

DEPARTMENT OF FOREST ECOSYSTEMS & SOCIETY  
COLLEGE OF FORESTRY, OREGON STATE UNIVERSITY

# IMAGINING POTENTIAL FOR ALSEA COMMUNITY FOREST

Prepared for Alsea Community Effort, Oregon

20  
23

# ACKNOWLEDGEMENTS

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We thank Alsea Community Effort (ACE) for the opportunity to develop a vision for their forest parcel.

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# EXECUTIVE SUMMARY

This proposal reimagines the potential for the Alsea Community Effort (ACE) forest parcel into a space for community revitalization. The development of a public-use interpretive trail would provide educational and recreational opportunities to Alsea and the neighboring populations in four meaningful avenues:



## LOCAL HISTORY

Alsea has a colorful history that its citizens are proud of. Along the trail, visitors would have the opportunity to learn about cultural, Indigenous, and socioeconomic history that created the landscape we see today.



## FOREST PRODUCTS & SERVICES

Visitors would have the opportunity to identify native flora and fungi that provide food and habitat for forest animals and cultural and spiritual significance to humans.



## PARTICIPATORY MONITORING & CITIZEN SCIENCE

Visitors would be able to document what they find on the trail on accessible mobile apps and websites to help local researchers monitor forest trends and inspire K-12 students.



## COMMUNITY ART

Through various permanent and rotational art installations, visitors would be able to find something new every time they visit the trail and be reminded of how much nature can inspire creativity and alleviate stress.

This report, alongside these proposed ideas for the community trail, includes a summary of ACE's forest parcel, a stand description of the parcel, a summary of forest practices laws and regulations, trail building considerations, and next steps for how to bring the community trail into fruition.

# PROJECT BACKGROUND

Established in 1997, the Alsea Community Effort (ACE) pursues a mission to inspire action and tackle challenges faced by the Alsea people through progressive ideas, bold actions, and a strong foundation of support. In 2017, ACE acquired a 20-acre forest parcel from a private donor. The land is located along Little Lobster Creek, a 20-minute drive away from Alsea's main street.

In 2023, ACE reached out to Oregon State University and agreed to be a part of a graduate course on interdisciplinary approaches to social-ecological problems. Throughout the course, fourteen students from diverse disciplinary backgrounds, two professors from the College of Forestry, and ACE board members worked together to develop a proposal for the use of this forest parcel. This document serves as that proposal.



## Our Vision

*A focal point for the community, we envision the Alsea forest parcel as a tangible space where residents of all ages can enrich their lives by developing interests and skills in art, science, forestry, ecology, trades, and resilience. To facilitate these opportunities, we propose the establishment of a community trail traversing the parcel.*



On October 11th, 2023, students and faculty arrived at the Alsea Community Library to discuss the needs and possibilities for the project. From this conversation, four main project components emerged: 1) timber and land management; 2) forest products and services; 3) participatory environmental education and research opportunities; and 4) community engagement. A survey conducted in 2008 reported that Alsea community members were mainly concerned with land use regulations and the local economy.<sup>1</sup> ACE board members echoed these sentiments in our meeting at the Alsea Community Library.

With all this information, the class decided to propose the creation of an interpretive community trail on the forest parcel that would meet ACE's goals of serving the Alsea community. This way, the parcel can become a place for educational opportunities about the natural world and native forest products, community engagement through citizen science, and developing a sense of community through the arts.

## HOW TO USE THIS REPORT

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This report is designed to elucidate our proposal, an Alsea interpretive community trail. It can be used as much by educators, grant writers, and community leaders as community members who might use this trail in the future. The information presented here is not exhaustive, but is meant to jump-start the conversation within the community.

The report begins with our proposed usages of the trail. These usages highlight talking points from our conversation with ACE. This section includes a brief discussion on each proposed trail use, exemplary frameworks for diverse community projects, as well as ready-to-use information for educational content creation. Each of the four sub-sections covers each use of the trail, including **local history, forest products & services, participatory monitoring & citizen science**, and **community art**.

The second section of this report describes the lay of the parcel land. It includes maps of the parcel, a description of the land's vegetation, and considerations ACE might take to build the trail. The information provided here can be used by ACE in order to make decisions, plan, and budget for grant solicitation or when developing future projects.

The last section of this report outlines the next steps ACE may take in order to bring the interpretive trail to fruition, including financing options and a framework for community engagement.

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# PART I

## ALSEA COMMUNITY TRAIL

The following sections will describe each of these avenues in relation to the community trail. Each idea has the potential to engage an array of community members, local nonprofits, schools, and researchers. Thus, the proposal that follows has the capacity to foster lasting relationships through the forest parcel, a primary goal that ACE envisioned for the land.



### LOCAL HISTORY

### FOREST PRODUCTS & SERVICES



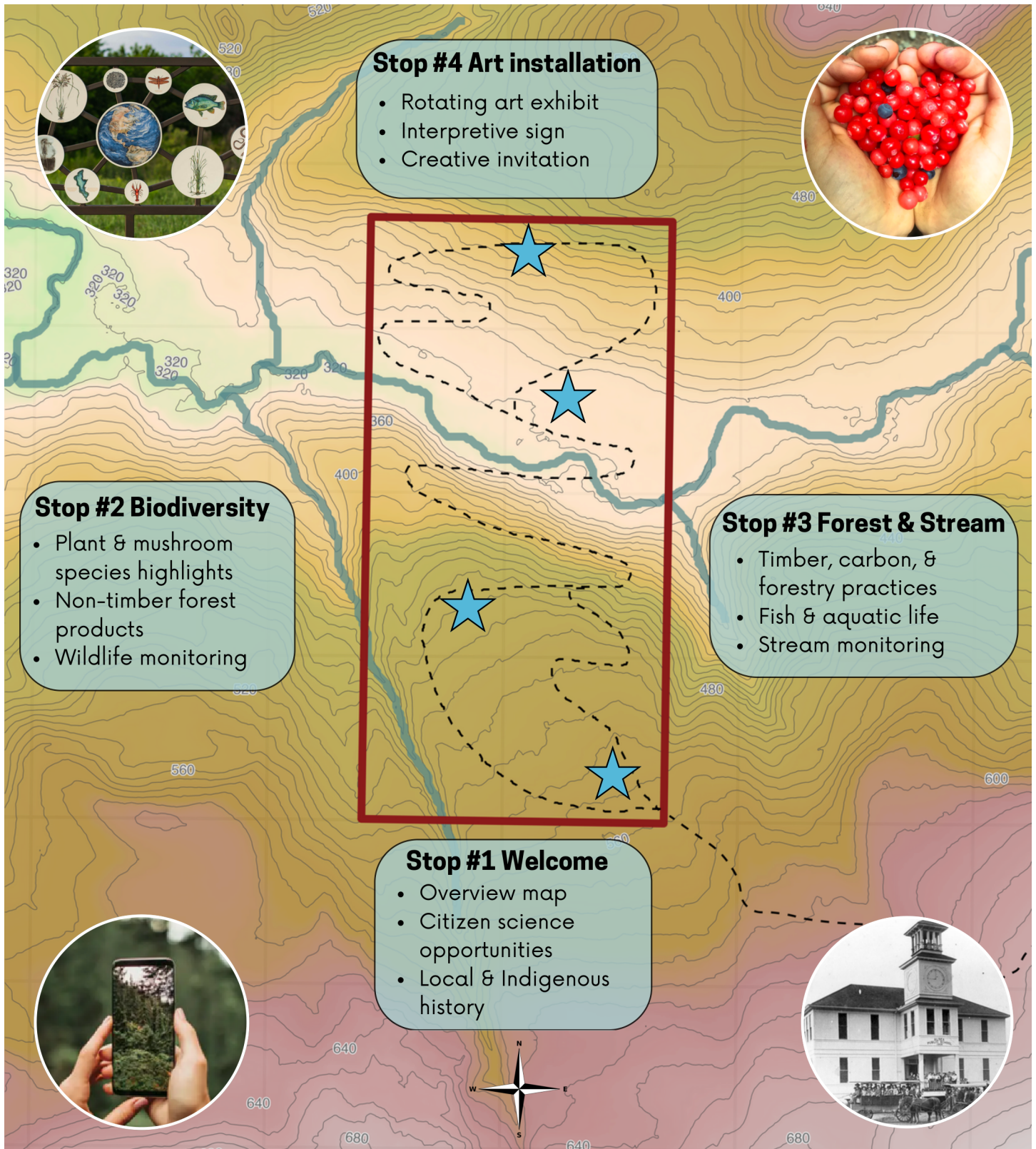
### PARTICIPATORY MONITORING & CITIZEN SCIENCE

