

INVASIVE AND NOXIOUS PLANT SPECIES (Taken from Appendix F of the Tualatin Soil and Water Conservation District's Long Range Business Plan for 2011-2015)

Description of Resource Concern

Certain species of plants are suited to certain areas. It makes sense the places they would naturally grow have the right conditions, such as temperature, climate, and soil type. In these natural or native habitats, plants have natural competitors and diseases to keep the population under control. However, when plants are taken out of their natural habitat and put into a new area, they often lack competition from other plants. They no longer have their natural control environment to keep their populations in check. This situation could allow the plant species to grow out of control and harm native species that do belong there. These non-native species are “invasive¹” because they can dominate areas by crowding out native species. They compete, and often win the fight, for light, water, and nutrients to grow. Invasive species also reduce land productivity, eliminate native species, produce health hazards to humans and livestock, reduce aesthetic values, and most importantly negatively affect the local economy.

Noxious weeds² are an “explosion in slow motion”. They flourish in the absence of insects and diseases normally present in their native habitats. These weeds are aggressive and invade native plant communities, crowd out forage, degrade wildlife habitat, and may increase erosion. The Oregon Department of Agriculture maintains a list of noxious weeds in Oregon.

Many people are affected by invasive plant species and noxious weeds, whether or not they realize it. Non-native plants reduce land productivity, destroy helpful native species, and use up valuable resources for growth, such as soil and water. Additionally, these invasive species and weeds could be hazardous to human health, poisonous to livestock, and reduce the aesthetic and recreation value of public lands.

Invasive species damage lands and waters that native plants and animals need to survive. They hurt economies and threaten human well-being. The estimated damage from invasive species worldwide totals more than \$1.4 trillion – five percent of the global economy³. According to the Oregon Department of Agriculture, Oregon loses over \$83 million annually to just 21 of the 99 state-listed noxious weeds⁴.

In the Tualatin River Watershed, invasive plants are a huge concern. Many species (e.g. Himalayan blackberry, English ivy) are widespread throughout the basin. However, new invaders such as **garlic mustard⁵** and **Japanese knotweed⁶** need immediate attention. If left unchecked, these species will

¹ Invasive Plant – A plant that has been introduced into an environment in which it did not evolve and thus usually has no natural enemies to limit its reproduction and spread.

² Noxious Weed – A weed specified by law (usually a seed certification law) as being especially undesirable, troublesome, difficult to control, and harmful to the health of humans and animals.

³ Protecting Native Plants and Animals: Taking on the Invaders. 2011. The Nature Conservancy. 4 January 2011 <
<http://www.nature.org/initiatives/invasivespecies/>>.

⁴ Oregon Noxious Weed Strategic Plan. 2009. Oregon Department of Agriculture. 18 January 2011 <
http://www.oregon.gov/ODA/PLANT/WEEDS/strategic_plan_contents.shtml#Executive_Summary>

⁵ Garlic mustard, a new invader to Oregon, was recently discovered along Gales Creek (2007). As of 2010, garlic mustard has been found in limited areas of the Tualatin River Watershed, including portions of Fanno, Rock, Beaverton, and

greatly affect the economy of Washington County. These invaders cost a lot of money to control; require the use of strong pesticides; and require lots of hand labor, time, and repeated treatments.

We have reached a state of emergency. We need to stop the spread now, or get overrun by new invaders and increase both financial and environmental costs.

Highlights of Accomplishments

In 2006, the District partnered with the Tualatin River Watershed Council on a grant from the Oregon State Weed Board to map and treat garlic mustard along a four-mile reach of Gales Creek. Twenty acres of garlic mustard were treated. The District also provided outreach to citizens living in the Gales Creek Watershed.

