

File Code: 1950; 2900
Date:

Friends and Neighbors of the Siuslaw National Forest

The Siuslaw National Forest is in the early stages of developing a comprehensive approach to treating invasive weeds and is providing a designated opportunity for public comment to inform development of the proposed action. The spread of invasive weeds on National Forest System lands (NFS Lands) is threatening the health of the riparian, forest and dunal ecosystems. Non-native invasive weed species reduce native biological diversity, negatively impact threatened and endangered species, degrade wildlife habitat, modify vegetative structure and species composition, change fire and nutrient cycles, and degrade soil structure. Currently the Siuslaw National Forest has no comprehensive strategy on prioritizing and treating invasive species across the Forest. This results in treatments designed and analyzed on a project-by-project basis, leading to inconsistencies in management and limiting the Forest's ability to treat newly discovered populations in a timely manner or take advantage of partnership opportunities.

One of the pillars of integrated invasive species management is the concept of early detection, rapid response (EDRR). As the Forest is developing a proposed action, staff are considering a strategic approach to the treatment of invasive plant species populations across the Siuslaw National Forest through herbicides, mechanical, and manual control methods. A description of the potential different methods the Forest is considering is in Appendix A. The amount of treatment accomplished each year would vary, although it is anticipated that about 2,000 acres would be treated annually. Integrated pest management combines different preventative, control, and restoration measures. As some of the herbicides the Forest is considering are not covered under current plan direction, a forest plan amendment would be necessary.

The formal planning process, including National Environmental Policy Act (NEPA) and National Forest Management Act (NFMA) compliance, is expected to begin in the fall of 2024. Prior to initiating the NEPA and NFMA processes, the Siuslaw National Forest is seeking preliminary public feedback on invasive weed management options. This initial public input will inform the development of the project.

Project Location

The project area encompasses approximately 630,000 acres, or all the Siuslaw National Forest lands. Proposed activities may occur in all management areas including Wilderness, Wild and Scenic River corridors, Research Natural Areas and

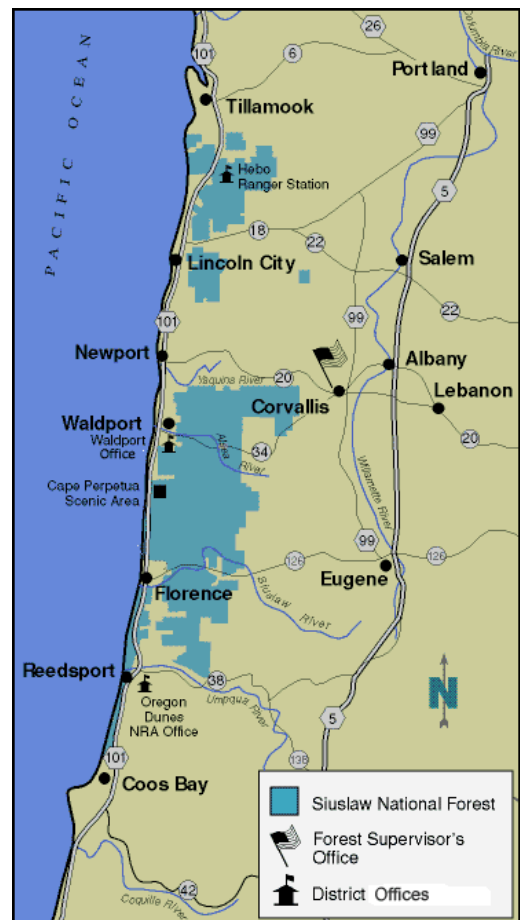


Figure 1. Vicinity map of the Siuslaw National Forest

National Recreation Different tools would be limited in different areas based on site specific situations and/or land allocations.

Background

In October 2005, the Pacific Northwest Region (Region 6) of the Forest Service completed a Final Environmental Impact Statement (Region 6 FEIS) addressing the invasive plant management program, culminating in a Record of Decision (Region 6 ROD) which added management direction to the Siuslaw National Forest Plan. It also included the approval for the use of ten herbicide active ingredients (USDA 2005b. Pacific Northwest Region Invasive Plant Program Record of Decision. Portland, OR.) The Region 6 2005 ROD explained that other herbicide ingredients may be added in the future; Additionally, this EIS does not allow treatments to occur without additional environmental analysis. This project would authorize the use of treatment methods, selecting the best approach for the situation and location and add four new herbicides to the approved list.