### COMMUNITY ART





# EXAMPLE COMMUNITY TRAIL







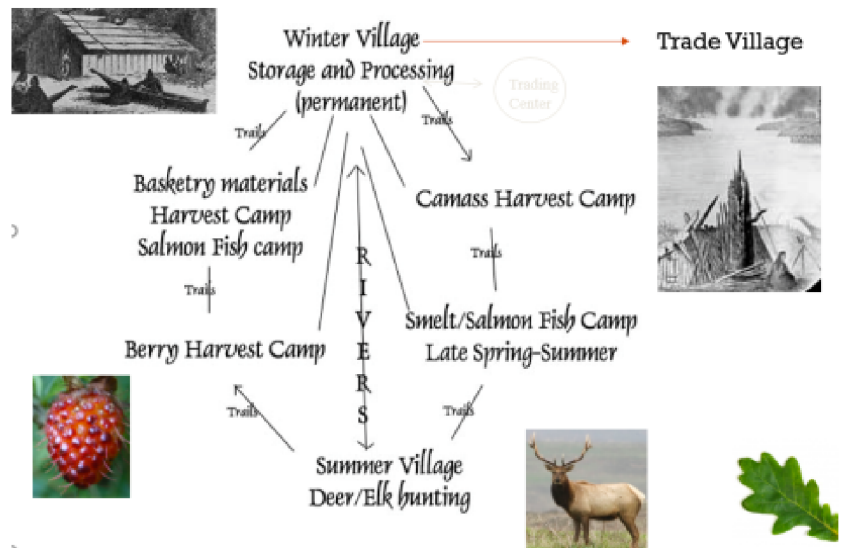
# LOCAL HISTORY

The entrance to the trail is a great way to introduce forest and trail users to Alesia's history. Interpretive signage can be developed to showcase both Indigenous and contemporary history.

## Indigenous History

The ACE forest parcel is located within the foothills of the Coast Range, an area that has been occupied by Indigenous people for millennia. Written historical records indicate that the tributaries of the Alesia river would have been frequented by the Alesia and Siuslaw tribes who were primarily coastal, as well as the Champinefu and Chemapho bands of the Kalapuya who primarily occupied the low-lying Willamette valley.<sup>2</sup>

## KALAPUYAN SEASONAL ROUND



The Kalapuya calendar, gathered in 1877 by Albert Gatschet at the Grand Ronde Reservation, posted in Quartux Journal<sup>4</sup>

Before extensive settlement by Europeans starting in the mid-1800s, the many Tribes in western Oregon were diverse in language and culture. They were generally peaceful, and traded both within and outside the region. People traveled in groups seasonally to their various stands of food and materials ranging from the coast, to the Willamette valley bottom, to the mountains. The Alesia River and its tributaries are host to aquatic species significant to Tribal lifeways, including sea-run cutthroat trout from late summer to early fall, chinook salmon late from summer through November, and steelhead trout from December through<sup>3</sup>March.

Through a series of Treaties in the 1850s, all Tribes in western Oregon were forcibly relocated to reservations by the U.S. government and are now members of the Confederated Tribes of Siletz Indians, Confederated Tribes of Grand Ronde, Coquille Indians, and Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians.<sup>5</sup>

# LOCAL HISTORY

## Contemporary History

The community of Alsea since the 1850s has had a rich history of founding and sustaining an unincorporated community, and adapting to the ebbs and flows of the timber and sawmill industry, fishing, recreation, and more. As outsiders to the community, we will not attempt to summarize the entire history of Alsea in this report but would invite ACE to assemble local contemporary history that they wish to pass on through interpretive signage to trail users. For example, the excerpt below from the Oregon Encyclopedia may be a starting place.



Ralph I. Gifford Photographs, circa  
1910s - 1947



Alsea Ranger Station, 1972.  
Courtesy Oregon State University Libraries

### **Oregon Historical Society excerpt**

*Although a post office was established at Alsea in 1871, the small farm and ranch community was isolated, distant from main routes of travel and without a railroad. Improved highways and the use of trucks for hauling logs and lumber eventually opened upper-valley forested hillsides to timber harvests. With the boom in lumber production following World War II, several small sawmills operated in the valley. With a consolidation in production, virtually all of the mills had closed by the early 1970s.*

*Nevertheless, the town prospered through the 1980s, with heavy harvests in the Siuslaw National Forest, but environmental restrictions, related to the northern spotted owl and other threatened species, dramatically curbed federal timber sales during the 1990s. When the Siuslaw Ranger Station closed in 1996, more than a hundred workers were transferred to other Forest Service offices. A small health clinic and a branch of the Benton County Library serve Alsea residents, many of whom commute to the Willamette Valley for employment.*



# FOREST PRODUCTS & SERVICES

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Non-Timber Forest Products (NTFPs) are often underestimated but play a vital role in forest ecosystems.<sup>6</sup> These products, including fruits, nuts, herbs, medicinal plants, and resins, bridge the gap between ecological health and community livelihoods.<sup>7</sup> These products are components of forest ecosystems, particularly in systems like the ACE forest parcel. These products significantly contribute to ecological health and community livelihoods, playing an essential role in maintaining forest biodiversity and ecological balance, crucial for environmental sustainability.



## 01 Ecotourism and Education

Developing trails that highlight the diversity and utility of NTFPs can boost ecotourism in the Alsea area. Trails can be designed to educate visitors about the variety of NTFPs available in the forest, their uses, and the importance of sustainable harvesting.



## 02 Economic Opportunities

Trails that focus on NTFPs can create economic opportunities for the local community. By organizing guided tours, workshops, and demonstrations on the usage of these products, the community can attract tourists and enthusiasts, generating income. This approach can also encourage the development of local businesses centered around NTFPs, such as selling handicrafts, herbal medicines, and locally made food products.



## 03 Community Engagement and Stewardship

Integrating NTFPs into trail development at the ACE forest parcel can enhance environmental sustainability while fostering cultural, educational, and economic growth. This approach harmonizes community interests with ecological stewardship and positions trails as channels for sustainable development and environmental education.



## 04 Enhancing the Trail Experience

Trails that showcase NTFPs can offer a unique and immersive experience for hikers. They provide an opportunity to directly interact with various forest products, understand their growth patterns, and observe them in their natural habitat. This can make the trail experience more engaging and enjoyable, in a community like Alsea.



# FOREST PRODUCTS & SERVICES

NTFPs in the Coast Range have a number of economic and ecological values,<sup>8</sup> summarized here and elaborated on in [Appendix B](#).

## Economic Values

Types	Examples	Benefits
Edible NTFPs	Wild berries, mushrooms, nuts, and fruits	Food security, income generation, and nutrition
Medicinal Plants	Oregon grape root, Cascara bark, Bigleaf maple syrup	Traditional medicine, pharmaceuticals, and healthcare
Honey and Bee Products	Honey, beeswax, and royal jelly	Food production, cosmetics, and beeswax candles
Ornamental Plants	Orchids, ferns, and decorative flowers	Horticulture, landscaping, and floral industry
Handicraft Materials	Cascara bark, Bigleaf maple	Artisan crafts, furniture, natural dyes, and textiles
Fibers	Bigleaf maple, stinging nettle	Textiles, rope-making, and paper production

### Native forest products can bring community members together

In Chiloquin, OR, changes to a local schoolyard have helped create a safe place for the community to gather outdoors and provide a unique way to learn and honor the Klamath Tribes' history and culture. Surrounding the schoolyard, they planted historically important plants such as huckleberry and native plum, and more. A sign nearby provides info about the plants, their use, and their harvest period, in both English and the Klamath language.

