological			
Death cap	Amanita phalloides	Health	
Northern giant hornet	Vespa mandarinia	Ecological	

Potential to Establish

Email: reagan.thomas@pdx.edu

## Criteria for inclusion/exclusion?)

- Exclude
  - Established species (ex. Himalayan blackberry, English ivy)
    - Reed canary grass is scheduled to be published. Why?
  - Species that do not have negative ecological, societal, or economic impact
  - Species that do not have a plausible method for getting here
- Include
  - Species that thrive in ecoregions similar to Oregon's
  - Species that have had negative impacts in nearby states
  - Species that spread quickly
  - Species that could do serious harm to key industries in Oregon



Email: reagan.thomas@pdx.edu

## **Current workflow**

- 1. Expert opinion (ODA, ODF, ODFW, US Customs, neighbor states)
- 2. Vet species based on ecological, economic, human health threats
- 3. Vector analysis: determine likelihood of introduction, possible vectors, and future impacts



Email: reagan.thomas@pdx.edu

## Questions for the Council

- 1. Highest priorities or indicators for adding a species to the Hub?
- 2. What other criteria for inclusion/exclusion should we consider?
- 3. Are there species (perhaps from different taxa) that we haven't listed yet that we should look into?



Email: reagan.thomas@pdx.edu

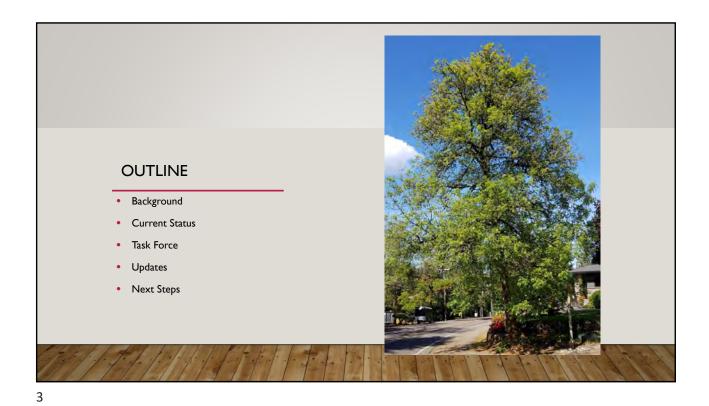
## EMERALD ASH BORER: STATUS IN OREGON

OISC FALL MEETING

OCTOBER 19, 2022

1





Agrilus planipennis

TECANOROUSIS

TECANOROU

# PREAD OF EAB IN THE U.S. • 2002: First detection in Michigan • 2013: Detected in CO • 2019: Spread to 33 states • 2022: Jump to Oregon (#36!) Quarantines are not bulletproof

## TIMELINE

- June 30<sup>th</sup>: ODF notified and ODF visited site and confirmed same day
- July Ist: ODF reported to ODA
- July 2<sup>nd</sup>: Trees cut down and chipped
- July 5<sup>th</sup>: ODA, ODF, and USDA held initial response meeting and visited site

- July IIth:
  - Public announcement
  - Oregon received USDA confirmation of identification\*
- July 14th: briefed nursery industry
- August: Task Force and Steering Committees formed

