

A close-up photograph of a gorse plant with several bright yellow flowers and green, needle-like leaves. The background is a soft-focus field of more gorse plants.

GORSE
ACTION GROUP

Let's Take Action Against
Gorse

INVASIVE SPECIES

Why should someone care?

What can someone do?

1977 British Open
Turnberry, Scotland



GORSE
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BANDON
DUNES
g o l f r e s o r t



Love / Hate
Relationship
With Gorse





Gorse Abatement Cost

\$3,500/acre

Ongoing Maintenance Cost Non Golf Areas

Total/Acre/Year

\$200



#14 after six years with gorse unchecked leading to the current program of gorse removal to maintain the original design intent.





Assigned WRCA the task of finding a way to control gorse in the region



What is Gorse?

Gorse is a highly invasive weed, extremely flammable and poses a serious fire risk.

Gorse threatens our environment and our economy— impacting farming, grazing, forestry, access to waterways, native plant communities and recreational opportunities.



What is the Gorse Action Group (GAG)?

Informal group of participants **federal and state agencies, NGO's, private industry, and landowners.**

The GAG is **working to** control and reduce the spread of gorse, **minimize the impact of gorse on our economy and natural resources,** and provide a successful process to share with others facing gorse infestations.



Wahl Ranch: Long-Term Gorse Management through Grazing

- On approximately **100 acres of heavily gorse-invested land**, initial control was through mechanical means, then ongoing control has been primarily through **intensive mob grazing**.



Gorse Control Intensive Grazing

- **100 Sheep per acre rotated daily**
- **Return every two to three weeks**
- Occasional spot spraying with herbicide
- Original prep cut and mulched with grinder
- In seeded with grazing mixture



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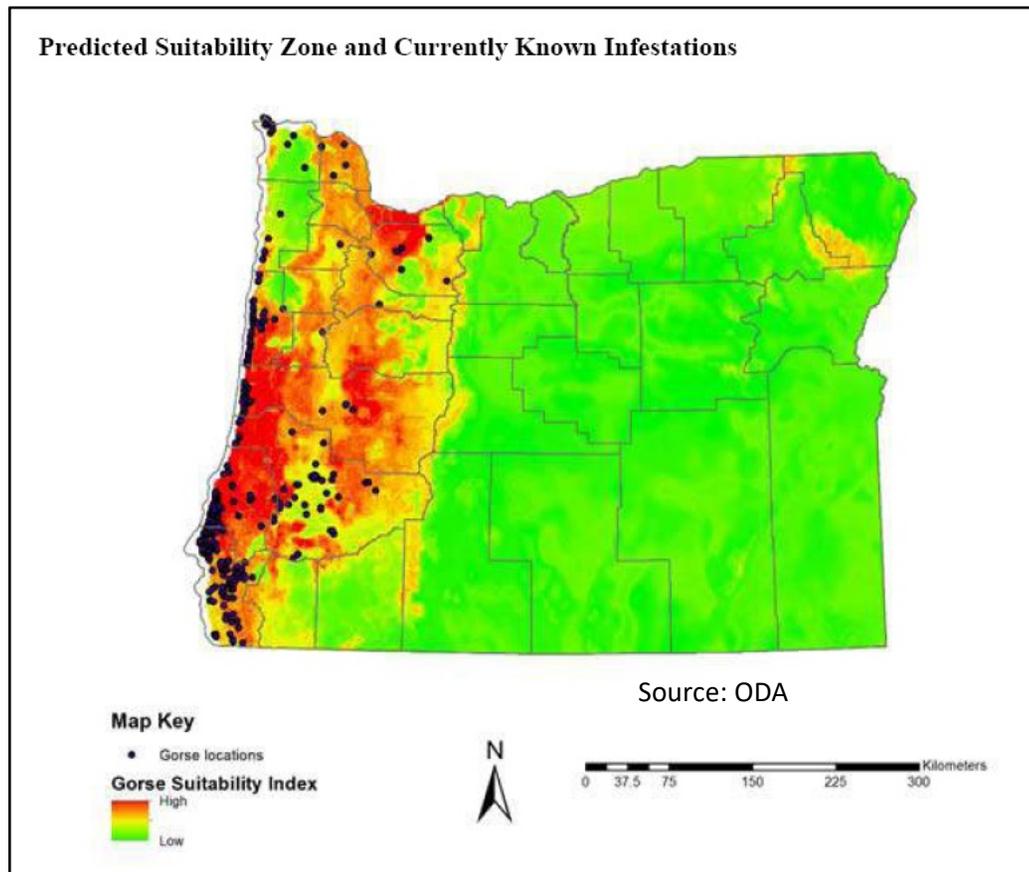
Why should you care?

