

# **WEED MANAGEMENT**

CHRIS RUSCH  
DOUGLAS COUNTY  
MASTER GARDENER  
OSU Extension Service

# Weed Management

Definitions

Noxious weeds

Identifying weeds

Options for weed control

# **WEED Definitions...**

- What is a weed?

A plant that is  
unwanted in a  
particular situation

# WEEDS...

- Why do we care?

Weeds take up resources like space, water & nutrients

Weeds can be hazardous

# **WEED Definitions**

- Native plants
- Non-native plant
- Exotic plant
- Naturalized plant
- Invasive plants
- Noxious weeds

# Native Weeds

- Native or indigenous plants or animals are ones that were present in the Pacific Northwest historically prior to European-American settlement. Native weeds are aggressive plants that are native and often widespread.







**Non-native** (exotic, alien or introduced) plants or animals are plants that were brought to the Pacific Northwest by humans, either deliberately or by accident.







The term 'naturalized' is conventionally used to describe non-native plants that are capable of surviving and reproducing without human intervention for an indefinite period of time. Naturalized plants may or may not become invasive.



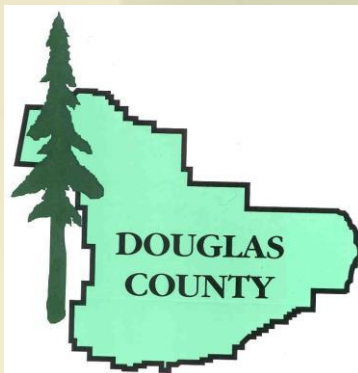




Invasive species are ones that are non-native and which thrive and spread aggressively outside their natural range. Some invasive species can become serious problems that threaten water quality, drive away native wildlife, crowd out native plants and create fire hazards.

# WEED Definitions...

- Noxious weeds
  - State & county noxious weed policies & lists



- Douglas County Weed Advisory Board

## Douglas County Noxious Weed Policy and Weed List

**"Noxious Weed"** is a legal definition for non-native plants that are particularly aggressive, invasive and difficult to control. One or more of the following can describe them:

- I. They cause economic losses to agricultural and horticultural industries.
- II. They endanger native flora and fauna by encroaching in wild lands.
- III. They hamper the enjoyment and full use of recreation sites.
- IV. They are poisonous, injurious or otherwise harmful to humans and animals.

Because these plants cause economic, ecological and other damage, an integrated control program, that includes biological, chemical, cultural, manual and mechanical control techniques, is recommended for all noxious weeds.

### Weed Control Ratings

The following list and its subsets (A, B & T lists) are based on the classification system developed by the Oregon Department of Agriculture.

#### "T" List

These noxious species are priority weeds "targeted" for control at the county level. All "T" list weeds are found on the "A" or "B" lists.

#### "A" List

These noxious weeds occur in small enough infestations that eradication or containment is possible in the county. Some of these weeds are not yet known in Douglas County but their presence in adjacent counties makes future occurrence likely.

**Intensive control of these infestations is highly recommended.**

#### "B" List

These noxious weeds are common and well established in Douglas County. Eradication at the county level is not likely. Containment is possible in some cases and is encouraged. Where these are not feasible, biological control agents may be introduced to slow the spread of the invaders.