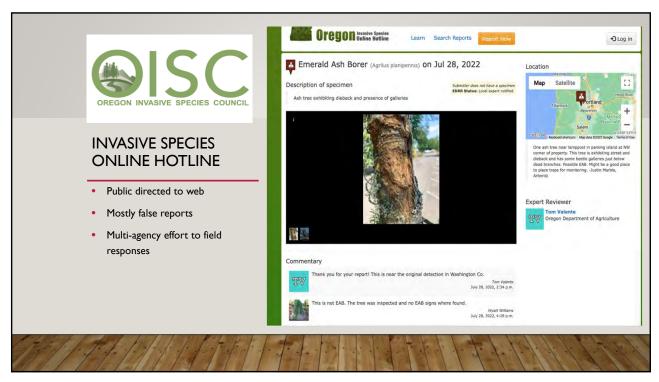


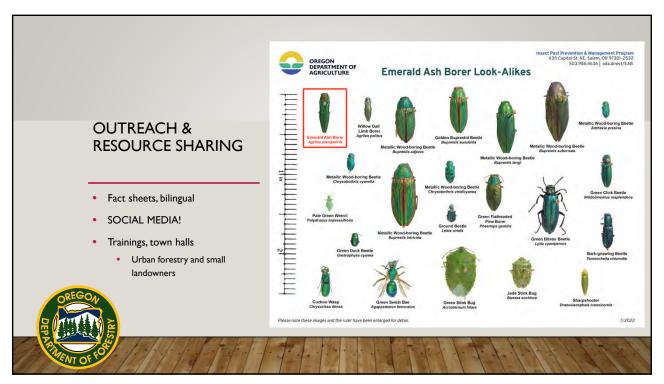
18th Ave
18th Ave
18th Ave

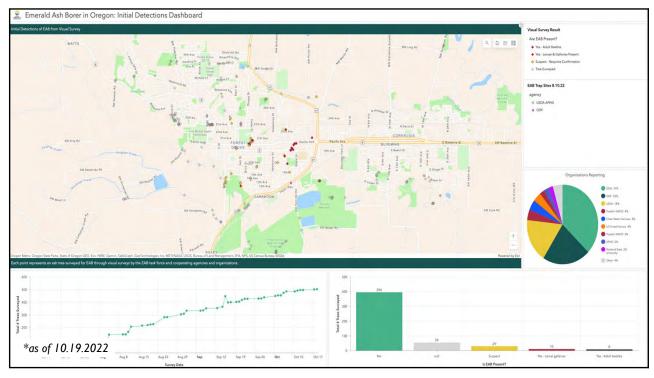
• Trees planted in 2012
• Purchased locally from landscaper/nursery in Aloha
• Tree origin unknown
• Estimate 3-5 years
• Point of introduction unknown

Champtons at Joseph Gale Elementary School

Elementary School





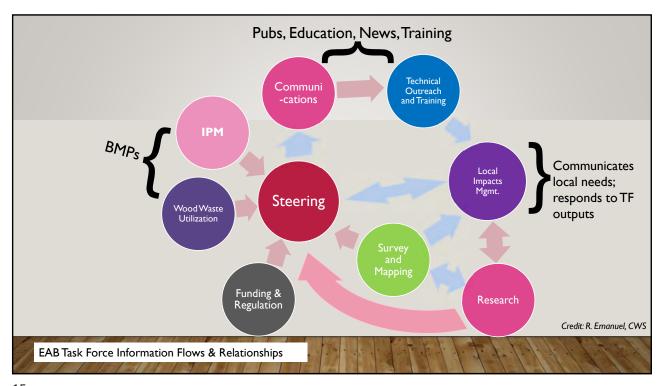


## ODF has been monitoring for EAB for several years Before the 2022 detection, ODA secured federal funds for biocontrol work ODA has applied for continued funds for FY2023 Part of Oregon's long-term plan ODA surveyed nurseries in the valley for woodboring insects Included EAB Surveyed landscape ash trees EAB Response Plan Seed collection (ODF) – ongoing!

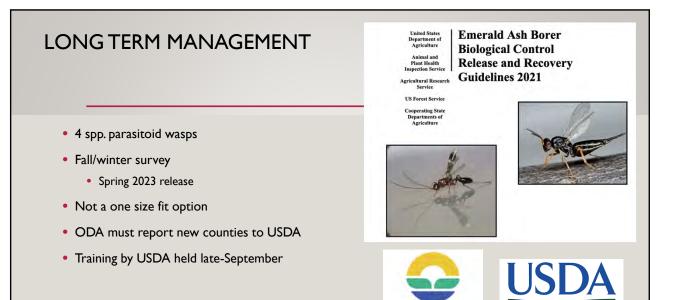
## ORGANIZATION & LEADERSHIP • Steering Committee • ODA • ODF • ODF • County • USDA-APHIS-PPQ • USDA- FS • CWS • OSU • Academic • And growing...