- **Extreme Fire Risk**
- **Highly Invasive Weed**
- **Threat to the Regional Economy**
- **Threat to Environment**
- **Threat to Agriculture Viability**
- **Hinders Access to Waterways**
- **Presence Greatly Reduces Land Values**
- **Huge Financial Burden on Land Managers**



Based on invasiveness and impact characteristics, the potential of spread, and the environmental and socioeconomic impacts, the **Government of Australia designated Gorse on their Weeds of National Significance list**
<http://weeds.ala.org.au/WoNS/gorse/>

ODA 2014



- Oregon Dept. of Agriculture
2014 Economic Assessment
- Impacts forest production, inhibits recreation opportunities, renders productive land unusable
- **Impact would be between \$1.5 and \$2.4 billion if infestation moved into susceptible areas**
 - **3 species with largest impact**
 - Armenian blackberry – 15%
 - Rush skeletonweed – 12%
 - **Gorse – 11%**

Gorse arrived in Bandon sometime in the 1870's. Originally intended for use as a landscape plant, gorse rapidly established throughout the area



Unfortunately it was a main contributor to two fires, in 1914 and 1936, that burned the town of Bandon.



Front Page of Coos Bay Times, September 27, 1936. Fire displaced and killed many.



Bandon Burns 1930'S Fire



Business district and docks after the 1936 Fire





**Ten different years of Gorse Fires in
Bandon since the 1936 Fire.**

Bandon Fire 1957



Bandon Fire 1980





Bandon Fire 2007





Bandon Fire 2015





2015 Near Five Mile Point



It only takes one
person or machine
to start a new
infestation of
gorse



ODF Sketchmapper: Spring 2014

Between Sixes & Elk Rivers



Between US 101 and Bandon Dunes



Photos: Oregon Dept. Forestry
Wyatt Williams



Weed Wash Station



ODOT and local contractors agree that a wash station would be used frequently by their crews



Oregon Solutions

**Governor Kate Brown
designated gorse as an
Oregon Solutions
Project**

**State Representative
Caddy McKeown
appointed as co-
convener**

**DOC signed December
2017**



Oregon Solutions

Collaborative group of participants from Federal, State, and County agencies, as well as non-profit organizations in Coos, Curry, and Douglas Counties



Gorse Studies OSU and 3DT

Commissioned by Bandon Dunes and WRCA

- **2008 - OSU – Professor Ganti Murthy**
 - Found a number of potential uses for gorse in Oregon
 - Not profitable
- **2012 -3DT Pyrolysis study with gorse as feedstock**
 - Biochar
 - SOD – Tan Oak as a potential feedstock
 - Soil Amendment
 - Carbon Sequestration
 - Failed due to transport restrictions and other issues



Biochar Studies

- **2010 – Coquille Tribal Woody Biomass Utilization Project**
 - **States positive attributes from biomass:**
 - **Creates industrial jobs in the community**
 - **Provides base-load renewable energy (24/7) on a cost effective basis.**
(Today coal-fire makes up over 40% of Oregon’s energy supply)
 - **Significant improvement in air quality (eliminating open burning)**
 - **Reduces waste material destined for landfills**
 - **Supports hazardous fuels reduction**

- **2018 – USDA Agricultural Research Service and OSU for the Juniper Biomass Optimization Project (JuBop)**
 - **Economics of mobile and stationary Biochar production systems using juniper feedstocks in Oregon**
 - **Found it possible that a mobile Biochar production system can be profitable using juniper as a feed stock**

Economics of mobile and stationary biochar production systems using juniper feedstocks in Oregon
Interim report prepared for USDA ARS for the JuBop project