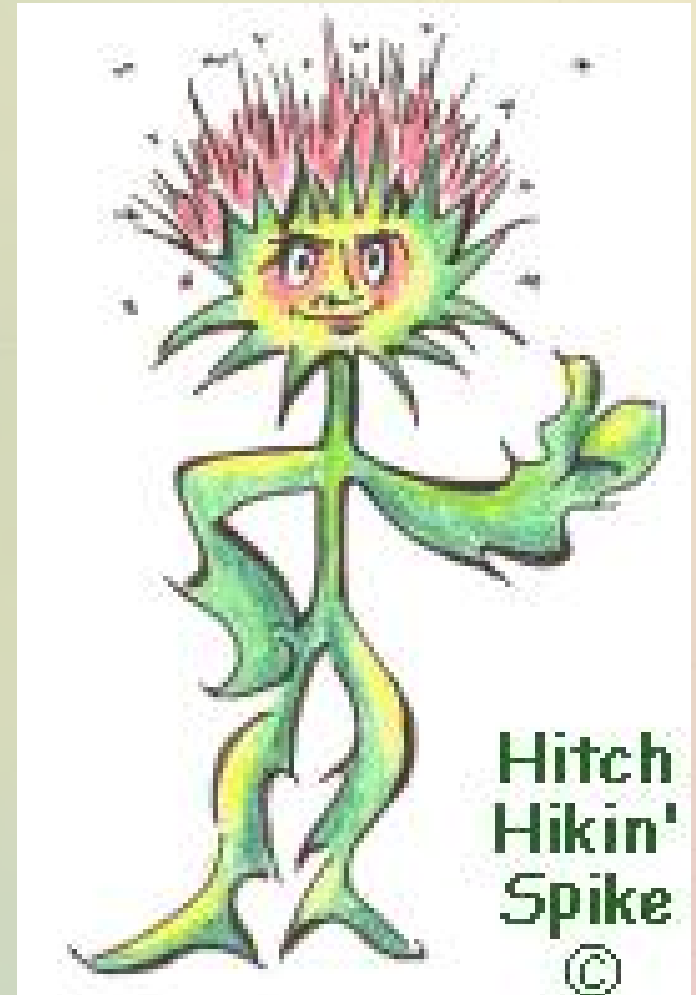
**Intensive control is recommended on small isolated infestations. Eradication is not likely or feasible on widespread infestations, but control, especially along travel routes is encouraged. In other areas, biological control agents may be introduced to reduce the spread of the infestation.**

To report noxious weeds - contact the Douglas County Extension Service, Courthouse Annex, 1134 SE Douglas Ave., Roseburg, 672-4461 or 1-800-853-7568

Adopted January 20, 2006

# Noxious Weeds

- Legal definition
  - Non-native plant designated by the Weed Board to be injurious to public health, agriculture, recreation, wildlife, or any public or private property.
- Federal, State, & county noxious weed policies & lists
- A, B, and T lists



# **“A” List**

- Occur in small enough infestations that eradication or containment is possible
- Some not here yet, but future infestations likely
- Intensive control highly recommended

# Examples of “A” listed weeds



# **“B” List**

- Common, well established
- Eradication is not likely
- Containment possible, encouraged
- Intensive control recommended on small infestations

# Common invasive weeds





# **“T” List**

- Priority weeds “targeted” for control at the county level
- All T listed weeds are found on the A or B list also

# Douglas County Noxious Weeds

See Plant Clinic copy

## “T” List

| <u>Common Name</u>                         | <u>Scientific Name</u>  |
|--|---|
| Buffaloburr                                | <i>Solanum rostratum</i>  |
| Diffuse knapweed                           | <i>Centaurea diffusa</i>  |
| English or single-seed hawthorn            | <i>Crataegus monogyna</i>   |
| Gorse                                      | <i>Ulex europaeus</i>   |
| Armenian (Himalaya) blackberry             | <i>Rubus discolor</i>   |
| Knotweed- Japanese,<br>Giant,<br>Himalayan | <i>Polygonum cuspidatum</i> ,<br><i>Polygonum sachalinense</i> ,<br><i>Polygonum polystachyum</i> |
| Paterson's Curse                           | <i>Echium plantagineum</i>  |
| Portuguese or striated broom               | <i>Cytisus striatus</i>   |
| Spotted knapweed                           | <i>Centaurea maculosa</i>   |
| Spurge laurel                              | <i>Daphne laureola</i>  |
| Toadflax-yellow, dalmation                 | <i>Linaria vulgaris</i> , <i>Linaria dalmatica</i>  |
| Whitetop or Hoary Cress                    | <i>Cardaria draba</i>   |
| Woolly distaff thistle                     | <i>Carthamus lanatus</i>  |
| Yellow floating heart                      | <i>Nymphoides peltata</i>   |
| Yellow starthistle                         | <i>Centaurea solstitialis</i>   |

# The "T" Listed Weeds!

# Spurge laurel







**Diffuse  
knapweed**  
*Centaurea  
diffusa*

# Diffuse knapweed





Buffaloburr  
*Solanum*  
*rostratum*



# ***White Top or Hoary Cress*** ***Cardaria draba***



# Spotted knapweed

## *Centaurea*



# Leafy Spurge

## *Euphorbia esula*



# Portuguese Broom

## *Cytisus striatus*



# Gorse



Gorse 3/61  
CDFA/IPC

# Gorse *Ulex europaeus*



Woolly Dandelion Thistle 6/85  
CDFA/IPC- R.M. Breckenridge



Woolly Dandelion Thistle 6/83  
CDFA/IPC- R.M. Breckenridge



Woolly Distaff Thistle 6/79  
CDFA/IPC- R.M. Breckenridge



**Which  
is  
which?**



**Yellow Star Thistle**

**Woolly Distaff  
Thistle**

# Report “T” listed Weeds

- OSU Extension Office
  - 541-672-4461
  - 800-883-7568
- Douglas Soil and Water Conservation District
  - 541-957-5061
- ODA Noxious Weed Control Program
  - 541-839-4929
  - On-line reporting systems