There are also several directives and laws regarding invasive species including:

- *The Federal Noxious Weed Act of 1974 (7 USC 214)*, Section 15, requires federal land management agencies to develop and establish a management program for control of undesirable plants that are classified under state or federal law as undesirable, noxious, harmful, injurious, or poisonous on federal lands under the agency's jurisdiction (7 USC 2814[a]).
- *Executive Order 13112 of February 3, 1999, Invasive Species*, directs agencies to identify which actions could affect the status of invasive species; use an integrated weed management approach to managing invasive species; and not authorize, fund, or carry out actions that would likely cause or promote the introduction or spread of invasive species unless it can be shown the actions clearly outweigh the potential harm caused by invasive species.
- *The National Strategy and Implementation Plan for Invasive Species Management* was completed in 2004 and has been updated in 2013 as the Forest Service National Strategic Framework for Invasive Species Management (USDA 2013). These documents direct Forest Service Units to adopt a "Systems Approach" to invasive species management.
- *The US Forest Service National Strategic Plan (USDA 2007)* includes objectives to reduce adverse impacts from invasive and native species, pests, and diseases, and restore and maintain healthy watersheds and diverse habitats

Forest Plan Amendment

A programmatic amendment to the Siuslaw Forest Plan would be necessary to include the use of new chemicals.

Currently Forest Plan management direction on the Siuslaw National Forest reads: "*Select from herbicide formulations containing one or more of the following 10 active ingredients: chlorsulfuron, clopyralid, glyphosate, imazapic, imazapyr, metsulfuron methyl, picloram, sethoxydim, sulfometuron methyl, and triclopyr ... Additional herbicides and herbicide mixtures may be added in the future at either the Forest Plan or project level through appropriate risk analysis and NEPA/ESA procedures.*"

As part of this proposal, the draft amendment to this direction would read (additions/changes in bold): “*Select from herbicide formulations containing one or more of the following 14 active ingredients: **aminopyralid, fluazifop-p-butyl, clethodim, indaziflam**, chlorsulfuron, clopyralid, glyphosate, imazapic, imazapyr, metsulfuron methyl, picloram, sethoxydim, sulfometuron methyl, and triclopyr ... Additional herbicides and herbicide mixtures may be added in the future at either the Forest Plan or project level through appropriate risk analysis and NEPA/ESA procedures.*”

This amendment would be consistent with the Forest Service 2012 Planning Rule (36 CFR 219) by implementing a minor change to a Forest Plan standard; this amendment does not need to be informed by a stand-alone assessment (§ 219.6 (c)).

How to Comment and Timeframe

If you have ideas, suggestions, or concerns about the future of invasive weed management on the Siuslaw National Forest, please consider sending this feedback to Forest Service staff. Site-specific feedback and general input are both welcomed. Written comments should be submitted electronically in common formats (.docx, .doc, .pdf, .rtf, .txt) to <https://cara.ecosystem-management.org/Public/ReadingRoom?Project=60006>. They can also be mailed Siuslaw National Forest, 3200 Jefferson Way, Corvallis, OR 97331 ATTN: Katie Isacksen. Please submit your input by August 7, 2024.

Comments received in response to this solicitation, including names and addresses of those who comment, will be considered part of the public record on this project and will be available for public inspection. Comments submitted anonymously will be accepted and considered; however, anonymous comments will not provide the agency with the ability to provide the respondent with subsequent environmental documents.

For more information on development of the Integrated Invasive Weed Project proposal, please contact Forest Botanist, Chelsea Monks, at chelsea.monks@usda.gov, visit the project website: <https://www.fs.usda.gov/project/siuslaw/?project=66006>, or visit the project summary storymap at <https://storymaps.arcgis.com/stories/ab3e5716e179462187ded3e38ad58622>.

Sincerely,

REBECCA BROOKE
FOREST SUPERVISOR

Enclosure

Proposed Action Treatment Descriptions

Treatment Methods

An Integrated Pest Management (IPM) control approach employs a combination of treatment methods including manual, mechanical, and chemical methods. Successful treatments often require multiple years of treatments, and sometimes require multiple treatments per year, involving a combination of methods. The treatments are tailored depending on:

- Target invasive plant species and its biology (e.g. mode of reproduction)
- Population size and density
- Site type (e.g. disturbed roadside, riparian, upland)
- Prior treatments and their effectiveness

Treatments are usually a combination of methods; for example, an initial application of herbicide would often be followed with manual treatments after the density and extent of an infestation is reduced. The choice of methods in a particular year and for a particular infestation, would consider the effectiveness of all possible methods.