By:
Matt Delaney and Tom Miles (photo by
Marcus Kaufmann, ODF)
5/4/2018

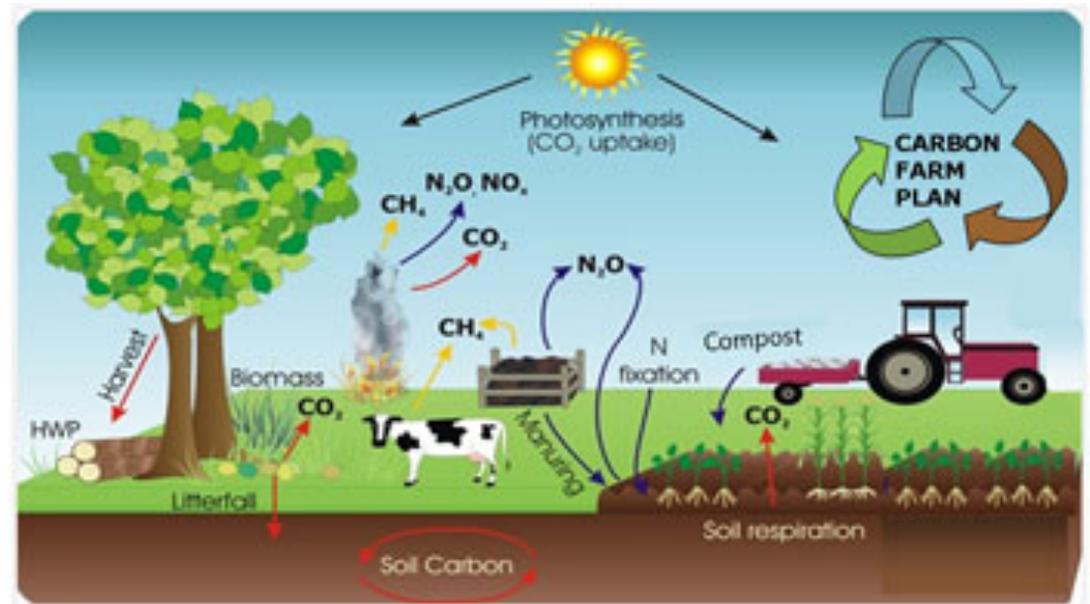
Biochar Benefits in Soil

- **Reduces Nitrogen Leaching**
- **Reduces nitrous oxides emissions from artificial fertilizers**
- **Increases soil cation exchange capacity**
- **Increases water retention in the soil**
- **Increases microbial activity**



Carbon Farming

Carbon Farming Practices were featured in the Marin Agricultural Land Trust (MALT) September 2018 Newsletter



- Using carbon farming to make agricultural land more resilient to the effects of climate change.
- Found that a one-time addition of compost to well-managed rangeland improves soil health and water retention, which nurtures better growth for pasture grasses. Healthier grasses are able to draw more carbon from the atmosphere and fix it in the soil, where it won't contribute to global warming.
- MALT farmers and ranchers practice carbon farming every day by practices such as:
 - **Rotational grazing**
 - **Woodland and stream restoration**
 - Plants absorb and store carbon from the atmosphere. Their roots help hold soil in place, reducing erosion and ensuring that stored carbon stays put.
 - **Spreading compost on rangeland improves a farm's or ranch's ability to sequester carbon**

Jim Archuleta with US Forest Service

- Forest Service helping to develop an air curtain burner in conjunction with **Air Burners Inc.**
 - Should have a working unit by Spring 2019
 - Unit will be a smaller, less costly option which can be towed by a pickup truck



Farmers – the more they till their soil, the quicker they lose **soil organic matter (SOM)**

- Biochar is a stable, carbon-rich form of charcoal that can be added to soil to increase water and nutrient retention.
- Biochar is produced by pyrolysis
- *****When you increase SOM by just 1% you increase the water holding capacity by 25,000 gal per acre!*****

Biochar Sources

Investigating Other Biochar Feed Sources:

- Gorse
- Sudden Oak Death infected Tanoak
- Slash Timber
- Juniper
- Eucalyptus (Vandenberg Air Force Base, CA)





Oregon Coastal Caucus – August 22-23, 2018 – Chinook Winds Casino Resort, Lincoln City

Discussion Topic: The Sequestration of Carbon

- **The Law and Science of Carbon Reduction: Best Practices and Policies**
- **Carbon Reduction and Climate Adaptation; Impact and Opportunities for Rural Communities**
- **Understanding Carbon Emission and Reduction, Ocean Resources, Forest Restoration and Sustainable Management**
- **Transportation Carbon Reduction**
- **Can Carbon Pricing Unleash the Climate Remedying Potential of Oregon's Forests, Farms, Water, Ocean, and High Desert**
- **The Politics of Cap and Trade; Can an unlikely Mix of Stakeholders Find a Balance for 2019**