# Weed Management



# Weed ID

- Plant appearance
  - Seedlings, Juveniles, rosettes, Mature
  - Growth habit
  - Lifecycle
  - Leaf shape, stems, flowers, roots
  - Smell
  - Color



Know enemies and friends



## Grasses

-Flowers are not showy and usually are the same color as the stems and leaves.



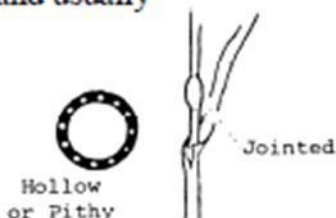
-Leaves are in two rows on the same stem.



-Veins in the leaves are parallel.



-Stems are jointed and usually hollow.



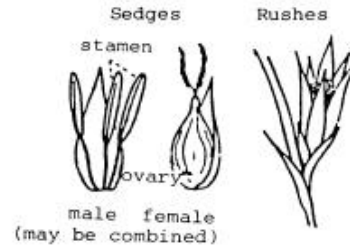
-Roots are usually fibrous.



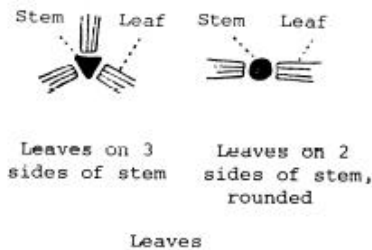
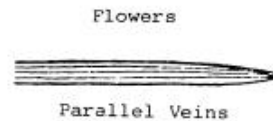
# Grass Like Plants

(Plants that look like grasses)

-Flowers are not  
showy, usually small  
and brown



-Veins in the leaves  
are parallel  
parallel



-Stems are solid and  
not jointed  
-Stems may be  
triangular or round

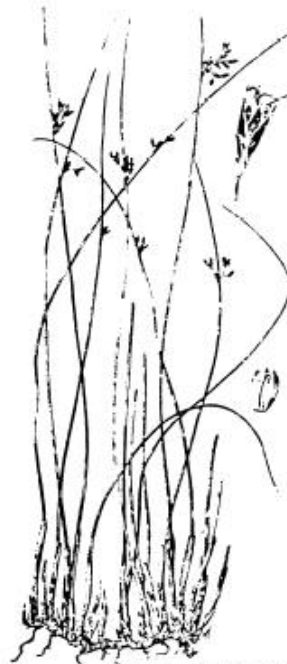
d  
d

triangular or  
round



-Roots are usually fibrous

- Roots are usually  
fibrous



GRASS-LIKE PLANTS

## Forbs

Forbs are broad-leaved, non-woody plants with net like veins in the leaves. Many garden plants and plants we call weeds are forbs. Their flowers are usually colorful and showy. The stems die back to the base of the plant each year. These plants may have fibrous, tap, or bulbous roots.

-Flowers are usually showy.



Flowers

-Leaves have net-like veins.



Leaves

-Stems are solid



-Roots may be fibrous, tap, or bulbous



Roots



## Shrubs

Shrubs are woody plants with stems that live over winter and branch from near the base. They are like trees, but usually are smaller. The flowers are usually colorful. The leaves have net-like veins, and are shorter and wider than grass leaves. A shrub has a large taproot or strong, branching roots.

-Flowers are colorful



Flowers

-Leaves have net like veins



Leaves

-Stems are woody with growth rings



Growth rings

Woody  
olid

-Roots are taproots or strong, branching roots



Roots



SHRUBS

## Identify your weeds

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### Broadleaf identification

Leaves are wide, veins branch out in different directions.

| [Tutorial](#) | [Broadleaf list](#) |

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### Grass identification

Leaves are narrow, arranged in sets of two; stems are rounded or flattened.

| [Tutorial](#) | [Grass list](#) |

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### Sedge identification

Leaves are narrow, arranged in sets of three; stems are triangular in cross section.

| [Tutorial](#) | [Sedge list](#) |

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### Aquatic identification

Plants that grow in water for at least part of their life cycle.

| [Aquatic list](#) |

# Weed Identification

- Careful observation
  - Books & samples; books & samples; books & samples...
  - Appearance
  - Site Characteristics (dry, wet, etc. area)
- Monitor weeds on large acreage properties
  - Weed Maps and Calendars
  - Helps in weed control

# Weed Biology

- ID weeds at different stages
- Know
  - names of parts
  - growth habits

# LIFE CYCLES

- ANNUALS (summer, winter) - one year
  - Propagate by seeds



# Lifecycles

- BIENNIALS (live two years)
- The first as a rosette...