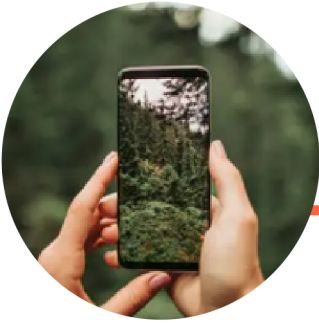


# FOREST PRODUCTS & SERVICES

## Ecological Values

Types	Examples	Benefits
Wildlife Habitats	Tree hollows, forest undergrowth, water bodies	Biodiversity conservation, wildlife shelter
Pollinators	Bees, butterflies, hummingbirds	Essential for crop pollination, fruit and seed production
Soil Improvement Species	Nitrogen-fixing plants, mycorrhizal fungi	Enhance soil fertility, nutrient cycling, and plant growth
Water Quality Regulators	Riparian vegetation, aquatic plants	Water purification, erosion control, and aquatic habitat
Habitat Connectivity	Forest corridors, stepping stones	Wildlife movement, and resilience
Natural Landscapes	Wetlands, old-growth forests	Ecosystem stability, preservation of unique biodiversity
Wild Genetic Resources	Wild plant varieties, Indigenous crop relatives	Genetic diversity, crop improvement, and adaptation to changing environments
Erosion Control	Grasses, shrubs, ground covers	Soil conservation, landslide prevention, and watershed protection
Natural Pest Control	Predatory insects, birds, bats	Pest regulation, reduced need for chemical pesticides
Carbon Sequestration	Large trees, dense forests	Mitigation of climate change, carbon storage

Please refer to Appendix B for more information on forest products that occur in this region.



# PARTICIPATORY MONITORING

Participatory monitoring and citizen science have become increasingly popular since the late 1990s as a way to co-create knowledge relationships between natural resources, local communities, and formally trained scientists. Participatory monitoring and citizen science are approaches that emphasize the active role of the community in prioritizing their goals with regard to monitoring and the production of quality data.<sup>10, 11</sup>

Successful participatory monitoring projects can ensure responsive long-term results and relationships on multiple scales; some of the examples that will be highlighted include national and international initiatives that have lasted several years. Participatory monitoring is a powerful tool for sustainable, actionable research grounded and led by the community.

Ultimately the idea of participatory monitoring for this parcel is to incorporate the use of a trail with science initiatives planned and guided by the interests of the Alsea community. Picture this: a trail that provides access to school groups and researchers checking wildlife and stream monitoring stations. There are signs that help explain to visitors what projects K-12 students are working on. There are excited conversations about what species of bird was just sighted.

For the Alsea community, creating and practicing participatory monitoring protocols on the ACE parcel along an interpretive trail can be an excellent way to incorporate community interests and engage folks in cross-discipline science to learn more about their ecosystems. With this information, the Alsea community can then move forward with a well-rounded understanding of their ecosystem(s) to make decisions for the future.

This section provides a range of participatory monitoring projects and resources that encompass many topics and skill levels. This is not a comprehensive list, and we encourage readers to use this resource as a starting point to explore their areas of interest in the ACE parcel. Here we highlight projects in three major areas (1) Community-Level Participatory Monitoring Projects, (2) K-12 Educational Opportunities, and (3) Collaborative Research. These distinctions are made with the understanding that many projects have overlap between these areas.

## **Participatory Monitoring**

is the active “monitoring of natural resources by local [community members] using their resources” and their knowledge to achieve their goals.<sup>10</sup>



# COMMUNITY-LEVEL PROJECTS



## 01 Stream Monitoring

There are many aspects of streams that might be of interest to monitor: water level, temperature, cleanliness, and more. As a result, there is a large range of tools, tutorials, and approaches available to assess these aspects and allow users to begin to understand changes in their stream.



Example of a water testing kit. This specific kit tests nitrogen concentration in the water. Excess nitrogen can cause a decrease in water quality.

A collaborative sampling method can be as simple as a measuring stick in the stream and a QR code that visitors can submit pictures to. Other stream tools are water testing kits. These kits usually consist of testing strips to give users a rough idea of what is going on in the stream as opposed to how deep the water is. They're useful for quick assessments and as a learning tool for people interested in stream conditions. [Science on the Fly](#) is an organization that can help folks get started.

Lastly, there are specific gauges that can be purchased that automatically collect stream data as often as every ten minutes every day for several years. Depending on the gauge, both water level and in-stream data are collected. A guide for non-specialists co-created by the US Geological Society and the National Park Service is a comprehensive quick-start guide that compares different gauges and walks readers through setting up and understanding their results. Please see the blue **Info Box** at the end of this section.



## 02 Wildlife Monitoring

Similar to stream monitoring, there are many ways to monitor wildlife and utilize different tools to learn more about biodiversity. One of the easiest ways to get involved is to use apps like eBird. eBird is a collaborative, widespread citizen science project where users take pictures of birds that they see and submit observations to the app. As a result, there is a robust map of birds and their habitats all over the world which is continually added to as more people join and make submissions.

eBird

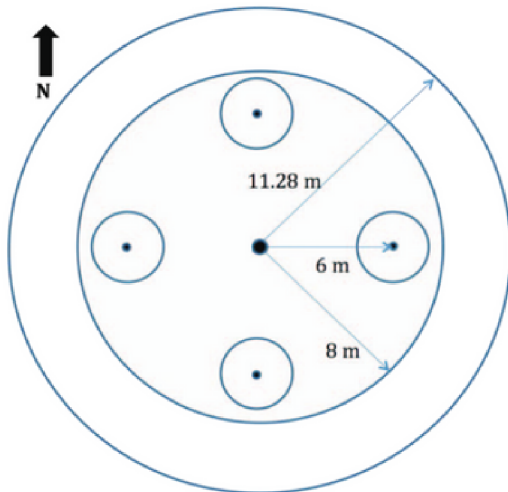
Differing from eBird, nest boxes are another way to observe wildlife. Often equated with small birds, nest boxes can be built for and used by raptors, ducks, and even mammals. The monitoring of such boxes generally involves visiting each box, determining the species using it, counting eggs, hatchlings, fledglings, etc., and maintaining the boxes if needed.<sup>12</sup> Protocols for monitoring nest boxes are animal- and site-specific and should be adjusted for project goals.

# COMMUNITY-LEVEL PROJECTS



## 03 Vegetation Monitoring

With regard to apps, iNaturalist is another collaborative, wide-spread citizen science project where people can make observations about the plants and help others identify what they are seeing. At its core iNaturalist is an “online social network of people sharing biodiversity information to help each other learn about nature”. A similar app called Seek, also by iNaturalist, is marketed as a more family-oriented app where users can gain badges for participating in observation challenges and also learn how to identify organisms. See **Appendix C** to see an example of an iNaturalist community project.



Example of a radius plot with a large main plot, smaller nested subplot, and four microplots. Often used for identifying, measuring, and counting the number of trees in an area.

Depending on how complex the project is, there are a multitude of ways to measure vegetation diversity, distribution, and density. Some options for vegetation data collection include:

- Photo comparisons
- Quadrats
- Point/line intercepts
- Radius plots
- Phone apps

Some guides that provide walk-throughs for these types of studies include the technical reference co-created by the US Forest Service and the Bureau of Land Management and the Forest Inventory technical note created by the US Department of Agriculture. Please see the blue **Info Box** below for these guides.