GAG Organization

- **Committees formed through Oregon Solutions Process:**
 - **Coordinating Committee- 14 people from 12 Organizations including: **Carri Pirosko, ODA****
 - **Donut Hole Committee –10 people from 9 Organizations including **Carri Pirosko, ODA****
 - **Communication & Engagement Committee - 14 people from 9 Organizations**
 - **Funding Committee -12 people from 11 Organizations, including **Carri Pirosko, ODA****
 - **Science Committee - 14 people from 11 Organizations, including **Tim Butler, Glen Miller, and Carri Pirosko, ODA****
- **Coos County Weed Board Collaboration**



GAG On-the-Ground Projects



- **Coquille Point** steep slopes
 - Coos WA, USFWS, City of Bandon, WRCA

GAG On-the-Ground Projects

Hwy 101 Demonstration Project

- Project Coordinator:
 - By-The-Sea Garden – Liza Ehle
 - Shutter Creek Correctional Institution
- March 2018 – March 2020



Aerial view – as clearing work
was being done



GAG On-the-Ground Projects

Hwy 101 Demonstration Project

11 In-kind Contributions:

Guynup Family Ranch
City of Bandon
Oregon Dept. of Transportation
Coos Forest Protective Assoc
Bandon Rural Fire Dept.
By-the-Sea Gardens
All Terrain Brushing
Jensen's Tree Service
Jerome Johnson Excavation
Bandon Rental
Oregon Overseas Timber

Signage Funding

Wild Rivers Coast Alliance



GAG On-the-Ground Projects

Hwy 101 Demonstration
Project



Aerial view – after a week of clearing

GAG On-the-Ground Projects

HWY 101 Demonstration Signage



GAG
On-the-Ground Projects
HWY 101 Demonstration Signage





GAG On-the-Ground Projects

- Bullards Bridge
- Old Mill Site
- Bandon Wash Station
 - Carri, Liza, ODOT
- Right of Way Coordination
City of Bandon and ODOT
Bandon to Langlois





GAG On-the-Ground Projects

- OPRD Bullards Beach Gorse Removal – 2014
 - Sherri Laier



Bandon Lighthouse, 2018



Bandon Lighthouse, 2014, prior to OPRD gorse removal

GAG On-the-Ground Projects

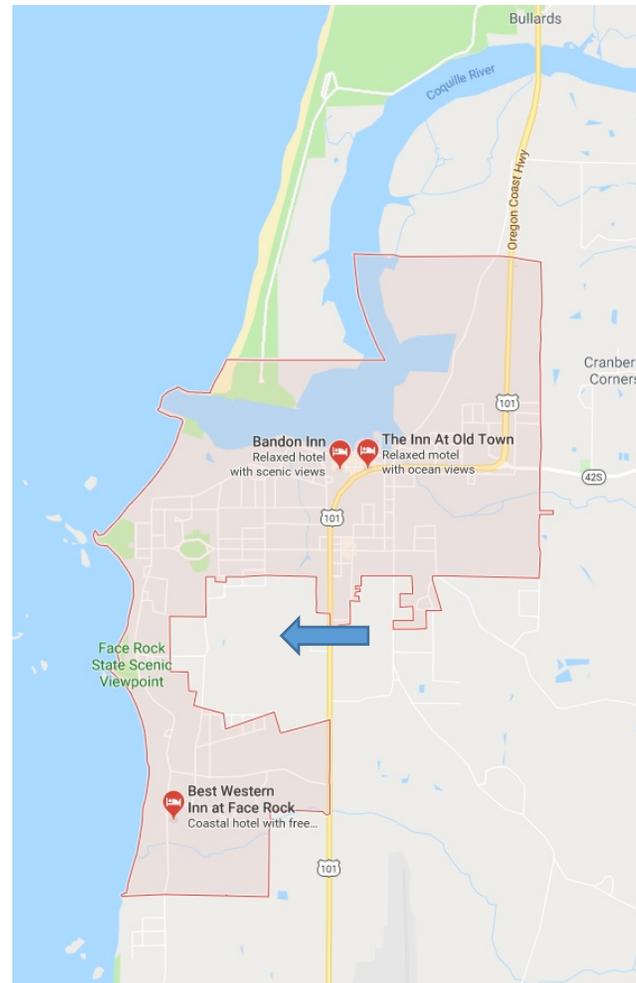
**Bullards Bridge
Gorse Removal
2018**



GAG On-the-Ground Projects

Donut Hole Bandon, OR

- **225 acres**
 - Unincorporated Coos County
 - Subdivided over 100 yrs ago
 - 100+ Property Owners
 - Coordination with Coos County and City of Bandon
 - **Gorse removal and potential for workforce housing development**