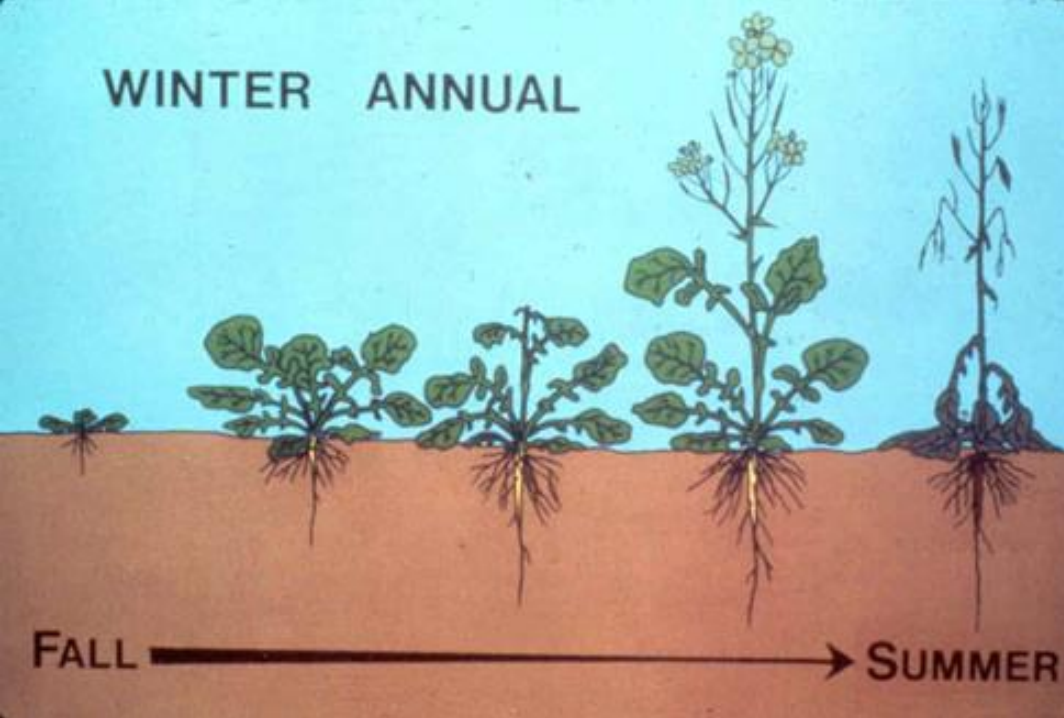
- Biennials...
  - The second year flower & produce seed
  - Propagate by seeds

# Lifecycles

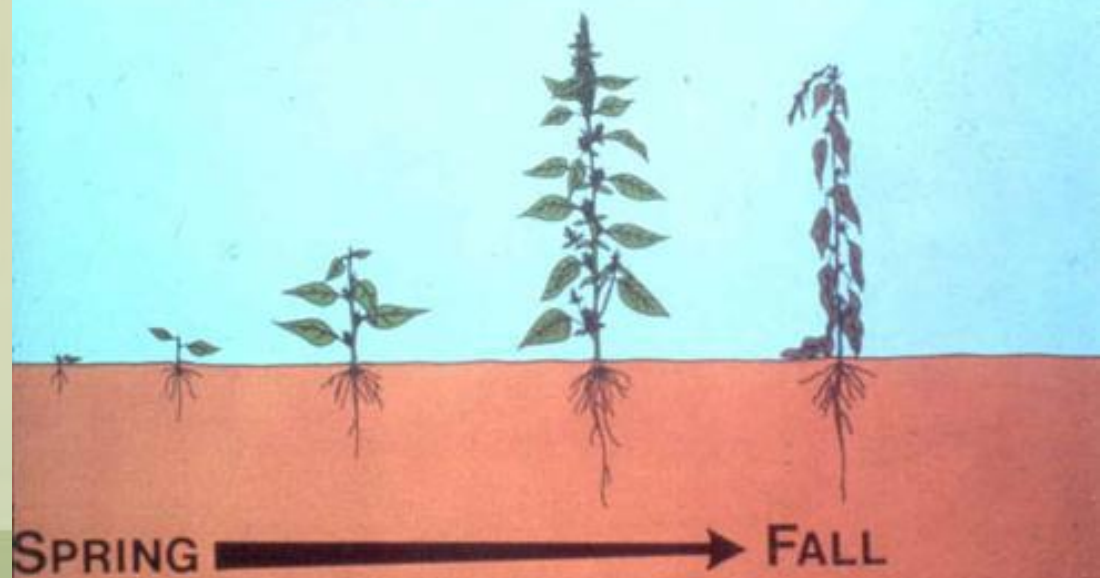
- PERENNIALS -  
more than two  
years (simple,  
bulbous,  
creeping)
- Reproduce by
  - Rhizomes
  - Seeds \*