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## TASK FORCE: SUB-COMMITTEES - Communications (Lead: ODF) - Research (Lead: OSU) - Wood waste & Utilization (Lead: ODF) - IPM (Lead: OSU) - Surveying & Monitoring (Lead: ODA) - Training (Lead: OSU) - Funding



## **RESPONSE AS A CONTINUUM** Actions will come from different groups · Trapping is a tool that can be used to in different ways assist monitoring · In conjunction with girdled/trapping Surveys tree determine the spread (ongoing) Quarantine identify trees for treatment · Regulatory arm to help slow the spread Tree removal • Evolve over time Case by case basis Up to the individual



OREGON DEPARTMENT OF AGRICULTURE

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### Wood Waste & Utilization

- Identified potential locations for wood disposal
- General guidelines (draft)
- Intel on wood waste practices in WA County
- Exploring Air curtain optionDEQ



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## **RESEARCH**

- EAB life history/biology in OR
- Flight period the same in OR?
- Biocontrol local natural enemies?
- Resistance in OR ash?
- Basic ecology of OR ash
- What species can be planted after OR ash is killed (i.e. riparian zones)

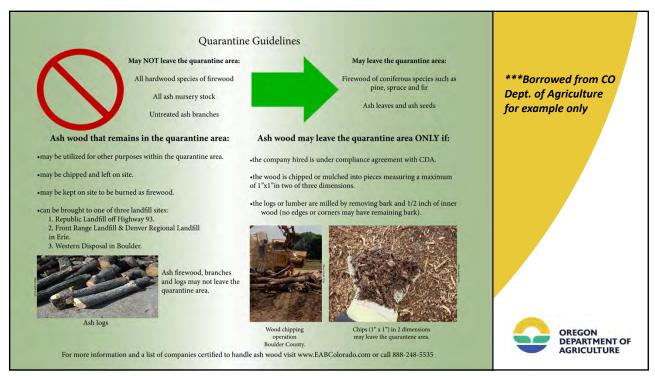
## **FUNDING**

- ODF funds to support EAB Coordinator
- ODA E-board funds (\$550K)
  - Treatments\*
  - Collection of green waste\*
  - Support staff with EAB focus
  - \* = contract work
- Forest Service
  - OISC
  - ODF
  - ODA

" as pest becomes established, annual costs for control will likely be incurred by the towns, cities, communities and landowners"

-EAB Response Plan

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## **EAB Task Force**

- Coordinated by Oregon **Invasive Species Council**
- Led by ODA
- ODF major support roles
- Over 40 agencies and counting

### **Task Force Subcommittees:**

- 1. Survey & Monitoring
- 2. Wood waste & wood utilization
- 3. Training & Technical assistance4. Integrated Pest Management
- 5. Research
- 6. Communication
- 7. Funding



## Oregon laws and EAB

Timber harvest of Oregon ash must comply with...

- **ODA quarantine rules (OAR 603)**
- **ODF Forest Practices (OAR 629) Notification of operations (FERNS)** Riparian rules







Wood waste "needs"

- Equipment
  - Chippers, loaders, air curtain
- Contractors
  - Operators, drivers, fellers, arborists
- Landowner agreements
  - Marshalling yards for large influx of waste
- Overhead
  - Agency staff needed to administer contracts



## Wood utilization "needs"

- Timber
  - FPA guidance to Stewardship foresters. "Plan for alternate practices" ....harvest in riparian forests
  - Replanting guidelines following timber harvest
    - Site prep, stocking densities and timing, comp release
- Firewood
  - HIGH RISK of moving EAB and other insects/disease
  - Best management practices
  - No intra-state firewood standard for Oregon for commercial firewood...which agency? ODA, ODF, DEQ, OPRD, ODFW...