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Photo: Oregon Dept. Forestry 2014

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Photo: 2018



Pacific View Senior Living Center South Jetty in Bandon



Before Gorse Removal



During Gorse Removal





GAG Communication & Engagement

Gorse Blossom Festival
February
2018





GAG Communication & Engagement

Cranberry Festival
September, 2018





GAG Communication & Engagement

Cranberry Festival
September, 2018





GAG Communication & Engagement



LET'S TAKE ACTION AGAINST GORSE!

WHY SHOULD YOU CARE?

- ▲ Fire risk
- ▲ Invasive weed
- ▲ Threat to local economy
- ▲ Threat to environment

WHAT TO DO ABOUT GORSE

- ▶ Learn how to identify
- ▶ Learn Best Management Practices
- ▶ Control & reduce the spread of gorse on your property
- ▶ Help spread the word

Few invasive species persist like gorse, making it one of the most difficult to manage weeds in the world. But there's hope! It is possible to get rid of gorse using the right integrated tools.

CLEANING EQUIPMENT

Gorse seed can easily be spread by equipment, machinery, and vehicles. Gorse control contractors and natural resource specialists that control invasive weeds on a regular basis know that seed is spread by muddy equipment, ATVs, and trucks working in gorse-infested zones.

- ▶ In order to stop the spread of gorse it is important to keep weed-eaters, mowers, trucks, trailers, tractors, etc., clean after working in a gorse infested area.
- ▶ In places where wash stations have been put in place during fire events, weed spread across burned lands in subsequent years is decreased.
- ▶ Tools to have on-hand include a hose with strong pressure nozzle or pressure washer, shovel, brushes, brooms and/or an air compressor with strong nozzle attachment.
- ▶ Prevention really is worth the effort, saving resources on all fronts.

**FOR MORE INFORMATION AND LINKS TO FULL RESOURCES
VISIT: GORSEACTIONGROUP.ORG**



TAKING ACTION!

Here are a few projects that the Gorse Action Group is currently working on.

ROW COLLABORATION

ODOT & City of Bandon
The City of Bandon (Public Works, Roads) and ODOT met this winter to discuss ways that gorse control can be more efficient and effective from Bandon, south to Langlois. ODOT and the City have different set-backs off of the roadway that they are charged with in terms of highway vegetation management. Both agreed that if they combined resources toward one contractor doing gorse/vegetation management it would allow more efficiency in the treatment of a broader band of highway shoulder from the pavement/hwy edge. Both agreed that a rotation of mechanical and herbicide treatments would be more effective in long-term success in removing large stands of old gorse in this heavily infested gorse zone.



WASHING STATIONS

Last fall, a meeting occurred on the potential site of a wash station. Larry's Car Wash is just south of Bandon and could make an ideal location for a weed wash station. ODOT and local contractors agreed that a wash station would be used frequently by their crews. It is difficult to quantify the effectiveness of preventive measures. The earlier you detect a new weed infestation, the odds of eradication are significantly increased, while associated control costs are significantly decreased.

DEMO PROJECT

Demonstration Area located just south of Bandon
Project timeline: March 2018 - March 2020
This project will provide a first hand look at the tools/methods that are available to reclaim gorse infested land. Multiple plots at the site will show the effectiveness of treating and controlling gorse using different mechanical and chemical treatments, on different types of land.



GET IN TOUCH!
Email us at gorseactiongroup@gmail.com
Or call us at 541-435-1731



**FOR MORE INFORMATION AND LINKS TO FULL RESOURCES
VISIT: GORSEACTIONGROUP.ORG**

GORSE
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It's your responsibility to help prevent the spread of gorse



**Contact Gorse Action Group
to help you find the resources you
need!**

Email : gorseactiongroup@gmail.com

Call: 541- 435-1731

**FOR MORE INFORMATION AND LINKS TO FULL RESOURCES VISIT:
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