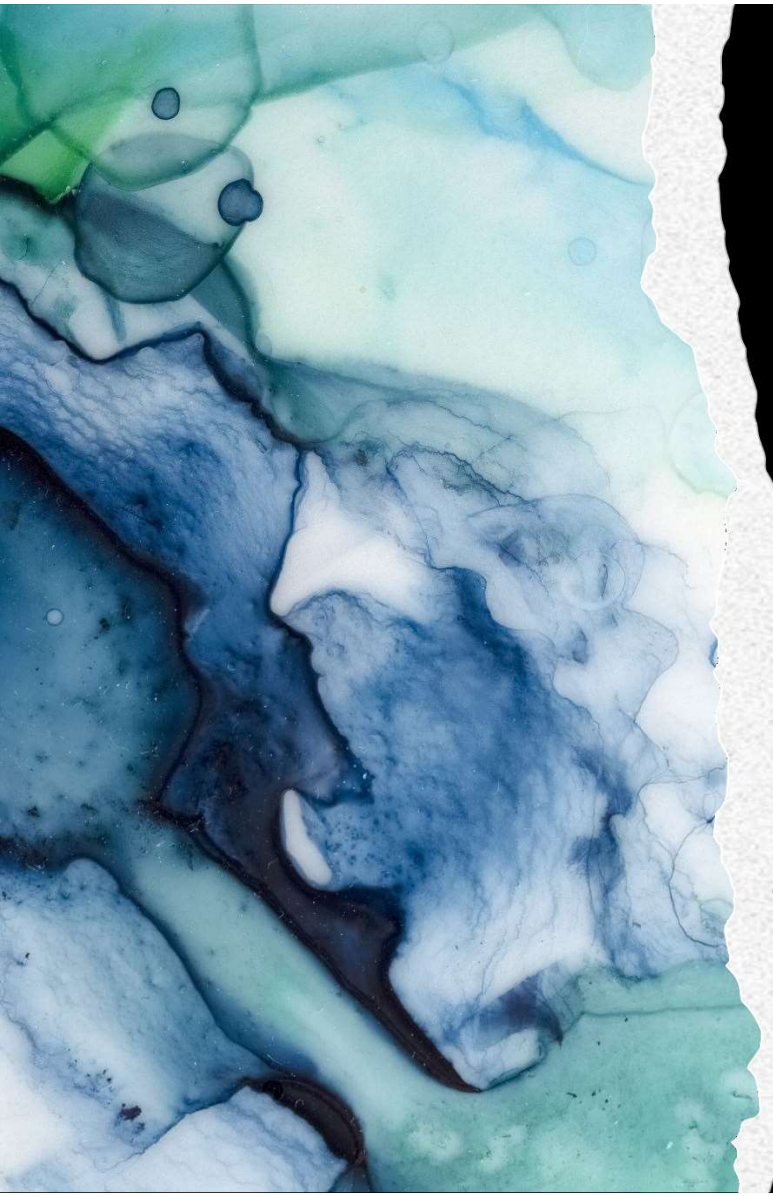
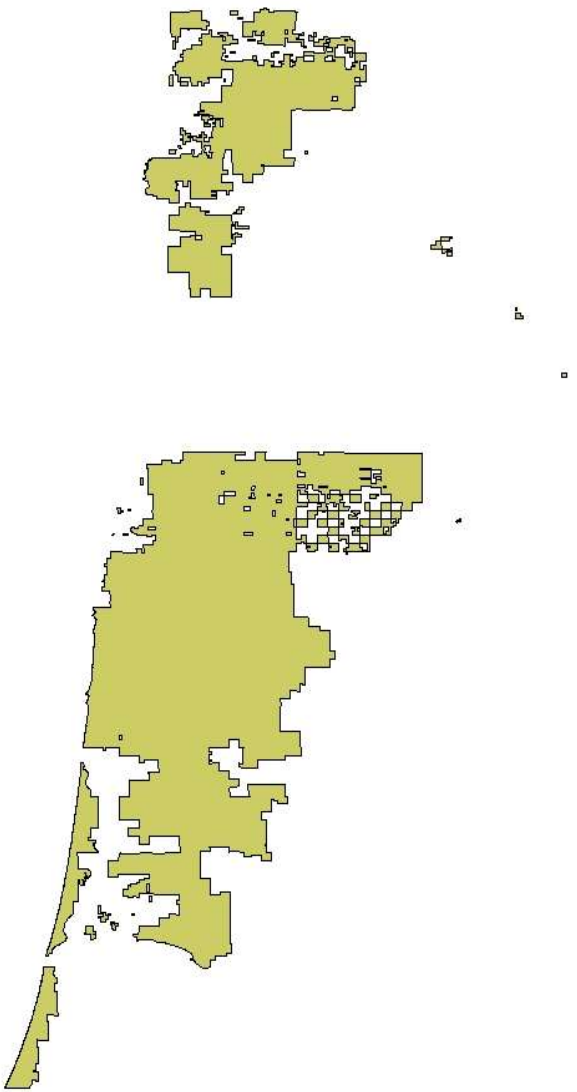