Other biomass

• Biochar, kiln-dry products, others

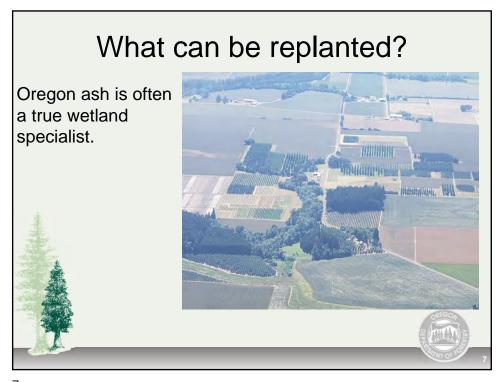


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## Written plan for alternate practices



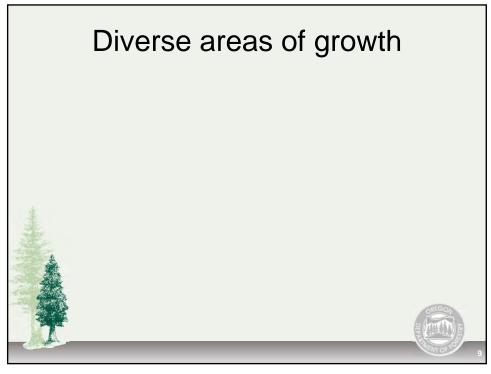




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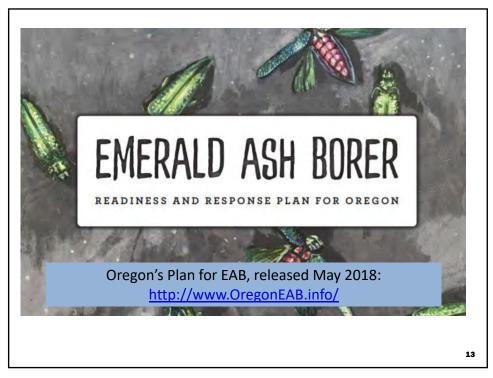
## Survey and research "needs"

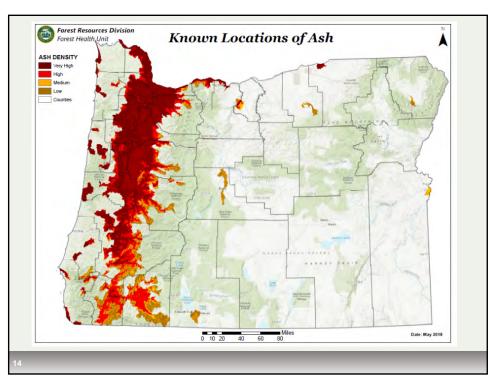
- Monitoring plots
  - Track health, mortality over time
  - Piggy-back with other projects, ie biocontrol
  - ODF: ADS, UAVs, remote sensing, on-the-ground
  - Coordination!!! ODF,ODA, OSU, CWS, USDA (\$\$)
- Replaceable species to plant
  - FPA vs. streamside ecological restoration
- Technology
  - Firewood market development, biochar, wood products....and more!
  - Coordination! USDA (\$\$) and many, many agencies











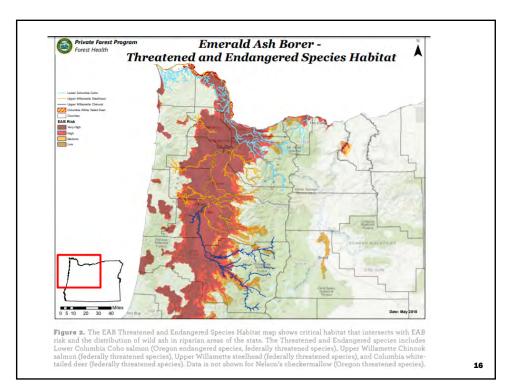
## EAB and risk to Oregon's T&E species

**Table 1.** Oregon threatened and endangered species that will likely be impacted by widespread Oregon ash mortality caused by EAB.