## WINTER ANNUAL



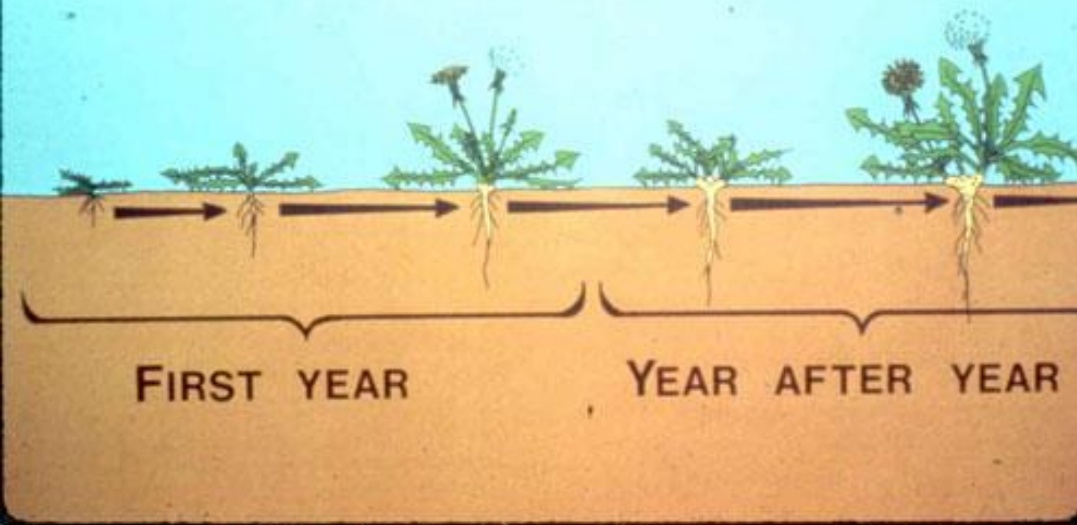
## SUMMER ANNUALS



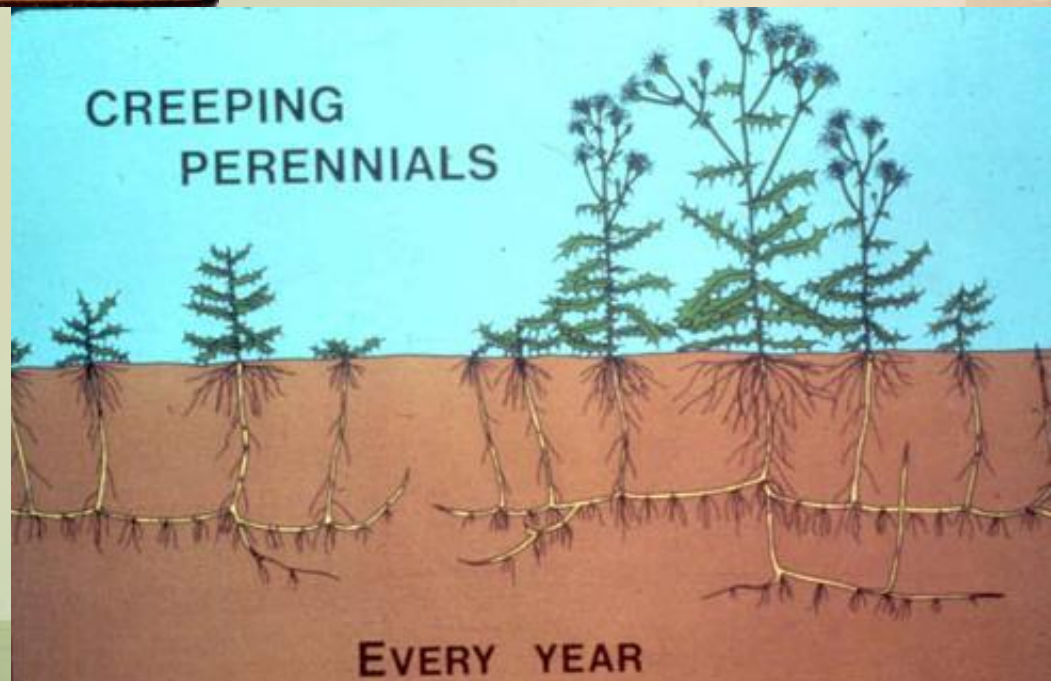
# BIENNIALS



## SIMPLE PERENNIALS



## CREEPING PERENNIALS



# AQUATIC WEEDS



# **FIVE GENERAL CATEGORIES OF WEED CONTROL**

- Preventative Weed Control
- Cultural Weed Control
- Mechanical Weed Control
- Biological Weed Control
- Chemical Weed Control

# Preventative Weed Control

- Buy clean top soil
- Check nursery plants for weeds
- Use geo-textile weed barriers
- Mulch
- Soil solarization
- Cover crops
- Clean equipment







# Cultural Weed Control

- Maintain good soil fertility
- Tilling

# Mechanical Weed Control

- Tillage
- Mowing
- Flaming
- Cultivation
- Hand weeding







# Biological Weed Control

- Goats
- Sheep
- Cinnabar moth
- Chrysolira beetle

# Example of a biological control



# Chemical Weed Control

- Herbicides: A substance that is toxic to plants, used to destroy unwanted vegetation.
- Pre-emergent, non-selective
- Post-emergent, selective
- Post-emergent, non-selective
- Extended control, non-selective

# Weed Identification

- Weed ID Books
  - Weeds of the West
  - Weeds of Oregon
  - How to enjoy your weeds
  - more (orange and white label)
  - Botany in a Day
  - OSU Fact Sheets
- <http://extension.oregonstate.edu>
- Help from OSU Agents – Logan, then Shelby

# Educational Programs

- Weed Day (1<sup>st</sup> Wednesday in February)
- Weed Tours (summer)



# Weed Mapper

[www.oregon.gov/ODA/PLANT/WEEDS/weedmapper](http://www.oregon.gov/ODA/PLANT/WEEDS/weedmapper)