Invasives Toolbox

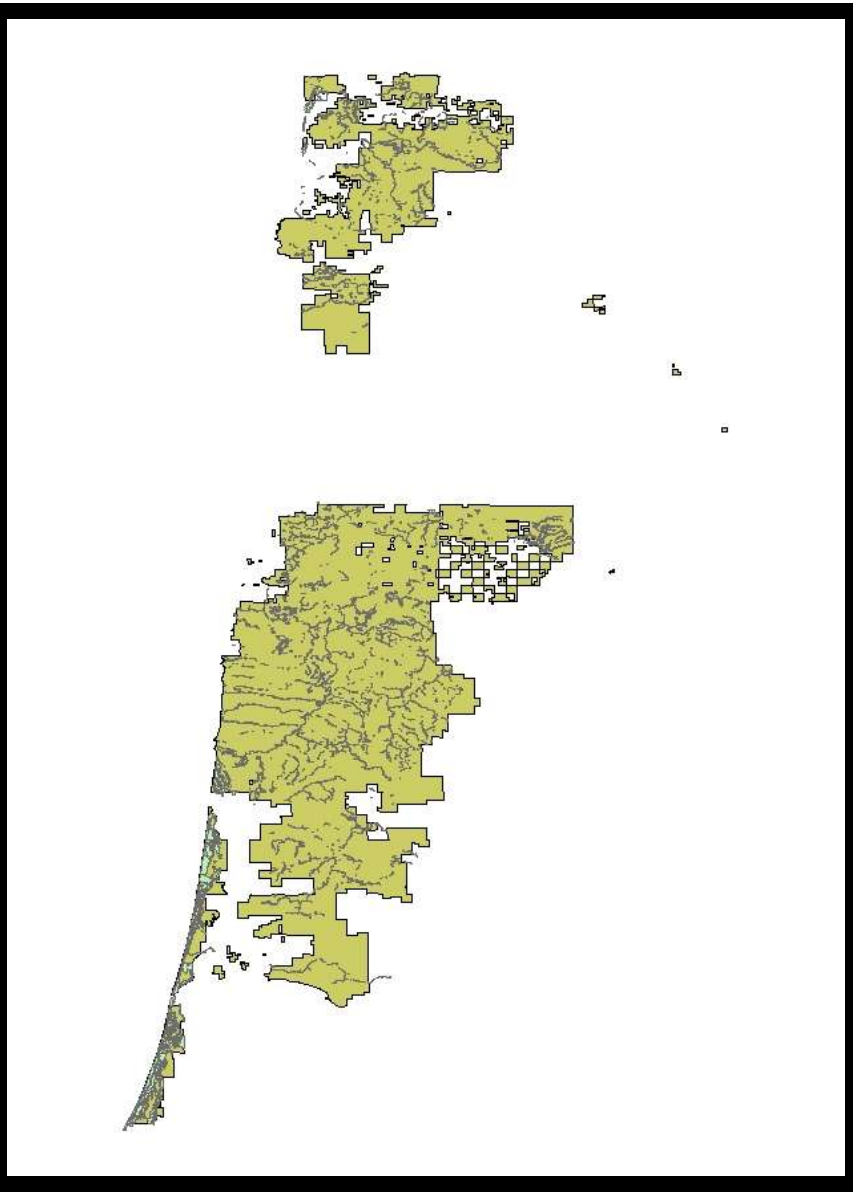
Chelsea Monks
Siuslaw National Forest Botanist