Common Name	Scientific Name	State Status	Federal Status	Potential Impact of EAB
Columbian White-tailed Deer (Lower Columbia River population only)	Odocoileus virginianus leucurus		Т	Some
Lower Columbia River Chinook Salmon	Oncorhynchus tshawytscha		Т	Some
Lower Columbia River Coho Salmon	Oncorhynchus kisutch		T	High
Lower Columbia River Steelhead	Oncorhynchus mykiss	E*	Т	Some
Oregon Coast Coho Salmon	Oncorhynchus kisutch		Т	Some
Southern Oregon Coho Salmon	Oncorhynchus kisutch		T	Some
Upper Willamette River Chinook Salmon	Oncorhynchus tshawytscha		Т	High
Upper Willamette River Steelhead	Oncorhynchus mykiss		T	High
Nelson's checkermallow	Sidalcea nelsoniana	T**		High
Peacock larkspur	Delphinium pavonaceum	E**	Е	Some
Bradshaw's desert parsley	Lomatium bradshawii	E**	E	Some

<sup>\*</sup> Listed under the Oregon Endangered Species Act (ORS 496.171 through 496.192)

\*U.S. Endangered Species Act of 1973 (Public Law 93-205, 16 U.S.C. § 1531)



## EAB/Ash public maps

ODA: Ash tree survey (tree inspections, traps)

https://geo.maps.arcgis.com/apps/dashboards/e6ff6b60f63b4c489cdee61315a85535

ODF Ash heat map

https://geo.maps.arcgis.com/apps/mapviewer/index.html?webmap=8a33ec55adfb4d1788d097c7b68066a2

ODF Seed project

https://geo.maps.arcgis.com/apps/mapviewer/index.html?webmap=1be6f8aaa2 934315aec439ced4ec5f94



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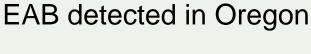
## EAB/Ash project photos

- Forest Grove Ground Zero
- https://photos.app.goo.gl/5WMkrXtdyXu2Tfx88
- Air curtain incinerator

https://photos.app.goo.gl/T98KrkvyS9uB3fkaA

- ODF Seed project southern Oregon
- https://photos.app.goo.gl/jdPaCsp5KGheMN mj6



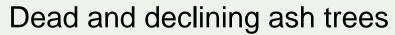


- Reported to ODF June 30, 2022
- Joseph Gale Elementary School, Forest Grove
- First discovery of this insect on West Coast



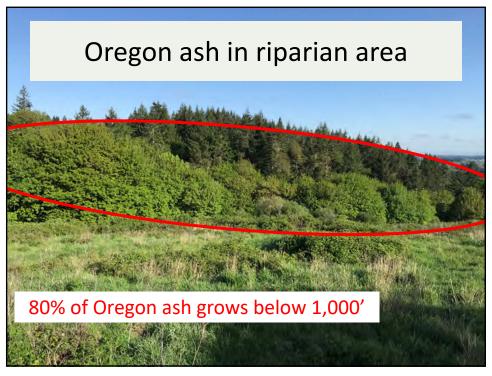


















## Update on Smallmouth Bass in the Coquille River Basin

Gary Vonderohe
Oregon Department of Fish and Wildlife

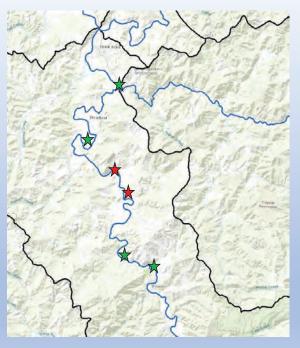
Oregon Invasive Species Council Meeting – October 19, 2022