### INFO BOX

#### Other Project Ideas:

- Amphibian monitoring program
- Camera traps a.k.a. trail cameras
- Fish point counts
- Human visitor counts
- Insect pitfall traps & counts
- Precipitation and temperature logging
- Soil health/erosion assessments

#### Helpful Monitoring Manuals

- [EPA Stream Methods Manual](#)
- [Handbook for Camera-Trap Monitoring](#)
- [NRCS Forest Inventory Technical Note](#)
- [NRCS Resources to Assess Soil Health](#)
- [NRCS Vegetation Sampling Technical Reference](#)
- [USGS Stream Monitoring Guide](#)

# YOUTH ENGAGEMENT THROUGH BIODIVERSITY MONITORING

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The biodiversity of the ACE forest parcel can be leveraged to engage and captivate all members of the Alsea community. Biodiversity can be thought of as a living library where each plant, animal, and microorganism is its own unique book or story. Just like a library contains many different books and stories, our world contains many different kinds of living things. There is something for everyone to learn.



## Trail Cameras

Trail cameras can be a valuable and relatively inexpensive tool in education as they provide a direct window into wildlife behavior and biodiversity without disturbing natural habitats. To foster hands-on learning, students can actively participate by choosing interesting locations to place the cameras. Students can then analyze captured footage to identify species, study behaviors, and understand the ecosystem dynamics of the forest parcel. Overall, trail cameras serve as an effective tool for blending technology with environmental education, making learning interactive and relevant to real-world ecological studies.

## Science Fair

A science fair for the local K-12 school is another excellent way for the community of Alsea to engage and foster a sense of ownership in their community forest. By participating in projects that involve observing, documenting, and studying the forest's flora and fauna, students can develop a deeper appreciation for the biodiversity in their own backyard. Moreover, the involvement of parents, teachers, and local environmental experts in mentoring and judging the science fair projects can strengthen community bonds and foster a collaborative spirit. Vivify provides a teacher's guide for organizing a science fair [here](#).

## BioBlitz

To further engage the community in biodiversity monitoring, ACE could host a BioBlitz event. These events involve community members and experts working together to identify and document species within a specified period of time. As the name implies, this is meant to be a fast and fun effort with the goal of identifying as many species as possible. This would provide an excellent opportunity for hands-on learning and community involvement. [iNaturalist](#) and [National Geographic](#) have tutorials on how to put on a local Bioblitz.

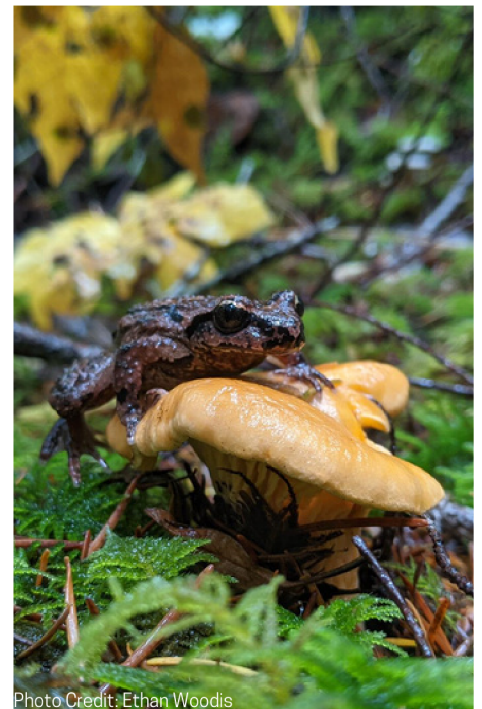


Photo Credit: Ethan Woodis



# YOUTH ENGAGEMENT THROUGH BIODIVERSITY MONITORING

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## Salamander Surveys

Salamanders serve as an essential link in the forest food chain by helping to decompose organic matter, enrich the soil, and foster plant growth. Notably, their sensitivity to environmental changes makes them vital indicators of ecosystem health, offering early warning signs of ecological disturbances like pollution or habitat degradation. The conservation of salamanders is therefore a crucial component of maintaining overall biodiversity.

### Equipment list:

1. Camera
2. Notebook
3. Pencil
4. Ruler
5. Gloves

### The Visual Encounter Survey method

1. Surveyors should search a specific area, such as a forest floor or streambed, for salamanders by sight. Salamanders are most active during the summer on damp, rainy mornings and evenings.
2. Walk slowly through the area, carefully examine potential hiding spots like under logs, rocks, leaf litter, or in water bodies.
3. Each encountered salamander is identified, counted, and measured or photographed before being gently released back into its habitat. This method provides data on species presence, abundance, and distribution without significantly disturbing the animals or their environment.
4. Remember to wear gloves when handling any amphibian as any residue on your hands will be absorbed by their skin and can cause serious harm.

The Oregon Forest Research Institute provides an article [here](#) for conducting these surveys.

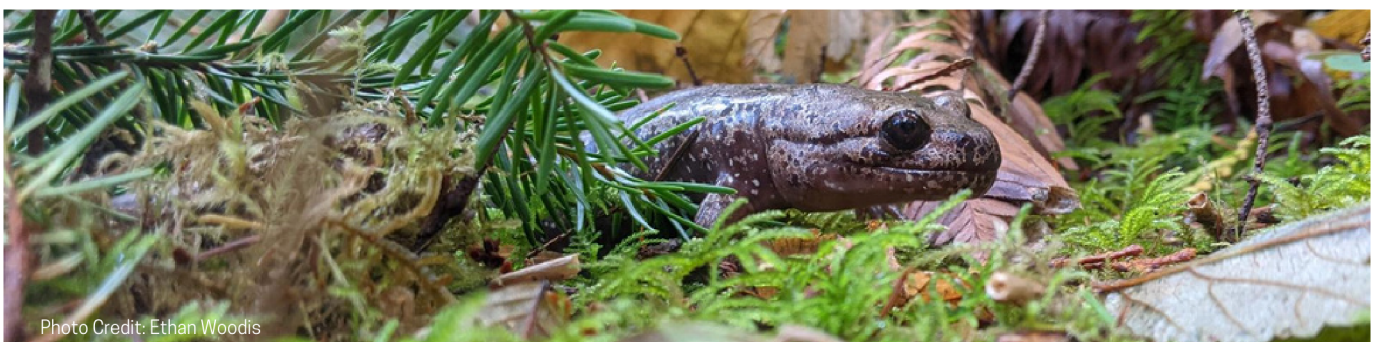


Photo Credit: Ethan Woodis

# YOUTH ENGAGEMENT THROUGH BIODIVERSITY MONITORING



Photo Credit: Brett Lovelace/OSU

## Marbled Murrelets and Northern Spotted Owls

The decline of the Northern Spotted Owl and Marbled Murrelet is closely linked to the environmental and economic history of the Pacific Northwest, initially driven by the loss of old-growth forest habitats due to logging in the 20th century. This habitat loss led to reduced nesting areas, increased vulnerability to predators, and (for Spotted Owls) intensified competition with the invasive and aggressive Barred Owl. The resulting decline in both species' populations has been at the center of complex debates, notably the "timber wars," balancing economic interests against environmental conservation.

The ACE Community Forest is bordered on the north and west by critical habitat for both species as determined by the United States Fish and Wildlife Service (USFWS). Both species rely on mature and old-growth forests for nesting sites, protection from predators and food sources. Conserving the forest in the northwest corner of the ACE property could lead to both murrelets and spotted owls using this patch for nesting and foraging – if they aren't already. Once the trail is built, surveys could be conducted within the northwest corner of the plot and may find that the forest is occupied by one or both of these rare species.