Current Situation



Current Situation

57,000 acres currently mapped as having invasive plant species



Invasive Species

- Plants not native to the Siuslaw National Forest
- 150 species known to occur on or near the Siuslaw National Forest
  - 2 categorized as A/T by Oregon Department of Agriculture
  - 26 categorized as B
  - 6 categorized as B/T

Invasive Species

- Scotch broom most abundant (*Cytisus scoparius*) with 21,300 acres mapped

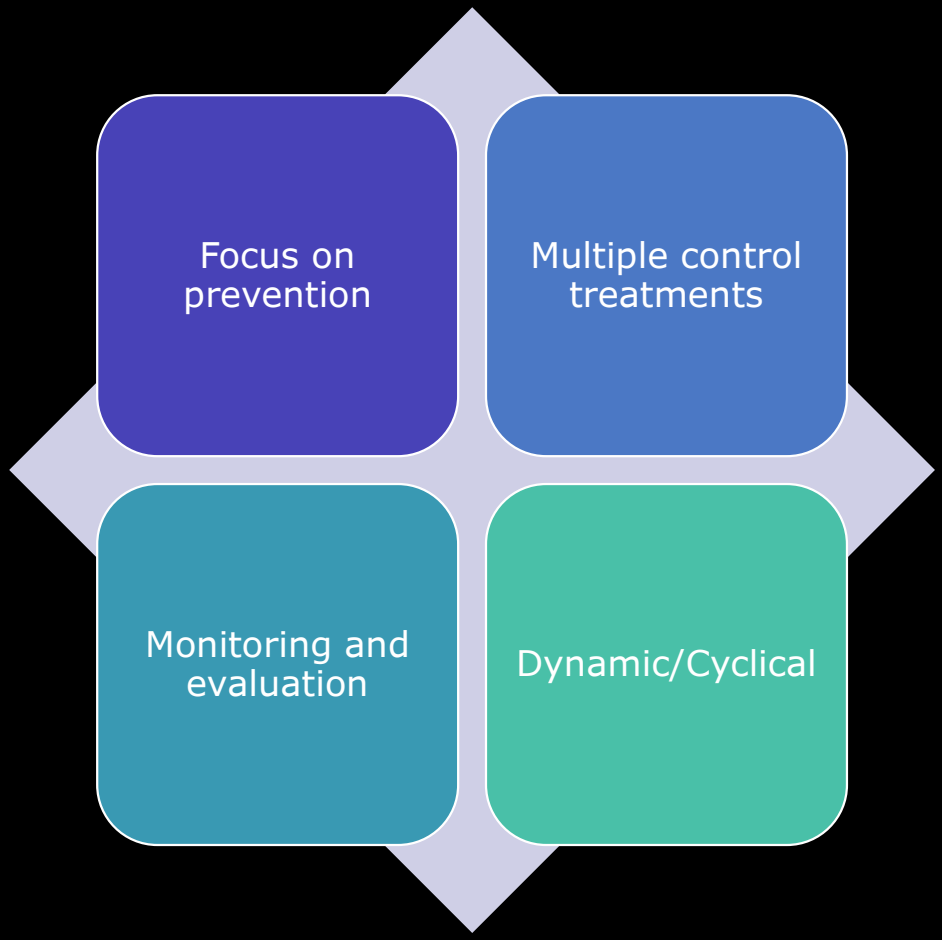
Invasive Species

- European beachgrass (*Ammophila arenaria*) is second most abundant (12,500 acres mapped)

