WMSWCD Invasive Species
Partnerships, Initiatives & Restoration

Michelle Delepine, Invasive Species Program Coordinator
West Multnomah Soil & Water Conservation District
Board Presentation – March 13, 2019

WEST MULTNOMAH
Soil & Water Conservation District

Partnerships: PNW-Garlic Mustard Working Group

- Established Fall 2014
- Self-organized, grassroots
- OR, WA, BC & AK
- Annual Meetings
- List-serve
- Common goals, but different experiences

Partnerships: PNW-Garlic Mustard Working Group

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Prevention & Outreach

Prevention &
Outreach

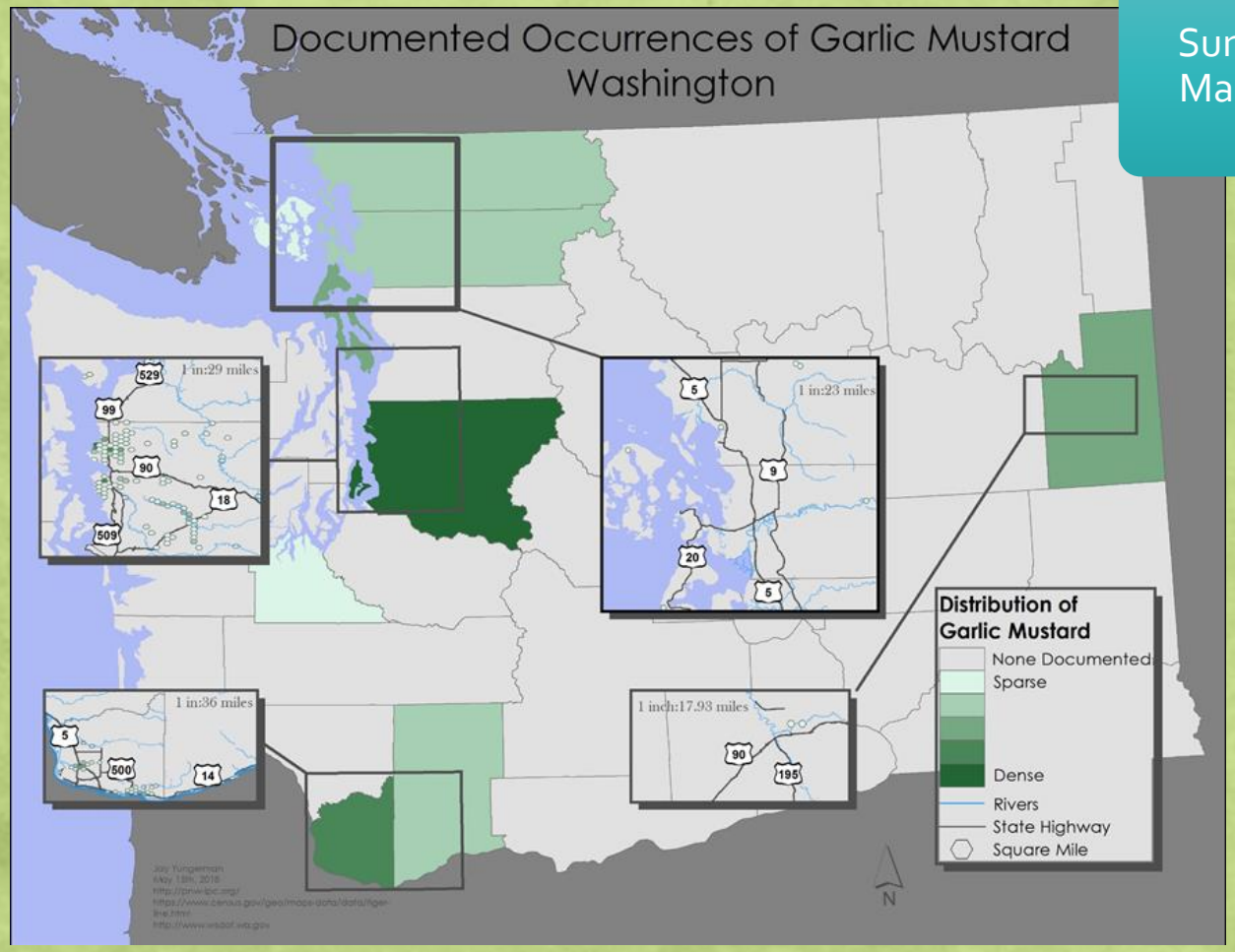
What can we do?