Garlic mustard treatment efforts continued in 2009, with a partnership between the District, Clean Water Services, Tualatin River Watershed Council, and SOLV. Approximately 28 acres of garlic mustard were treated along Gales Creek, focusing on the entire length of the creek instead of limiting treatment to the four-mile reach as in 2006. The survey was expanded to the neighboring Dairy Creek Watershed, but no garlic mustard was found. Japanese knotweed, a second target weed due to its limited distribution throughout the basin, was also surveyed and treated in both watersheds. Funding for this effort was received through the National Fish and Wildlife Foundation's Pulling Together Initiative.

In 2010, the above partners initiated an Early Detection/Rapid Response (EDRR) program for the Tualatin River Watershed. A workshop was held to teach citizens to look for (Early Detection) and report (Rapid Response) new, high priority invasive plant species before they spread. A "Weed Watchers EDRR ID Guide" was produced to help citizens identify these high priority species.



Figure 1. Garlic mustard infestation within the riparian area of Gales Creek.

Gales Creek watersheds. The District and its partners believe garlic mustard control is possible in the Tualatin River Watershed.

⁶ Japanese knotweed is more widespread than garlic mustard, but is not found in all watersheds within the Tualatin River Watershed. Knotweed has already been identified as another target species in the Basin to focus control efforts.

Desired Conditions

- Public is aware of the problem, the need to eradicate invasive and noxious species, and the economic and environment benefits of proper management.
- Elimination where possible, and control (prevention of spread) where eradication or elimination is not possible.
- Identify and manage the invasion of outside species.
- The public can identify noxious weeds and will report sightings to known authorities.
- EDRR program is active and effective.

Goals

By the end of 2015, the District will:

- increase the number of acres surveyed for invasive and noxious species.
- increase the number of acres treated for invasive and noxious species.
- monitor progress toward eradicating the most dangerous species.
- increase the number of acres restored to native vegetation.
- increase the number of people educated.
- increase the number of reported sightings.

Strategies and Actions

Table 1 Timeline of Desired Conditions and Actions for Invasive and Noxious Plant Species

Benchmark	Timeline	Actions
Focus on garlic mustard and knotweed in 2011	Dec 2011	<ul style="list-style-type: none"> ▪ Obtain permit of entry forms to access private properties in Gales Creek and Dairy Creek watersheds ▪ Finish survey in above watersheds ▪ Begin chemical treatment of infested acres ▪ Create planting plans for treated areas ▪ Continue Early Detection/ Rapid Response (EDRR) program ▪ Create a local priority “target” species list, collaborating with partner agencies ▪ Continue process to become the Washington County Weed Board

Expand work to include additional target species as identified in 2011	Jan 2012- Dec 2015	<ul style="list-style-type: none"> ▪ Continue to treat garlic mustard and knotweed ▪ Survey and treat additional target species ▪ Implement planting plans following treatment ▪ Expand surveys to include all watersheds within the Tualatin River Watershed ▪ Continue EDRR program
Eradicate all remaining population of garlic mustard	Dec 2014	<ul style="list-style-type: none"> ▪ Collaborate with partner agencies to survey and treat remaining garlic mustard populations ▪ Implement planting plans following treatment
Set up education and monitoring programs to look for new infestations to eradicate immediately	Dec 2015	<ul style="list-style-type: none"> ▪ Expand EDRR program to have “weed watchers” in every watershed of the Tualatin River Watershed ▪ Continue to seek additional partners to be involved in the program ▪ Advocate for cleaning equipment, boats, boots, etc.

Partners necessary to complete the strategies and actions:

- Clean Water Services
- Natural Resources Conservation Service
- Tualatin River Watershed Council
- SOLV
- 4-County Cooperative Weed Management Area
- Washington County
- Oregon Department of Forestry
- Oregon Department of Fish and Wildlife
- Oregon Invasive Species Council
- Neighboring Soil and Water Conservation Districts

Measurements

- Number of acres surveyed
- Percent of acres identified that were treated, restored and/or eradicated
- Funds applied to weed control
- Number of calls taken to report weeds