## Refresher from my June presentation

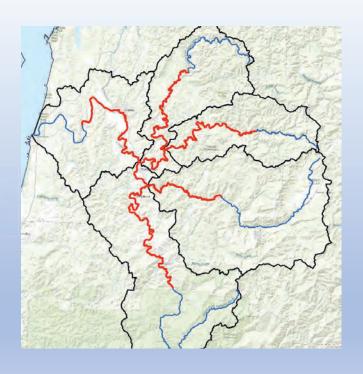
Report of Smallmouth bass in South Fork Coquille River summer of 2011

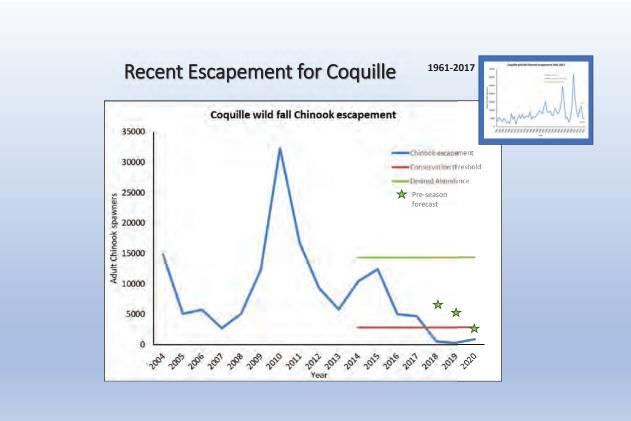
Initial snorkel surveys South Fork Coquille River, August 2011





Current
Smallmouth
bass
distribution in
the Coquille
Basin





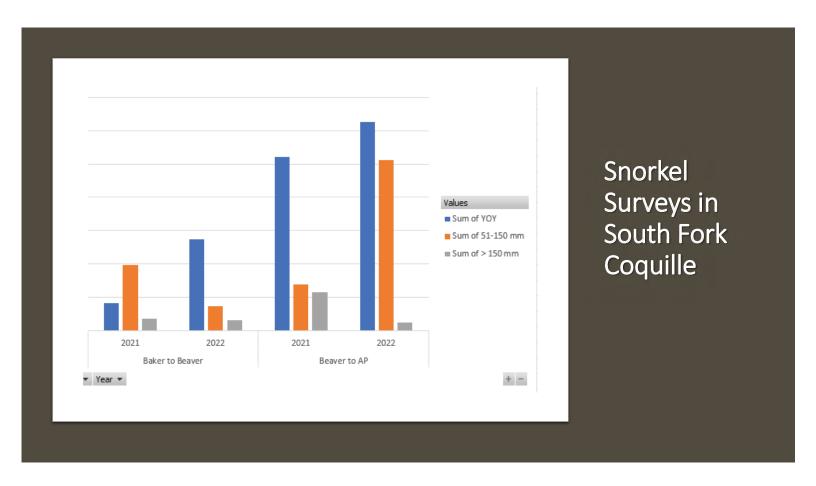
OISC 10/18-19/22 Exhibits - Page 35

## Work occurring with Smallmouth bass in the Coquille Basin during 2022

- Temp rule allowing spearfishing
- Snorkel Surveys in South Fork Coquille
- Electrofishing removal
  - Motorboat
  - Raft
- Smallmouth bass derby
- Radio telemetry



Adopted a Temporary Rule allowing spearfishing for smallmouth bass in the Coquille Basin from May 22 – October 31, 2022.