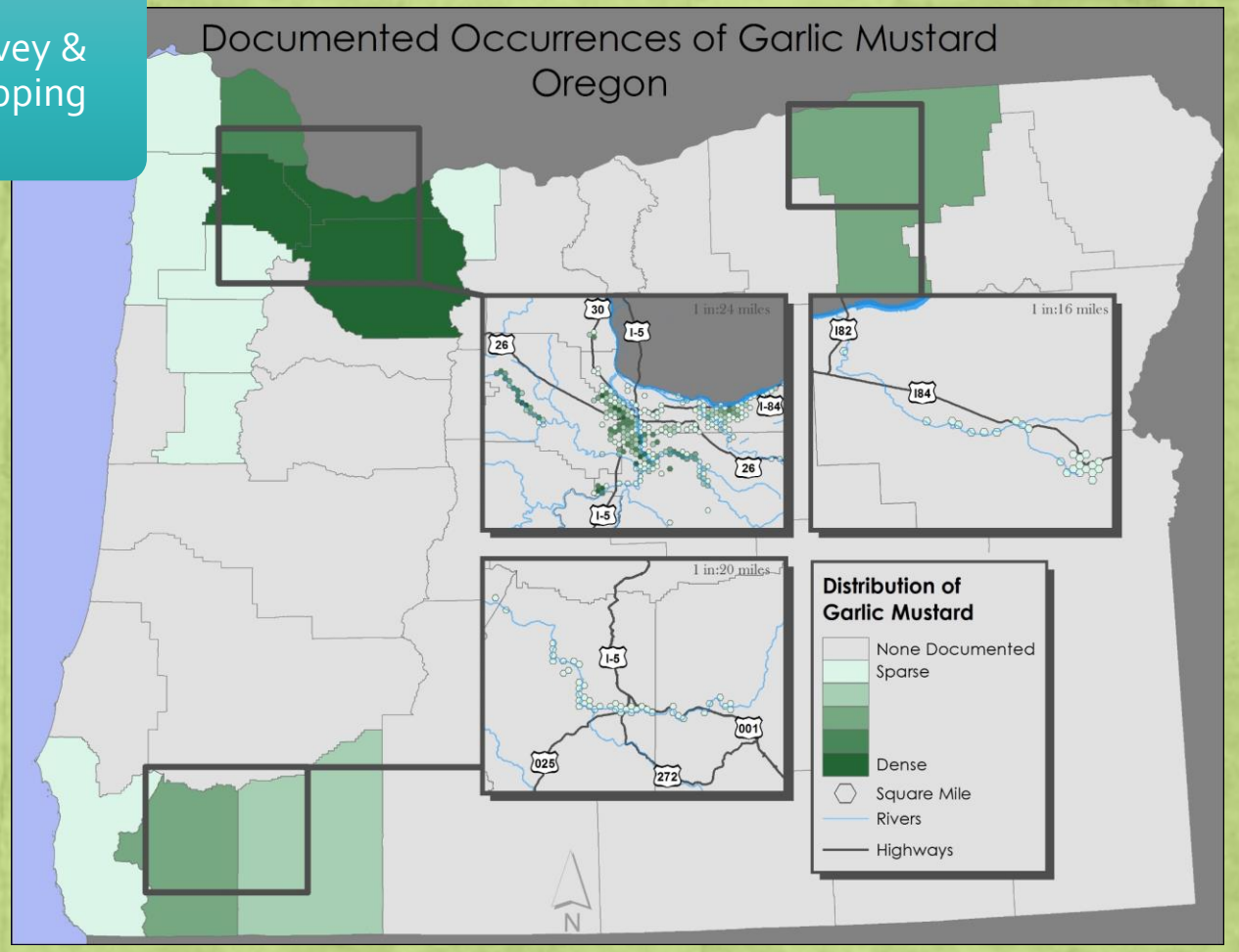
Prevention & Outreach

https://tinyurl.com/bootwashing

Partnerships: PNW-Garlic Mustard Working Group

Survey & Mapping





Partnerships: PNW-Garlic Mustard Working Group

Best Management Practices

Integrated Pest Management (IPM) Guide for Garlic Mustard in the Pacific Northwest
Revised November 22, 2017