Photo Credit: Chris McCafferty



### Equipment list:

1. Camera
2. Phone
3. Notebook
4. Pencil
5. Binoculars

Surveying for Marbled Murrelets involves arriving to the survey location an hour before sunrise, when the birds are most active. [The Marbled Murrelet survey protocol](#) includes techniques for visual and audible detection of murrelets in addition to on-the-ground assessments to identify potential nesting platforms and large trees, which are indicative of suitable murrelet habitat. In contrast, spotted owl surveys are conducted at night. [The Spotted Owl survey protocol](#) describes the methods for identifying suitable habitat and broadcasting owl calls to document owl call in responses.

Conservation efforts for the Northern Spotted Owl and Marbled Murrelet are not only crucial for the survival of these species but also represent broader environmental stewardship. By implementing targeted surveys, ACE can contribute significantly to demystifying the preservation and recovery of these emblematic species of the Pacific Northwest, ensuring their continued presence in our forests for generations to come.

# COLLABORATIVE RESEARCH

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Forested ecosystems are often living laboratories and outdoor classrooms for researchers to provide access to long-term legacy data and enable baseline research opportunities. A community-based, participatory research forest could be established on the ACE forest parcel, combining community local knowledge with scientific research in collaboration with governments, universities, research centers, and other institutions.<sup>13</sup> The result from the continuous participatory monitoring data from said projects could be used as in situ data for scientific research projects and publication. For example, historical research in the Alsea watershed included data from parcels 7-year pre and post harvest.<sup>14</sup> The results from this study played a critical role in the development of the Oregon Forest practices Act (1971/ 72) which provided the first rules associated with forest harvesting in the country.<sup>15,16</sup>

The ACE parcel is situated in the Oregon Coast Range. It has both young and old-growth forest stands with Little Lobster Creek flowing in the middle. There is a recent clearcut in the upstream proximity of the parcel which may impact management practices in this area. This site offers many opportunities for research in the fields of soil science, hydrology, biodiversity, forest ecology, and more. Potential research and suggested areas of investigation are listed below; these are some ideas to get started however the true breadth of options goes beyond this suggestive list.

## Hydrology



- Comparison of historical and contemporary management practices using the historical Alsea watershed study.
- Baseline study of stream water nutrient and heavy metal content in Little Lobster Creek.
- Hydrological impact of forest management practices, clear cut, and logging on the watershed.
- Long term temperature and turbidity monitoring and assessment of stream quality as fish habitat.
- Stream water dynamics due to storms, or characterizing stream characteristics in general.



## Soil Health

- Quantification of soil organic carbon stock.
- Research on how old growth forest differs from new growth forest in soil carbon stock.
- Comparison between terrestrial vs aquatic decomposition.
- Soil organic matter sources and composition in the old growth forest and new growth forest.
- Baseline soil physical properties.
- Nitrogen fixing mechanisms and microbial community.



# COLLABORATIVE RESEARCH



## Forest Surveys

- Photosynthesis measurements and biometric data collection for estimating the gross primary production of the forest.
- Forest biometrics and tree health study.
- Satellite imagery analysis for carbon-water exchange
- Plant succession and biomass dynamics.



## Fish & Wildlife Surveys

- Inventory survey on plant species, fungal communities, entomology, invasive species, wildlife biodiversity, fish and amphibians, etc.
- Understanding how forest management, natural disturbance, and climate change will affect ecosystem patterns and relationships.



## Community Perspectives, Stewardship, & Forest Policy

- Measuring human well-being impacts of community forests.
- Community participation in collaborative community based ecological monitoring and forest management.
- How forest stewardship and policy shape forest management and conservation.



## Trail Building & Recreation Ecology

- Wildlife response to recreational trail building.
- Sustainable trail building with respect to ecological conservation.
- Recreation use and enjoyment by visitors.

### Potential Oregon State University academic departments interested in participatory monitoring research

- Chemical Biological, Environmental Engineering
- Civil Engineering
- Geography
- Education
- Environmental Arts and Humanities
- Environmental Science
- Fisheries and WildLife
- Forest Engineering Resources and Management
- Forest Ecosystems and Society
- Psychology
- Public Policy
- Sociology
- Water Resource Policy and Management
- Wood Science and Engineering



# PUBLIC ARTS ON THE TRAIL

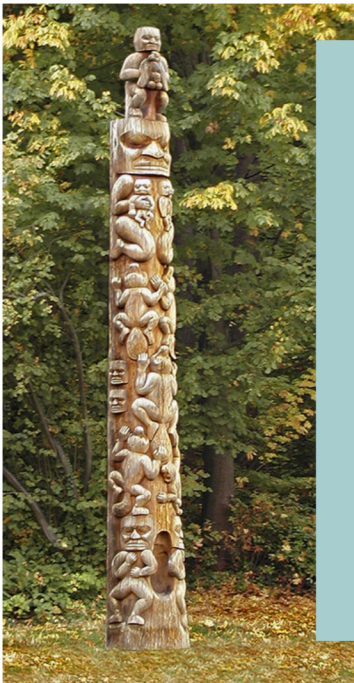
Having art in public places creates many benefits for the community, including building community identity and creating a sense of pride and belonging. ACE expressed a need for stimulating community engagement. The process of creating or picking public art pieces can bring people together! Public art can also become a tourist attraction, helping to bring tourism dollars to the community. We can learn some lessons from other public arts programs.

## Public art can connect community members and the trail

One inexpensive way for the Alsea community to add its own art to a trail could be painted stones. Each year, local school children could each paint their own stone. Once complete, the stones could be used to line the side of the trail or hidden along the trail to be found by the hikers. The community could be informed they can add stones to the trail as they please to increase community involvement beyond the schools. Over time, as the number of stones grows, it could become a tourist attraction, as well as a fun place for past students and their families to visit. The community could have a fun yearbook of sorts for their children.

## Public art can commemorate community's cultural identity

One example of public art is Hydaburg, AK: a small Alaskan Native Village of 370 people. The Village established 'house posts' or a public building for the creation of totem poles, an important traditional art form known around the US. The house post is not only for creating art but also for teaching the youth of the Tribe to become master carvers to carry on cultural traditions of the Tribe. The house posts help connect the community by creating art using local, cultural traditional methods. ([Lesson from Hydaburg, AK](#))





# PUBLIC ARTS ON THE TRAIL



## Public art can empower a sense of community togetherness

In Philadelphia, PA, the mayor started a program in 1984 to reduce graffiti around the city. Over time, this program became Mural Arts Philadelphia. The city partly funds the program and works with other programs and businesses within Philadelphia to create works of art in public spaces from sidewalks to massive building sides. Each is made by a local artist or a local group, from veterans to students to other artists in the community. The mural has successfully brought adverse groups together. This program changed graffiti and vandalism into art that the city is proud to show off, and the community has a personal link to the art for decades to come. (Lesson from Philadelphia, PA)

## Public art can be a tourist attraction

The Witch Castle in Portland, OR, is another excellent example of a local abandoned building turned into art. Local kids use the Witch Castle as a hang-out and fun place they can call “theirs.” The building is known more to locals than tourists, but still draws in visitors who are looking for something unique on their hike. (Lesson from the Witch Castle, Portland, OR)

The Oregon Coast Public Art Trail gives a catalog of examples of art tourism. This trail has over 800 exhibits up and down the coast of Oregon with art ranging from houses, statues, murals, fountains, benches, and many other art pieces from local coastal artists. Each exhibit can be visited 24/7, making them great for traveling tourists; no admission is always a plus. With some of the art being on the sides of buildings, there is the additional chance that the tourists visiting the art stop in the store or business where the art is located. The idea is to let the people visit the arts they want to see on the “people’s coast.” (Lesson from Oregon Public Trail)





# WHO MAKES ART IN PUBLIC SPACES

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The task of installing artwork in a community forest can be an opportunity for community building. Public arts should not be crass or offensive to community members, but that does not mean they cannot be innovative or provocative. More importantly, public arts should serve functions beyond aesthetics as mentioned in the previous section. From inception of ideas to maintenance of artworks, many actors are involved in decision-making.