Removal of Smallmouth bass using Electrofishing

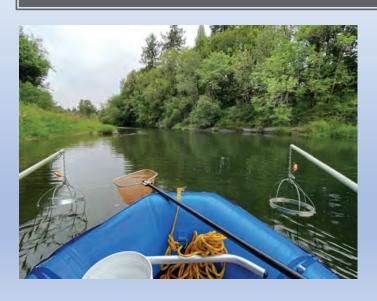
#### Predation on salmonids

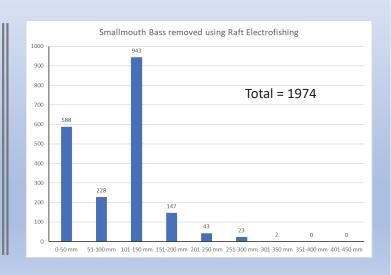






## Raft Electrofishing the South Fork Coquille

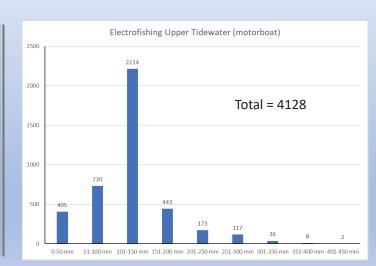


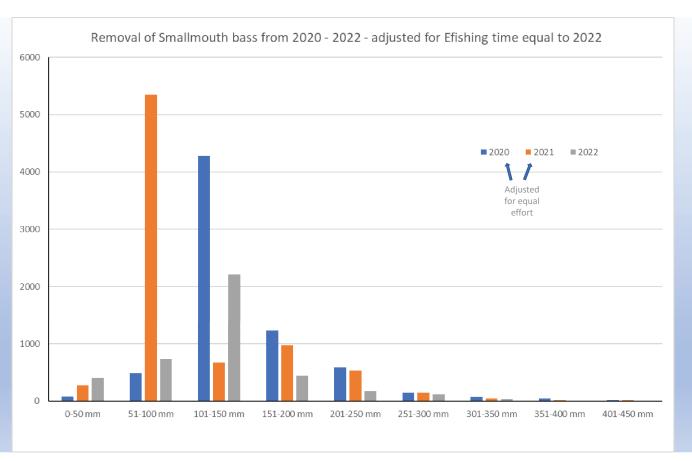


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# **Electrofishing Upper Tidewater (motorboat)**

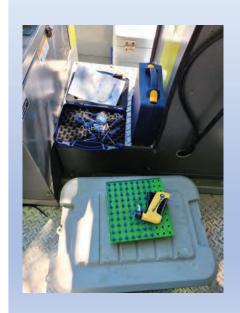






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### Port of Coquille River – Bass removal derby





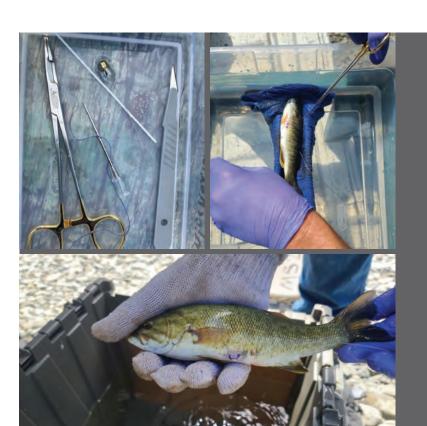


#### Some Results

51 PIT tagged fish released

- 6 tagged fish returned in July
- 4 tagged fish returned in September
- 1 tagged fish moved at least 7 miles in less than 2 weeks





#### Radio Tracking Smallmouth Bass

- Captured and surgically implanted radio tags into 14 smallmouth bass
- Bass lengths ranged from 6 inches to 13 inches
- Bass came from 3 locations in the South Fork Coquille and 1 location in the Middle Fork Coquille