Mechanical	Manual	Chemical	Integrated Pest Mgmt	Notes/Tips
Mowing is not an effective control. Plants will still bolt, flower and seed, and additional seed heads may be created by mowing. Mowing after seeds are present (typically, May-September) will spread garlic mustard. This has been shown to turn small infestations into large infestations very quickly.	Handpulling can be very effective but must be done when soil is moist enough to allow complete root extraction. Pull carefully from root crown to avoid breaking off the stem. A hori hori can be useful to loosen soil around base of plants. May not be practical at larger sites, or in all situations. Roots left behind may resprout. Monitor site for regrowth. Second year plants will continue to bolt, flower and set seed even once pulled, unless disposed of properly. All pulled plants must be bagged, removed from the site, and disposed of in the landfill (NOT yard debris/compost). Soil disturbance may cause increased seed germination or seedling flush. Timing: Best time is during flowering when plants are most visible and when root stores have been used for flower production. However, rosettes can be handpulled any time of year, provided the soil is moist enough (generally *NOT* late summer). *1st priority: Bolting and flowering 2nd year plants; rosettes may be controlled on a time permitting basis.* Note, only a percentage of rosettes will make it to adult stage.	Spring (Apr - May): If only treating sites once a year, be sure to visit them in early spring (typically early April-late May but this can vary due to weather conditions). Apply the suggested foliar spray during bolting or flowering to prevent seeding. Be sure flowers and developing siliques (ie seedpods) have adequate herbicide coverage. Triclopyr amine at 2% rate (or Vastlan at 1.5% rate), plus 1% site-suitable non-ionic surfactant (e.g. Competitor or Agridex) will minimize damage to competitive grasses and work quickly on preventing seed maturation. Up until flowering (but no later), 2% glyphosate can be used instead of triclopyr amine. Fall (Sep - Oct): Rosettes can be sprayed in early fall after rain events end summer dormancy but before leaves begin to fall from trees and cover garlic mustard plants. Treatment trials to date suggest using 1% triclopyr amine OR 1% glyphosate, and 1% site-suitable non-ionic surfactant. 1% imazapyr has also been effective, but may not be appropriate if targeted plants are near mature trees or other desirable vegetation. Rosettes can also be sprayed in late winter, but this is only effective after winter dormancy ends. Garlic mustard often dies back in the winter so you must wait until the great majority of plants have re-sprouted. Rosette treatments at the height of summer may be least effective due to summer dormancy.	Combination of spring herbicide application followed by handpulling is very effective. Spray bolting and flowering plants in early spring (typically early April-late May). Revisit sprayed sites in early June (once seedpods have started to harden and spraying has become ineffective) to handpull any plants that were missed or bolted after spraying. Pulled plants must be bagged and removed from the site and disposed of in the trash. Revisit sites if possible after initial pull and be prepared to repeat pulling if smaller or later growing plants bolt. Fall rosette treatments can also be added to this IPM method as directed in 'Chemical' section of this document. This approach has the potential to reduce spring workloads and may be beneficial to desirable native plant recruitment. Reseed (e.g. blue wildrye etc) or replant trees/shrubs to provide competitive cover. Installing >5" layer of mulch, particularly hemlock mulch, may limit seed germination.	Multiple years are needed to exhaust seed bank, which can last at least 5-10 years. Early detected sites are much easier to manage! Control before the plant goes to seed! Once seedpods are no longer milky, even sprayed plants will continue to set seed. TIP: Be sure to spray seedpods during late treatment applications using the 2% triclopyr amine solution described OR handpull and properly dispose of plants before seed matures. Do not move plants, or enter site, once seedpods yellow and mature black seed is present. Prevention is Key! Consider impact of crews – clean boots, clothing, and machinery before moving from areas with garlic mustard plants/seed into uninfested areas!

Disclaimer: This document is a basic guide and assumes no liability toward product efficacy, loss of non-targeted plants, or personal safety issues. Always follow label instructions, wear proper safety gear, and avoid herbicide drift. If in doubt as to control practices, consult a licensed herbicide contractor.

Important Notes:

* Prevent new infestations!! Always clean equipment and footwear before and after entering a site. Consider limiting contractor work in affected areas.
* *Always read the entire label before using any herbicide. Wear proper safety gear, and mix and pour herbicides carefully in a safe environment.*
* A site-appropriate non-ionic surfactant and indicator dye will help with efficacy and control.
* Aquatic formulations of herbicides AND surfactants must be used near open water and riparian areas.
* Glyphosate-based products, such as Roundup and Rodeo are non-selective -- they will kill all green plants!
* If using one of the listed chemicals, spray to wet entire plant, including flowers and seedpods. Unsprayed seedpods may continue to set mature seed.
* There are currently treatment trials testing a site-appropriate pre-emergent in combination with other IPM methods. This method needs more exploration, but could be useful at certain sites that do not have natural native plant recruitment (e.g. roadside patches). Timing: fall and late winter applications.
* REMEMBER: Garlic mustard can set seed even after being pulled! Dispose of plants in the trash—Do Not Compost, or place in yard debris.
* It may be helpful to mark bags as "Noxious—Do Not Compost," if worried about disposed plants being redirected to green waste stream.
* Limit invasive seed germination by improving competitive plant cover. Reseed sites with suitable native grasses or replant with trees and shrubs.
* Gravel trucked in from other sites may contain invasive weed seeds – please monitor right of ways/storage facilities throughout the year.