The screenshot shows a web browser window displaying the Oregon WeedMapper website. The browser's address bar shows the URL [www.oregon.gov/ODA/PLANT/WEEDS/WEEDMAPPER/Pages/index.aspx](http://www.oregon.gov/ODA/PLANT/WEEDS/WEEDMAPPER/Pages/index.aspx). The website header features the Oregon.gov logo and a navigation bar with links like "Cascade Community", "Bing Maps", "Contact Us", "Department of State L...", "Douglas County Oreg...", "Douglas County Stree...", "Douglas Forest Protec...", and "Dow AgroSciences Lab...". Below the header, the main content area is titled "Oregon WeedMapper" and includes a "Welcome to Oregon WeedMapper" section with a map of Oregon showing weed distribution. A sidebar on the left lists navigation options: "ODA home", "About Us", "Contact Us", "WeedMapper Partners", "Plant Information", "How to navigate", "Oregon maps", "Submit a weed report", and "Submitting Data". A right sidebar titled "Mapping Resources" lists links to "CalWeedmapper", "EDDMaps", "iMapInvasives", "Oregon Watershed Restoration Tool", "USDA Plants Database", and "Washington Weedmapper". The main content area also features sections for "Current topics" (including "New improved Oregon WeedMapper (beta)" and "The All New Oregon WeedMapper (beta)") and "Resources" (including "Report a weed", "Stay connected", "Noxious Weed Grant Programs", and "Local weed control contacts"). The bottom of the browser window shows the Windows taskbar with the Start button and open applications like "State of Oregon: Ore..." and "Microsoft PowerPoint ...".