Integrated Pest Management

- Science-based approach to pest management that utilizes a combination of methods, including cultural, biological, and chemical controls, to minimize pest populations and environmental impact

Integrated Pest Management



Integrated Pest Management

- Identify the pest
- Monitor pest activity
- Determine action thresholds
- Explore treatment options and implement them
- Evaluate results


Invasives Toolbox

Prevention

- Most effective means of treating invasive species
- Education and outreach
- Boot brushes at trailheads

Non-Herbicide Treatments

Soil Solarization or Shading

- Covering unwanted vegetation with plastic
- Can take several seasons
- Effective at clearing small areas for replanting

Mulching

- 2-3 inch layer of mulch
- Prevents plants from germinating
- Not target specific

Manual Control

- Pulling, stripping, stabbing, girdling
- Labor intensive and expensive
- Best done before seed set
- Must dispose of the biomass

Mechanical - Mowing

- Mowing or weed whacking
- Done when desirable plants are dormant
- Requires multiple treatments
- Relatively inexpensive
- Not target specific

Steaming

- Trailer mounted machine
- Siuslaw owns the equipment
- Labor intensive
- Limited to length of hose
- Effective in sensitive areas
- Multiple applications may be necessary

Flame Weeding

- Treat in spring when plants are small
- Does not kill roots of perennial plants
- Slower process than chemical treatments

Prescribed Burning

- Primarily be used in the Dunes
- Requires planning and weather windows
- Eliminates biomass

Mechanical – Heavy Equipment

- Brushing along roads (blackberry)

Scraping

- Removes all above-ground and some below-ground biomass
- Requires post treatment
- Heavy handed treatment option
- Best in flat areas with a high concentration of invasives

Biocontrol – insects and livestock

- Biocontrol agents are regulated by APHIS
- Years of testing before approval
- Not available for all species
- Varying degree of effectiveness
- Goats used to graze down unwanted vegetation

Several treatment methods have been proposed - Herbicide

- Hack & Squirt/Frill
- Cut & Daub
- Basal bark
- Injection
- Foliar application, spot application, wick application, terrestrial boom application
  - Backpack
  - Truck/trailer
  - ATV/UTV
  - Spot spray from hose
- Drone application

Hack & Squirt

- Used on trees 1 inch or greater in diameter
- Target specific (only impacts the tree you are treating)
- Effective most of the year

Cut & Daub

- Used on trees and shrubs
- Cut with chainsaw and daub within one minute of injury
- Good with resprouting shrubs
- Most effective in late summer and early fall
- Target specific

Basal Bark

- Trees and shrubs (including vines) less than 6 inches in diameter
- Target specific
- Late summer through late fall
- Only in places where standing dead can be tolerated for at least six months

Injection

- Inject herbicide directly into the stem
- Target specific
- Can be done at any point in the growing season
- Good for knotweeds

Foliar Application - selective

- Apply herbicide to leaves
- Quick and economic
- Non-target impacts possible
- Application by
  - Backpack sprayer
  - Gloved hand
  - Spot spray from hose

Timeline (Tentative) Integrated Invasive Species Project

- Analysis complete in June 2025
- Draft Environmental Assessment August 2025
- Public comments August 2025
- Decision Spring 2026

Current Active Ingredients

- Chlorsulfuron (Glean or Telar)
- Clopyralid (Stinger, Transline, Reclaim, Curtail, Lontrel)
- Glyphosate (Roundup)
- Imazapic (Plateau, Cadre)
- Imazapyr (Habitat, Arsenal, Chopper, Stalker)
- Metsulfuron methyl (Ally, Cimarron, Escort)
- Picloram (Tordon, Pathway)
- Sethoxydim (Poast, Vantage)
- Sulfometuron methyl (Oust, Spyder Broad spectrum)
- Triclopyr (Garlon, Access, Crossbow, Pathfinder)

Proposed Active Ingredients

- Aminopyralid (Milestone)
- Clethodim (Grass Out, Envoy)
- Fluazifop (Fusilade)
- Indaziflam (Esplanade, Rejuvra)

What has worked for you?