



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

* 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 state-managed 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/fin_dforester.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/forestry-and-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