D05u
Pacific Northwest Garlic Mustard Working Group
Highlights from 2017-2018 Collaborations
Contributors: BRITISH COLUMBIA: Val Miller (BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development) OREGON: Chris Aldassy, Lucas Nipp, Jon Wagner (East Multnomah Soil & Water Conservation District (SWCD)); Mitch Bixby (City of Portland, Bureau of Environmental Services); Crystalyn Bush (Columbia SWCD); Justin Cooley (Yamhill SWCD); Michelle Delepine, Ari DeMarco (West Multnomah SWCD); Heather Hendrixson, Kris Schaedel (Hood River SWCD); Sam Leininger, Jeff Lesh, Lindsey Karr (Clackamas SWCD); Beth Myers-Shenai (Oregon Dept of Agriculture); Nichole Linehan, Charles Nappi (Portland Parks & Rec); Jeff Merrill (Metro); Theodore Orr (Umatilla Weed Control Program); Tyler Pedersen (Tualatin SWCD); Jay Yungerman (Portland Community College) WASHINGTON: Cia Bywater, Justin Colell, Jeff Duval, Sance Kellinoi (Clark County Vegetation Management); Karen Peterson, Maria Winkler (King County Noxious Weed Control Program); Cyndi Soliz, Emily Stevenson (Skamania County Noxious Weed Control Program)
Abstract
Background
Regional Mapping
Control
Key Points
Contact
Acknowledgements
URGAN GARDEN ECOLOGY
Portland State

Register for March 21 webinar: Conservation Districts and Invasive Species Management

News

CATEGORIES

All
Agriculture
Air Quality
Economic Development
Energy
Environmental Management
Forest & Rangeland Management
Mining
Natural Resource Development
Species Management
State-Federal Relationship
Transportation
Water
Wildfires
Western Governors' Association
The West
Waste Isolation Pilot Plant

RELATED NEWS

03/07/19

CATEGORY: Species Management

The Western Governors' Association will host the webinar, **Conservation Districts and Invasive Species Management**, at 1 p.m. MT on Thursday, March 21.

The webinar will feature representatives from conservation districts in Hawaii, Oregon and New Mexico discussing innovative, cross-boundary efforts to manage invasive species. Panelists will also highlight how Natural Resources Conservation Service (NRCS) programs and funding can facilitate invasive species management on private land.

This is the second webinar in a series as part of the **Western Governors' Biosecurity and Invasive Species Initiative**, the central policy initiative of WGA Chair and Hawaii **Gov. David Ige.**

The webinar will be moderated by **Travis Thomason**, Director – Pacific Islands Area, NRCS. Panelists include: **Mae Nakahata**, Director, Maui County Soil and Water Conservation District; **Michelle Delepine**, Invasive Species Program Manager, West Multnomah Soil and Water Conservation District; **Lindsey Karr**, WeedWise Specialist, Clackamas Soil and Water Conservation District; and **Debbie Hughes**, Executive Director, New Mexico Association of Conservation Districts.

Register now

Get the latest news about the West and its governors by following the Western Governors' Association on **Twitter, Facebook** *and* **LinkedIn**.

western governors, webinar

Partnerships: 4-County Cooperative Weed Management Area (CWMA)

- 2019 Pull Together Event (122 attendees)
- Home & Garden Show (320 attendees)
- Field Day – June 12th 2019

- Co-Chair June 2016-Dec 2018
- Technical & Scientific Review Co-Chair
- $4,500 support for coordination

Partnerships: Oregon Invasive Species Council

- Statewide Coordination of Invasive Species
- Multi-taxa (animals, plants, insects, etc)
- Current Coordination funding gap
- Legislative Committee (SB 445!!)
- Education & Outreach Committee
- 2nd term concludes Dec 2019

OISC

OREGON INVASIVE SPECIES COUNCIL

Partnerships: Solve Pest Problems

- Advisory Council
- Annual Commitment of $7,500
- SB 257, Legislative Funding Request
- Initial Content Review
- Plain Language Approach to IPM info for multiple types of pests available online

OSU Extension Service

SOLVE PEST PROBLEMS

October 2018

Project Description

The purpose of Solve Pest Problems is to reduce the impacts of pests and pest management practices on people and the environment in non-agricultural settings. The resource will be built in English and Spanish and will address inequities in access to unbiased, science-based pest management information.