## Community members

It is essential to include community members' voices in the making of public art. This inclusion could mean the difference between a shared sense of pride in the products and a sense of disdain which propels vandalism.

- **Who are potential collaborators in the community?**



## Project managers

An art committee within a community organization like ACE can act as a connector between community members, artists, and funders. Project managers solicit funding, commission the artist, and moderate hearing sessions. They make sure to communicate their community needs wholly to everyone else involved.

- **What aspects of the community are we representing?**



## Artists

It is important to include community members in the selection process. Each artist will bring their own interpretation and technique. We want to avoid the case where the final artwork is too abstract or elaborate where it distances community members from the experience.

- **Are materials that the artist frequently works with available locally and easy to maintain?**
- **Does the artist's vision align with the values held by the community members?**



## Funders

A state-funded commission might mean the artwork belongs to the state's collection instead of being owned by ACE or Alsea. This does not automatically mean the community cannot enjoy it. In fact, being state-owned might help with maintenance and promotion. It is important to make the decision on who will fund the project with the community.

- **Who owns and benefits from the final product?**



← A wedding archway composed of various tree branch shoots gathered and assembled collaboratively shows an example of both beautiful and practical community forest art.

## STEPS TO MAKING ART IN PUBLIC SPACES

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# 1

### Develop community cultural asset list

There are customs, traditions, and sentiments that strengthen the characters of our community. An inventory of these intangible cultural assets can lead to unexpected collaborations. For instance, working with Alsea historical society to uncover an untold past or convening students to envision Alsea's near future can lead to wonderful ideas for public art. What stories, concepts, ideologies, and virtues capture the essence of the Alsea community? Having the arts physically encapsulate those elements in time and space is a powerful tool for building a sense of community.

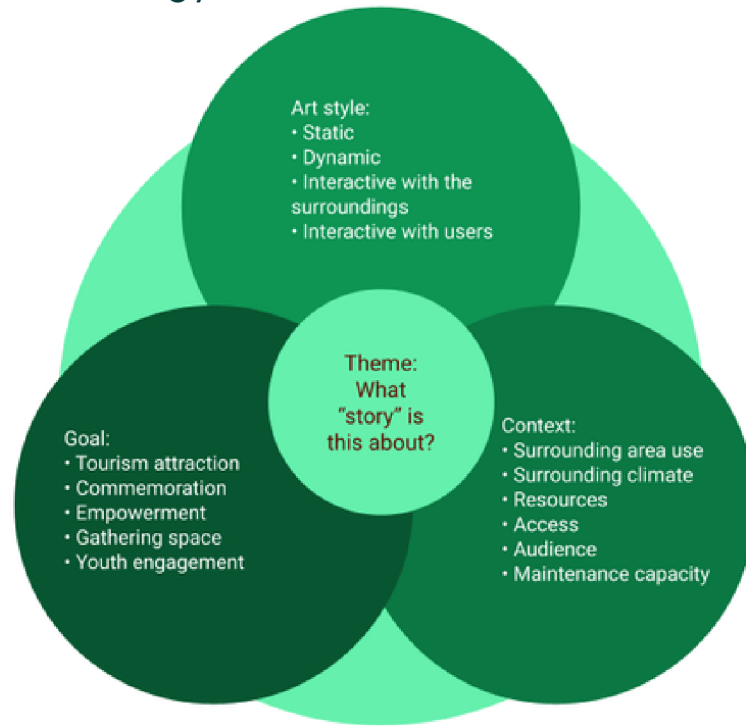
# 2

### Develop public arts strategy

A public arts strategy informs the choices of the artist.<sup>17</sup> It is important to have a clear vision of how the final artwork will be used. The commission team should have a clear goal, context of the art, art style, and description of the audience ready before they meet with artists. The figure below represents a framework for developing the public arts strategy.



A figure representing a framework for developing public arts strategy.



# 3

## Partner with outside organizations

The state of Oregon has the “Percent for Art” program where they work with the community to commission and acquire public arts. Through establishing a selection committee, they facilitate the process of developing ideas, making an open call for artists, review and interview artists, artwork selection, and provide artists with feedback. The Oregon Art Commission also offers grants for community-based organizations as well as operating support. In addition, other non-profit organizations offer assistance in developing public spaces, for example, Trust for Public Land helps communities build outdoor spaces. Expert help is readily available when it comes to creating public art spaces.

# 4

## Placing arts in the community forest

Something to consider as you are geared up to put art in the community forest. **Connection to the land:** not only the history but the material used in the art piece itself. **Weather:** for the art to last a lifetime, the art should withstand the changing seasons in the area. **Workshop opportunity:** thinking about the surrounding space for potential future workshops. What stories connect the art with the forest that the community can learn from?



## **PART II**

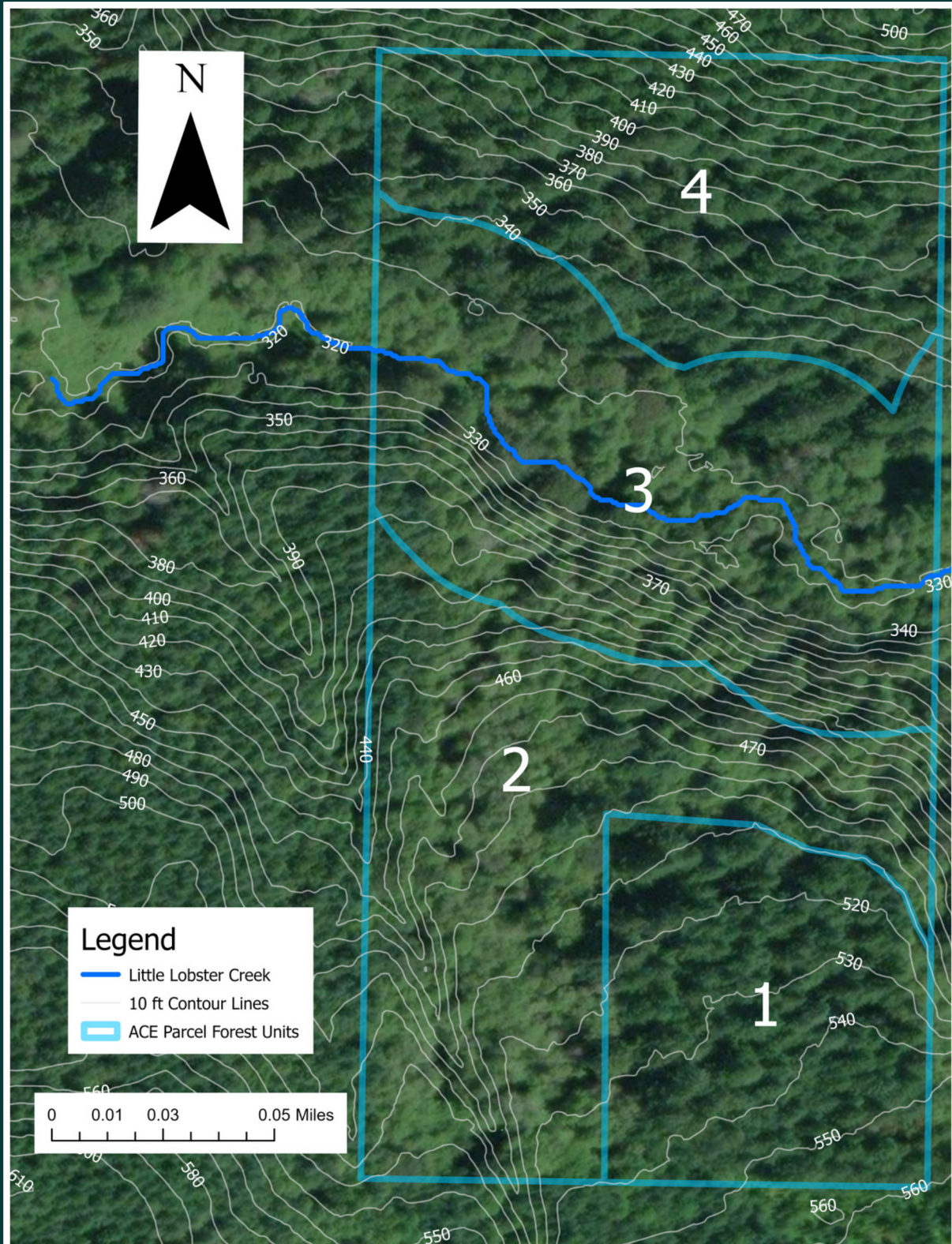
# **Parcel Features & Trail-building Considerations**

This section considers the biophysical and technical characteristics of the ACE parcel, including forest stand information, tax lot and access information, and trail-building considerations



# PARCEL MAP

Included below is a map of the parcel with units separated by forest type and slope position. Also included are 10ft contour lines showing the topography of the area.