Prevention

Prevention is, by far, the most effective means of controlling invasive plant species. This is accomplished many ways, but this project would focus on visitor education and outreach. One of the ways to educate the public is to install kiosks with boot brush stations at trailheads. This functions in two ways. The boot brush removes plant propagules and mud from the user's boots, therefore preventing the spread of plant species, and the kiosk can educate as to why boot brushes and cleaning pets is important to preserving the local ecosystem. Kiosks can contain information about cleaning equipment and pets as well as information on invasive species found in the area. This would address the existing condition of lack of signage.

Manual Methods The following methodologies would be used to reduce the amount of infestation on the Siuslaw National Forest.

Hand Pulling: Hand pulling is uprooting plants by hand or pulling, removing as much of the root as possible while minimizing soil disturbance. Control by hand pulling is effective for some annual and tap-rooted plants, such as scotch broom seedlings; it is not effective against many perennial plants with deep underground roots and/or plants with easily broken roots that are left behind to re-sprout. Hand pulling is the preferred method of treatment where it is effective and efficient. This applies to small, young infestations of many species, as well as follow-up treatments for many larger infestations initially treated with other methods. Hand pulling can occur at any time of year and would not amount to more than 700 acres per year. This would help to decrease the abundance of invasive species on the Forest.

Pulling Using Tools: Pulling using tools is another method of hand pulling. Most plant-pulling tools, such as the weed wrench, are designed to grip the plant stem and provide the leverage necessary to pull its roots out. Ground disturbance is localized but because of the larger stems and root systems that can be treated in this manner, use of pulling tools may result in greater ground disturbance than would occur through hand pulling. This approach has been successfully used for broom plants. Hand pulling can occur at any time of year and would not amount to more than 700 acres per year.

Clipping: Clipping refers to cutting or removing seed heads and/or fruiting bodies to prevent germination. This method is labor-intensive but can be effective for small and spotty infestations or as follow-up treatments to treat target plants missed by initial herbicide use. This method may also be used in sensitive areas with resource concerns from other treatment methods. This approach does not involve ground disturbance or impacts and is appropriate for annual or perennial plants that should not be pulled by hand. No more than 200 acres per year would be treated using this method.

Cutting: Cutting woody stems when plants are drought stressed has been shown effective at eliminating or reducing mature scotch broom plants along with other woody invasive species such as holly. Cutting can be accomplished using loppers or chainsaws. This approach is labor-intensive but can be effective for treating small or sensitive areas. Cutting can occur at any time of year and would not amount to more than 20 acres per year.

Mulching: Mulching involves covering plants with weed free and plastic free mulch such as wood chips or rice straw to shade out weeds. Mulch prevents plants from germinating which may give advantage to native planted plugs while they establish. Mulching can be accomplished at any time and would not occur on more than 50 acres in a year.

Biological Methods

Insect Biocontrol: Biological control or biocontrol is the method of controlling pests using other organisms. Traditional biocontrol is the use of insects from the target plant's home ecosystem. These animals are tested thoroughly for unintended consequences before introduction into a new environment. These insects are regulated by the Animal and Plant Health Inspection Service (APHIS) and the State of Oregon Department of Agriculture and are not available for all invasive species. Insect biocontrol works best in areas with a large, dense population of the invasive species so that the insects have enough food to survive for several seasons. Biocontrol agents would be released at the time of year most suited for their survival and would not be used on more than 100 acres per year.

Livestock Biocontrol: Livestock can also be used as a biocontrol agent. Goats, sheep, llamas, and alpacas can be penned into small areas to remove unwanted biomass as well as tough to treat species such as blackberry. Consideration of the type of livestock used can increase the efficacy of treatment. Cattle will graze even young resprouts, while both sheep and goats are more selective. Sheep prefer broadleaved herbaceous plants, though some eat fine grasses and goats will eat brush and forbs. However, while this is an effective method to make an area fallow, it is inappropriate for more targeted treatment as livestock are unpredictable and likely to eat vegetation indiscriminately.

Proper timing can also make for more effective treatments. For example, forbs should be treated in the budding stage, while grasses are more treatable in the boot stage (just before flowering). Consider grazing for young shrub regrowth post fire and use repeat treatments as necessary. Livestock could be used at any point in the year and would not occur on more than 100 acres per year.