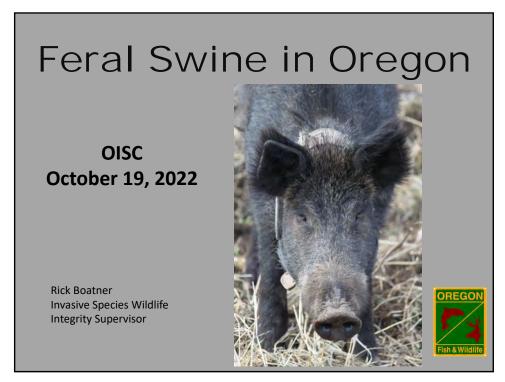
# Tacking bass movements

- Better understanding of bass population
- May help develop removal strategies





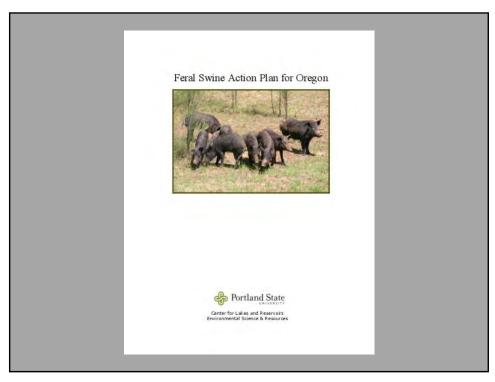












## Management Tools



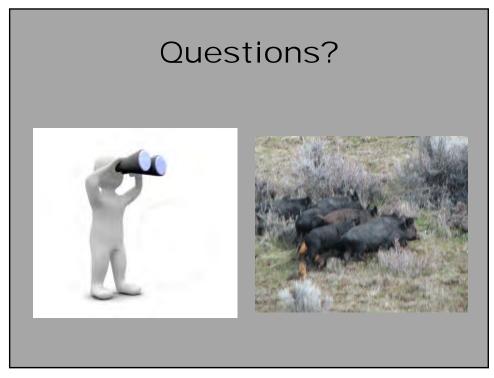
- O Created by HB 2221
- No selling of hunts
- **0** OAR 635-058-0010
- Requires a person who owns or controls land must notify ODFW within 10 days of discovering feral swine on the land.
- Within 60 days submit a feral swine removal plan.
- Must implement the plan











#### USDA FOREST SERVICE

#### 2022 Pacific Northwest Region AIS Focal Species

Type	Common name	Genus species	Species Code
Aquatic Animals	New Zealand mudsnails	Potamopyrgus antipodarum	POAN
	Zebra mussels	Dreissena polymorpha	DRPO
	Quagga mussels	Dreissena rostriformis bugensis	DRRO
	Rusty Crayfish	Orconectes rusticus	ORRU
	Red Swamp Crayfish	Procambarus clarkii	PRCL
	Ringed Crayfish	Orconectes neglectus	ORNE
	Bullfrog	Rana catesbeiana	RACO
	Northern Crayfish	Orconectes virilis	ORVI
	Nutria	Myocaster coypus	MYCO
	Asian Clam	Corbicula flumina	COFL
	Chinese mystery snail	Cipangopaludina chinensis	CICH
	Big Eared Radix	Radix auricularia	RAAU
Aquatic Plants			
1	Yellow Flag Iris	Iris pseudacorus	IRPS
	Hydrilla	Hydrilla verticillata	HYVE
	Nonnative Milfoils	Myriophyllum species	MYSP
	Yellow Floating Heart	Nymphoides peltata	NYPE
	Brazilian Elodea	Egeria densa	EGDE
	Flowering rush	Butomus umbellatus	BUUM
	Common reed	Phragmites austalis	PHAU
	Curly-leaf pondweed	Potamogeton crispus	POCR
	Purple Loosestrife	Lythrum salicaria	LYSA
	Garden Loosestrife	Lysimachia vulgaris	LYVU
	Water primrose	Ludwigia spp.	LU
	,	0 11	
Terrestrial Animals	Feral Swine	Sus scrofa	SUSC
Terrestrial Plants	Japanese Knotweed	Fallopia japonica	FAJA
	Hybrid Bohemian Knotweed	Polygonumx bohemicum	POBO
	Giant Knotweed	Polygonum sachalinese	POSA
	Giant Hogweed	Heracleum mantegazzianum	HEMA
	Old Man's Beard	Clematis vitalba	CLVI
	Garlic Mustard	Alliaria petiolata	ALPE
	Himalayan blackberry	Rubus discolor	RUDI
	English Ivy	Hedera helix	НЕНЕ
	Salt Cedar	Tamarisk ramosissima	TARA
	Orange hawkweed	Hieracium aurantiacum	HIAU
	Yellow archangel	Lamiastrum galebdolon	LAGA