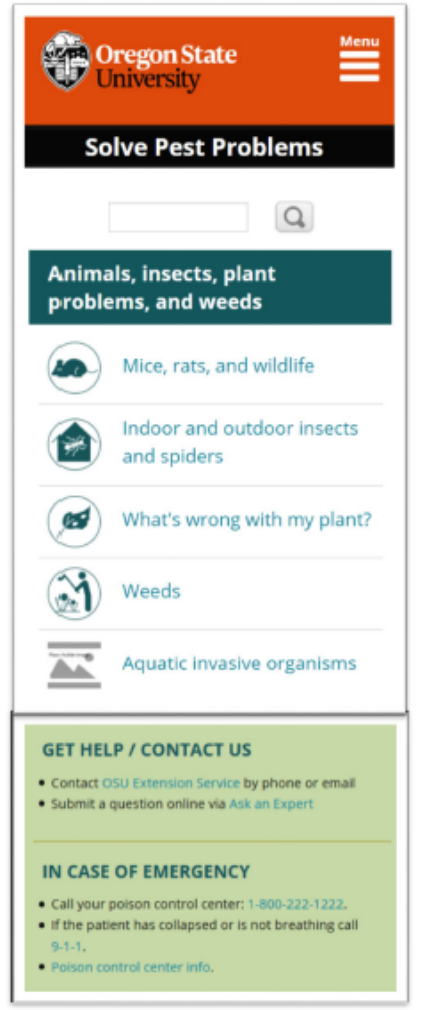
Situation

Currently, there is no comprehensive educational resource to help Oregonians diagnose pest problems and determine effective, low-risk Integrate Pest Management strategies for homes, buildings, landscapes, natural areas, and other non-agricultural locations. There is a confusing array of information online and on store shelves, which makes it difficult for people to solve pest problems. There are also diverse communities who have been historically underrepresented in contributing to and accessing IPM information, and who are disproportionately impacted by pests and pesticides.

Solve Pest Problems is a collaborative vision to address these pressing issues while engaging diverse stakeholders in the development of content and technology as well as marketing, outreach, and evaluation. Diversity, equity, and inclusion are central to this effort.

Solve Pest Problems will help people quickly and easily diagnose pest problems and determine effective strategies for preventing and managing specific pests in non-agricultural locations. Recommended strategies will pose the least possible risk to people, property, resources, and the environment, while preventing intolerable levels of pest damage. *(Continued on page 2)*