Soil Solarization and Shading: Soil solarization is accomplished when the ground is covered with a tarp of clear plastic, which allows sunlight to pass through it. The sunlight heats up the air and ground to temperatures that plants cannot withstand. This takes six to eight weeks. Shading is a similar treatment using black plastic tarp. Since sunlight cannot pass through the tarp, it effectively shades out the plants underneath the tarp as well as preventing the seed bank from germinating. This process takes several months. Both solarization and shading are best used in small treatment areas. Plastic could be placed at any time of the year and no more than five acres per year would be treated this way.

Native Plant Material Planting and Seeding: Native plant materials can be added to the environment either by using seeds, container grown plants, or rhizomes. Seeding can be accomplished by gently scarifying the soil using a rake or harrow to create a bed for the seed and then spreading seed using a bag spreader or similar device. Plugs and other containerized plants are planted using an auger, dibble stick, or similar device to create a 1–6-inch diameter hole that is no more than 18 inches deep and placing the container plant or rhizome in the hole.

Mechanical Methods

Mowing or Cutting with a Hand-held String or Blade Trimmer: Mowing or cutting with a gas-powered string or blade trimmer can reduce seed production and restrict invasive plant growth, especially in annuals cut before they flower and set seed. The timing of treatment should be appropriate to the species. Some species resprout vigorously when cut, replacing one or a few stems with many that can quickly flower and set seed. Mowing and cutting may be used as a primary treatment or a follow-up treatment to another initial treatment method. Mowing or cutting can also be used to promote vigorous growth to increase herbicide effectiveness. This method could be used at any time of the year and would not amount to more than 400 acres per year.

Propane Torch: Flame weeding uses propane generated heat to wilt targeted plants. It causes water and sap within the plant cells to boil and expand, rupturing cell walls and causing the plant to wilt. Heat is applied using either a backpack or vehicle mounted propane tank with a flexible hose attached to a long wand. The end of the wand is placed over the target plant so that heat is delivered only to the targeted plant. This activity could occur at any time of the year and would not amount to more than 100 acres per year.

Prescribed Burn: Fire is used in a planned manner to remove excess biomass generated by invasive species. This treatment would mostly be used in the Dunes to remove European beachgrass biomass and could only occur when certain weather conditions are met. Follow up treatments would be required. Prescribed fire would most likely be applied between September and March and would be used to treat no more than 500 acres per year.

Scraping: Scraping is the removal of the vegetation and top layer of soil to exposed bare soil. This is usually implemented in flat areas with a high concentration of invasive species and is accomplished using mechanical implements pulled behind a tractor to physically slice, chop, or uproot plants. Using heavy equipment to remove all above and some below ground biomass creates a “clean slate.” Invasive species can resprout within the scraped area and would require follow up treatment as well as native plant materials to replace the removed vegetation. This treatment could occur May through October and would not amount to more than 200 acres per year.

Power Raking: Power raking is the use of a machine to remove thatch and rhizomes from a flat area. This is usually implemented in areas with a high concentration of pasture grasses or areas dominated by rhizomatous plants. This work could occur at any time of the year and would not amount to more than 100 acres per year.

Steaming: Similar to propane torch weeding, steaming causes the water within the plant cells to expand and rupture. This is accomplished using a trailer mounted boiler with large water tank. Water is heated to boiling and spot sprayed onto target plants using a 100-foot hose and specialized wand. Multiple applications may be necessary, but this method has proven effective in sensitive areas with interspersed invasive and rare plant species. This treatment could be used any time of the year and would not amount to more than 50 acres per year.

Chemical Methods

Twelve herbicides are proposed for use, using the methods and application rates shown in Table X. The following is a description of the methods and chemical products listed in Table X. All uses of chemicals would be in an effort to reduce the amount of invasive plant species found on the Forest.

Hack and Squirt or Frill: A hatchet is used to cut downward angled incisions into a tree or shrub with one inch or greater diameter. Cuts are placed around the diameter of the stem with the number of cuts equal to the inches in diameter of the stem and at least two cuts per stem creating a “frill.” Herbicide is then placed in the frill using a squirt bottle for quick absorption into the roots. This treatment method could be used at any time of the year and would not amount to more than 20 acres per year.