# STAND DESCRIPTIONS

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## Unit 01 Upland Douglas-fir Stand

The overstory of Unit 1 mostly consists of Douglas-fir (*Pseudotsuga menziesii*) while the understory contains a variety of Douglas-fir associated species including Oregon grape (*Berberis aquifolium*) and sword fern (*Polystichum munitum*). Unit 1 is 3.57 acres.



## Unit 02 Upland Big-Leaf Maple Stand

The majority of the overstory is dominated by Big Leaf Maple (*Acer macrophyllum*) with scattered Douglas-fir trees in the northeast part of this unit. Without further survey of this unit, the assumption is that the understory contains native species such as Oregon grape and sword fern, but also invasive species such as English holly (*Ilex aquifolium*) and Himalayan/Armenian blackberry (*Rubus armeniacus*). Unit 2 is 6.02 acres.



## Unit 03 Riparian Big-Leaf Maple Stand

The overstory of Unit 3 is co-dominated by Big Leaf Maple and scattered Douglas-fir on the south side of Little Lobster Creek. On the north side of the creek, there are mostly Douglas-fir in the floodplain of the creek. Understory composition is largely unknown but likely consists of similar compositions found in Unit 2 with differences depending on slope conditions. Unit 3 is 6.36 acres.



## Unit 04 Lower Step Douglas-fir Stand

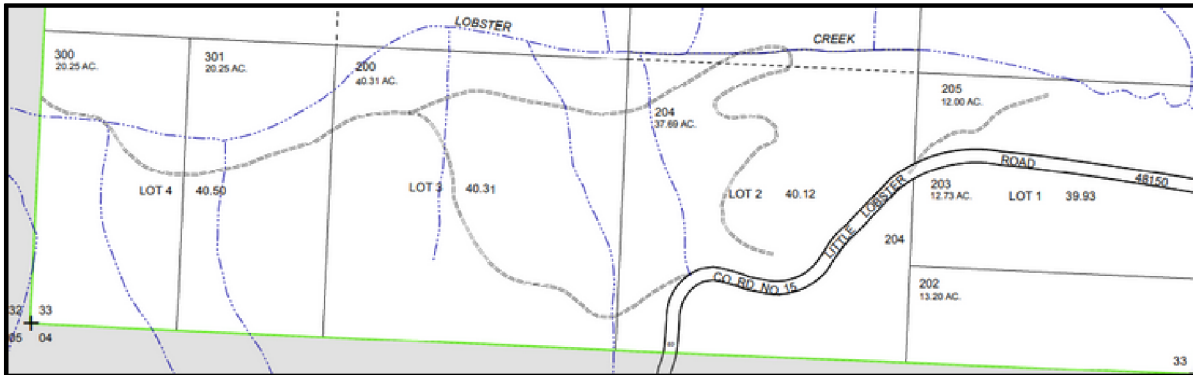
Unit 4, which is located on the northernmost part of the parcel is defined by its near continuous overstory of Douglas-fir. Based on recent aerial photographs, it has similar overstory canopy features that are seen in Unit 1 and could be of similar age. Without ground truthing the understory composition, we can assume that given the comparisons between overstory compositions and structure, the understory in Unit 4 most likely matches Unit 1. Unit 4 is 4.66 acres.



# PARCEL ACCESS

## ACE Tax Lot

The tax lot (148330000300) was donated to ACE on April 6, 2017 by Larry King. There are no other county sale records for the parcel. There are survey records for the tax lot that can be found on the Benton County tax assessors' website. The survey years were 1987, 1986 (records obtained in 1986 survey were included in the 1987 survey), 1915, and 1892.



## Access to the Parcel

There might have been an easement on a pre-existing road (shown in the [Section 33 T.14S. R.8W. map](#) above) that starts east from the southwest corner of tax lot 204 to the northeast corner of tax lot 300 (ACE parcel). A living trust was formed in 2019 under Deed Ref # 2019-588768 by Donald and Maureen Carr (address: 1331 SE MIMOSA DR, GRESHAM, OR 97080 USA). It is unknown how the easements were tied into the living trust deed. There are more maps and documents pertaining to neighboring tax lots and their owner information in [Appendix E](#).

Oregon law allows for access to landlocked lands. There are a few ways to go about gaining access to landlocked lands but all of them require acknowledgement and a notarized agreement between the party wanting to gain legal right to use the easement and the party that is being burdened by the easement (ORS 105.170).

In the case of the ACE owned forest parcel, one route is to confirm the existence of prior easements through tax lots 301 and 200. Another way to acquire access is through the courts. Easement by Way of Necessity under ORS 376.150 to 376.200 appears to be a common way to be granted access but all other options for access must be exhausted before undergoing this process. Legal counsel should be sought to more thoroughly answer these questions.

# HOW TO BUILD A TRAIL

So if you want to build a community trail, where do you start? Building a trail is complex, and needs to have a clear purpose from the get-go. The “Trail Triangle” is a useful framework for thinking about the multiple forces at play in trail systems. The key segments of the Triangle are Ecological Forces (habitat, topography, impacts, etc.), Social Forces (users, experience, accessibility, etc.), and Managerial Forces (economic constraints, trail management, etc.). This framework rests on the understanding that trails are designed to connect human communities to ‘natural’ spaces. Here, we provide several key questions to consider at the outset of the project, compiling information from a variety of resources available in the [Appendix A](#).



## Who decides what the trail looks like?

This question should be addressed by answering a different question: Who will use the trail, and why? Who are the community stakeholders that should be involved in the planning and creation process? What responsibilities does each stakeholder have? Trails should reflect the diversity of the needs of the people that use them.

## What infrastructure is needed?

Once a trail’s purpose has been identified, some time should be spent in figuring out the trail route (“where is it going?”), the biophysical strategy (“how does it get there?”), and the key infrastructure (“what help is needed along the way?”). Identifying these factors will inform the cost, time, and maintenance. Infrastructure needs, in particular, are a key part of the planning phase. A clear trailhead, clear parking, an outhouse, benches, signage, clearings for groups, and possibly a bridge, will likely all be required.

## Who will pay for it?

An abundance of funding sources exist from federal, state, private, nonprofit, and philanthropic sources (see the financing section). Consider and build on the existing networks within Alesa for a strong proposal. Don’t forget to consider the costs at each stage of the trail project, and make a case for why and how this network will benefit the community.

## How will the trail be maintained?

Can the project be built and maintained by volunteers, or are private contractors required? Volunteer trail crews are useful for simpler tasks like brush clearing, minor excavating, or erosion control. Contractors would be required for bridge and outhouse construction, and sign creation. Consideration should be paid to upkeep, as well: How often will trails need to be brushed? Who will do this?

# TRAIL BUILDING FAQ'S

Some additional key questions to ask before building your trail, with suggestions from the class. Keep in mind, this list is not exhaustive.