State of Oregon: Oregon We X

www.oregon.gov/ODA/PLANT/WEEDS/WEEDMAPPER/Pages/index.aspx

Cascade Community ... Bing Maps Contact Us Department of State L... Douglas County Oreg... Douglas County Stree... Douglas Forest Protec... Dow AgroSciences Lab...

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OREGON.gov


**Oregon WeedMapper**

weedmapper

ODA home

About Us  
Contact Us  
WeedMapper Partners  
Plant Information  
How to navigate  
Oregon maps  
Submit a weed report  
Submitting Data

**Welcome to Oregon WeedMapper**

 Welcome to the new Oregon WeedMapper developed by the Oregon Department of Agriculture. This new tool allows you to access all the same data points you were familiar with in the original WeedMapper.org, but with new abilities that will enhance your experience in mapping and analyzing noxious weed distributions. We at ODA hope you can use this new tool to facilitate noxious weed management and help protect Oregon's natural resources and agricultural economy.

To view the new Oregon WeedMapper  
How to use the new Oregon WeedMapper


**Current topics**

**New improved Oregon WeedMapper (beta)**  
WeedMapper.org has become Oregon WeedMapper to improve your noxious weed mapping and management capabilities. You can expect a program in which you can access all the same data but with new tools that allow you to work with noxious weed data as never before. The new mapping platform will give you access to layers relevant to weed management such as roads, rivers, Cooperative Weed Management Area boundaries and more in combination with the ability to draw lines and polygons on your maps to be saved, printed or shared. In addition, the data that comprises the entirety of the known weed sites to ODA can now be downloaded for your own use in your Geographic Information Systems.  
[Oregon Distribution Maps](#)  
[How to use Oregon WeedMapper](#)

**The All New Oregon WeedMapper (beta)**  
The all new Oregon WeedMapper is beta, if you see anything we can improve upon please feel free to let us know.

**Resources**

**Report a weed**  
[Report a suspect weed sighting to weedmapper](#)



**Stay connected**  
Join the Oregon weed information list serve! Send us an email and let us know that you would like to join our oregon-weedinfo list serve so you can stay connected on the latest noxious weed issues in the state.  
[Stay connected](#)

**Noxious Weed Grant Programs**  
Oregon State Weed Board Grant Program: Check back for dates  
ODA S&P Small Grants Program

**Local weed control contacts**

**Mapping Resources**

[CalWeedmapper](#)  
[EDDMaps](#)  
[iMapInvasives](#)  
[Oregon Watershed Restoration Tool](#)  
[USDA Plants Database](#)  
[Washington Weedmapper](#)

start State of Oregon: Ore... Microsoft PowerPoint ... 10:48 AM

# Oregon Invasive Species Hotline

<http://oregoninvasiveshotline.org>

1-866-INVADER

Oregon Invasive Species Hotline

## Help stop the spread of invasive species in Oregon

Think you've found an invader?

Have you seen something suspicious in your backyard or neighborhood? Are you having trouble identifying something you've found? Report potential invasive species you've found to the Online Hotline. Your submission will provide vital **early detection** information to the experts working to stop the next invasion before it starts.

There are three easy steps you can take to get involved:

**Learn** - Familiarize yourself with the potential invasive species in the areas where you live or visit frequently. Get started with [the Silent Invasion Quick Guide](#) or the [GardenSmart Oregon booklet](#).

**Look** - Wherever you are - hiking in the forest, on a fishing trip or digging in your garden - keep your eye out for unusual animals or plants that you have never seen before and be prepared to take a picture and document your find.

**Report** - Use the Online Hotline to report your find.

[Tips for finding and reporting potential invaders >>](#)

Produced by:



Funding provided by:

In partnership with:



OREGON INVASIVE SPECIES COUNCIL

## Report an Invader

If you spot a potential invasive species in Oregon, use our online form to report it. Or call our toll-free number 1-866-INVADER.

[Report Now](#)

[Tips for reporting >>](#)

## Where Have the Invaders Been Found?

Browse the map to find the ten most recent Hotline Reports. Click on the icons to read more. Or use the search tools to explore the full database of Hotline Reports.

[Search Hotline Reports >>](#)





# Oregon Invasive Species Hotline

1-866-INVADER

<http://oregoninvasiveshotline.org>

## Weed Mapper:

[http://www.oregon.gov/ODA/programs  
/Weeds/Pages/WeedMapper.aspx](http://www.oregon.gov/ODA/programs/Weeds/Pages/WeedMapper.aspx)