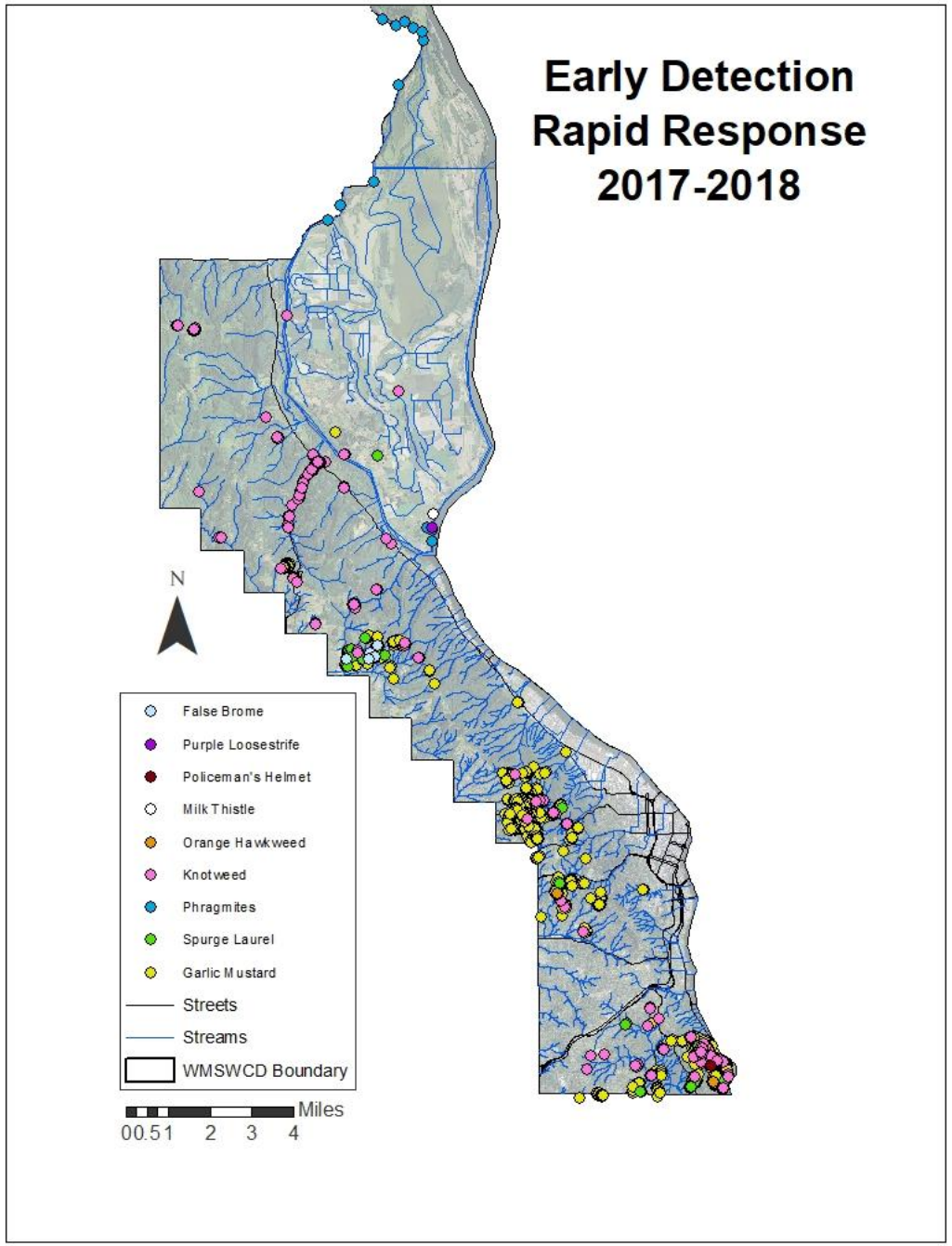
Oregon State University



Partial home page (phone view) mock-up of Drupal 8 development site. All content in this document is for example only.

West Multnomah SWCD Invasive Species Initiatives

- Oregon State Weed Board grant funded!
  - $34,638, with >$13,000 funding District EDRR work
- Prevention Efforts!
  - Boot Wash Stations, Decals & More!
- Database & Mobile Data Collection
  - Digitized landowner contact info for 400+ properties
  - Fulcrum Software, Herbicide Records, Data
- Riverview Canopy Weed Program
- District ReVeg for EDRR sites
- Mailing >300 outreach letters, Tabling & More


Early Detection
Rapid Response
2017-2018
N
False Brome
Purple Loosestrife
Policeman's Helmet
Milk Thistle
Orange Hawkweed
Knotweed
Phragmites
Spurge Laurel
Garlic Mustard
Streets
Streams
WMSWCD Boundary
Miles
0 0.5 1 2 3 4


Early Detection-Rapid Response
2017-2018
Final
Report

Early Detection, Rapid Response 2017-18

SPECIES	GROSS AREA	NET AREA**	AVERAGE DENSITY	# OF PATCHES	# OF SITES	NO NEW PATCHES FOUND**
Knotweed	1.37 acres	0.69 acres	50%	184 patches	75 sites	8
Phragmites	0.39 acres	0.05 acres	12%	14	14	5
Lesser celandine*	0.91 acres	0.29 acres	32%	88	40	
Garlic mustard	13.94 acres	5.6 acres	40%	1121	283	88
Spurge laurel	2.89 acres	1.13 acres	39%	83	74	
Orange hawkweed	411 sq ft	257 sq ft	62%	8	3	2
False brome	619 sq ft	261 sq ft	42%	7	5	1
Policeman's helmet	1 sq ft	1 sq ft	100%	1	1	
Goatsrue	None found					
Milk thistle	1 sq ft	1 sq ft	100%	1	1	
Butterbur	1 sq ft	1 sq ft	100%	2	2	
TOTAL	**20.5 acres**	**7.96 ac**		**1495 patches**	**498 properties**	**104 eradications**

Restoration

Discussion!!