Cut and Daub: Herbicide is applied to freshly cut stem surfaces (primarily the cambium) to eliminate or greatly reduce resprout. A backpack sprayer with a regulated nozzle, spray bottle, wicking apparatus, or paintbrush can be used to apply a 50 to 100 percent solution of herbicides soon after the cut is made. This treatment is applied to individual target plants thereby reducing drift falling onto non-target plants, soil, or water. This treatment could occur at any time of the year and would not amount to more than 50 acres per year.

Injection: Herbicide is delivered directly into the hollow cane or woody stems of the plant. Injections are made in the lower portion of the plant, in the first few nodes above the ground. This requires the use of a specialized herbicide lance. This treatment could occur at any time of the year and would not amount to more than 20 acres per year.

Basal Bark: An oil soluble herbicide is sprayed onto the entire circumference, 12 to 18 inches above ground level, of the base of a tree or shrub less than six inches in diameter using a spray bottle. This can be done in the late summer through late fall. This method should only be used where standing dead can be tolerated for at least six months. This treatment could occur between May and October and would not amount to more than 20 acres per year.

Wiping onto Foliage: A sponge or wick is used to wipe a 25 to 50 percent solution of herbicide onto foliage and stems of target plants. Wicking apparatuses vary in design, but generally consists of a reservoir attached to a sponge or wick. This activity could occur at any time of the year and would not amount to more than 20 acres per year.

Directed Foliar Spray: A backpack sprayer or compressed air sprayer (holding 1-5 gallons) of dilute herbicide solution is used to apply herbicides to targeted plants. A backpack sprayer has a hand operated hydraulic pump that forces liquid herbicide through a spray wand with a regulated nozzle held near the application surface. Spray is typically controlled by using a wand to direct herbicides to target vegetation, regulating tank pressure, utilizing different nozzle types, and combining dyes with spray solution. Directed foliar spray concentrates spray upon the target plant with the intent of minimizing spray between target plants. This activity could occur at any time of the year and would not be used to treat more than 700 acres per year.

Spot Spray: This method would be limited to areas heavily dominated (generally greater than 85% cover) by non- native species. In this analysis, “spot spray” refers to herbicide application that is targeted at an invasive plant and the area immediately surrounding the plant. Herbicide would be applied using a backpack sprayer with no boom. The use of this method at disturbed sites reduces the need for re-treatment to capture target plants that germinate later in the season and would otherwise require re-treatment to implement effective control. Treated sites would be evaluated for the need for retreatment and the need for revegetation. This treatment method could be used any time of the year and would not amount to more than 700 acres per year.

Drone Application: Herbicide is applied using an unpiloted aerial vehicle (UAV) fitted with a tank and nozzles. It is a means of broadcast spraying in areas where ATVs and backpacks cannot go, such as cliffs, areas with loose soil, and sand dunes. The drone flies approximately 7-12 feet off the ground or canopy and broadcast sprays over a set path. Only herbicides labeled for aerial spraying can be used with UAV. This treatment method could be used between April and October and would not amount to more than 100 acres per year.

All the above removal methods are accomplished with the expectation that native plant materials can be sown or planted in the areas treated. The planting of native plants can decrease the potential for invasive plants to resprout by outcompeting, thus making the treatments last longer and restoring the ecosystem by reestablishing native plant communities. Planting of native plant materials would occur at any time of the year at the time when the greatest chance of success for the specific species involved can be achieved. No more than 700 acres per year would be planted with native plant materials.

Most of the identified methods are currently utilized at the project scale level. The only unique treatments considered include biocontrol via livestock, drone spraying, and the addition of four herbicides (aminopyralid, clethodim, fluazifop-p-butyl, and indaziflam) onto the Forest's approved herbicide list. These chemicals are used on other Forests in the Region due to their effectiveness and relatively low toxicity to wildlife and fish. Aminopyralid is used on broadleaf plants once they have leaved, but also works as a pre-emergent treatment of certain species. Clethodim is used to control grasses and other monocots. Fluazifop targets grasses which makes it a valuable tool in treating butterfly habitat. Indaziflam is a pre-emergent herbicide that provides broad spectrum control of many weed seedlings through the inhibition of seedling emergence and root development. All herbicides would be applied by a licensed applicator according to the label directions and would help move the Forest towards the desired condition of having more chemicals available for treatment in sensitive areas. This project's environmental analysis would assess the impacts of these chemicals on terrestrial and aquatic species, as well as potential effects on humans.