## Topography

### Will topography affect construction and accessibility?

- The parcel consists of a complex of slopes around riparian areas and a flat bench in zone 1. We anticipate the slope down to the creek being a challenge. **See topographic map on page 25.**

### What will water flow look like across the parcel?

- Water will drain into the soil on the parcel pretty well. However, on a compacted surface such as a trail, surface water could lead to small-scale rills and erosion if it is not diverted off-trail in sloped areas.

**Did you know?**  
One trail expert says the #1 request she gets from land managers is that a trail be as 'self-sufficient' as possible.



## Habitat

### What habitat assessments are necessary before construction?

- Start with defining and identifying potential sensitive habitat and species.
- Then conduct biological surveys to identify any sensitive areas on the parcel.
- Critical habitat for spotted owls and salmon spawning habitat are examples of what could be present on the parcel.

### Is a National Environmental Policy Act (NEPA) assessment needed?

- Would not be required, unless you secure federal funding, in which case it might be needed. NEPA assessments are often challenging for small non-profits, so consider this when writing grant proposals.



## Stream

### Do you want the trail to cross the creek or is an overlook at the creek sufficient for your needs?

- This is important to consider, as crossing the creek will allow for more trail and access to the rest of the parcel, but this will require additional considerations for habitat and streams, which are often more heavily regulated for construction.

### Key Point

A thoughtful planning process, investing adequate time and resources early on, and a strategic building plan will reduce costs of maintenance and increase the lifetime of your trail.



# TRAIL BUILDING FAQ's



## Soil & Erosion

### What type of soil is on the parcel and how susceptible is it to erosion?

- Most soils in the area are well draining and a trail should not lead to mass failures of hill slopes.
  - See **Appendix F** for additional soil details on the parcel

### Where might erosion be an issue?

- Erosion will mostly be a problem on the slope down to the creek. Water will move faster here on the trail and sloped soils are more susceptible to failure/erosion both on and off the trail.



## Landscape Features

### What features do you want people to see and experience (Lobster Creek, significant trees, different parcel units, etc.)?

- During surveys or the planning process, you should walk the parcel and identify features you want to incorporate into your trail.
- The parcel has a few different forest types you can route the trail through. (See 'Stand Descriptions' above)

### What features will be a challenge to construction (trees, boulders, ditches, etc.)?

- This question is often answered during the construction process, but it serves as a reminder that you must plan out the route of your trail and not just start digging.

### Did you know?

Better signage means a safer experience, a more accessible trail, and less overall erosion.

The social and ecological impacts of trail networks are complex. Trails could potentially change native plant densities and composition, increase erosion of soils, change human-wildlife interactions, and increase litter. However, securing access to open spaces can be beneficial to local communities and allow for many educational opportunities which may outweigh potential negative impacts.

### A Note on Accessibility:

It is important for the trail to be accessible to everyone, even those with disabilities. To comply with the Americans with Disabilities Act (ADA), efforts must be made to assure that people with disabilities can participate. For trails, this includes considering the appropriate grade, width, and firmness so that wheeled devices can navigate the trail. Physical barriers to access include: loose substrates, steep side slopes, steps, exposed tree roots, large rocks, narrow passageways and high railings. Social barriers to access include: unclear or incomplete information about accessibility of features, discontinuity of accessible features, inaccessible or incomplete signage, and lack of an outhouse. For additional resources, consult "Willamette Partnership Accessibility Toolkit for Land Managers," or "KASA Adaptive Trail Standards."

# TRAIL CHARACTERISTICS

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**Trail length:** To serve a broad suite of possible uses, we suggest that a path with convolutions (i.e. lots of twists and turns) will maximize distance and create an interactive space. Based on a GIS analysis, we expect a trail 2 km in length is likely the maximum possible within the parcel.

**Trail width:** The US Forest Service standard is a cut 8 ft wide, 10 ft high. If the trail only gets brushed every few years, a wider and higher cut will be required.

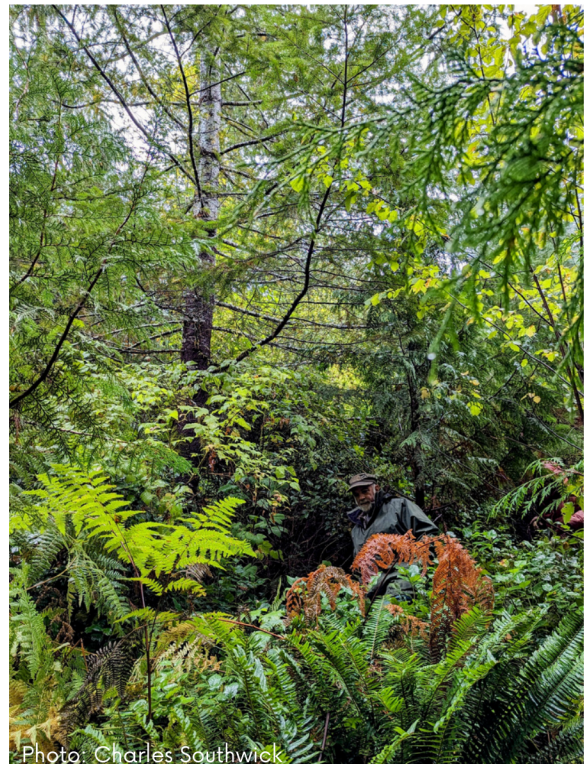
**Brush clearing:** Tree saplings should be removed from the trail. Flowers can be left. Blackberry and salmonberry should be cut back, especially on the slope. An annual brush clearing is likely.

**Expected usage volume:** Low, but with large groups at a time for educational experiences. Small clearings along the trail, for groups of students to congregate and work on activities, would be valuable.

**Rocks:** Rocks on trails can be challenging for accessibility. Rocks on a downslope side of trail can help prevent erosion. Rocks on the upslope side of a trail will push hikers to the downslope side, and create more erosion.

**Trail substrate:** Ideally, some firmer materials would be brought in to help with accessibility. Packed dirt is okay.

**Topography and Slope:** Switchbacks are required for slopes steeper than 15%. On the parcel, the slope to the stream is ~65%. This is roughly the typical angle of stairs. We do not recommend stairs because it would greatly limit accessibility (and increase costs).





# TRAIL BUILDING TECHNIQUES



Photo: Charles Southwick



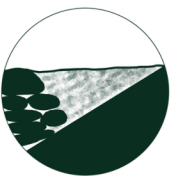
## 01 Reinforced Grade Dips

These should be every 20-50 feet across a slope. The idea is to use the 'lay of the land' to allow water to exit the trail where it naturally would if it had an outlet. A grade reversal (a gentle down followed by a gentle up) is used to send water downslope, and combined with a buried log 'checkdam' (to act as a blockade) funnels water down slope.



## 02 Benches/Cutbanks

These are created by cutting the full width of the trail into the uphill side, dug all the way down to mineral soil if possible. These are especially useful at the top of a switchback, and create a sort of 'retaining wall' effect.



## 03 Retaining Walls

These level a trail by incorporating a big rock as the foundation on a downslope side of a trail, with smaller rocks stacked on top and leaning inward (upslope). Rock and mineral soil 'infills' the space between the rocks and trail, creating a level plane.



## 04 Rolling Crown Switchbacks

This switchback is useful for preventing erosion and managing water flow. Variations in slope throughout the bend of the turn create a mound at the center of the bend which shunts water to the periphery rather than towards the center.

See **Appendix A** for references and helpful guides, from which much of this Trail Building Considerations section is compiled.



## **PART III**

# **Next Steps**

This section considers financing avenues, community engagement opportunities, and potential partners that would enable this proposed plan to materialize.



# FINANCING: TIMBER ASSET

In Oregon, timber harvest is a common management option for small landowners to generate revenue. While our focus in this document is on a proposed trail, there may be interest from the community for harvest at the site. Included on this page are regulation considerations for the parcel and notes on feasibility of harvest at the site.

## FPA Regulation Considerations for Harvest

The ACE parcel is a complex matrix of varying forest, soil, riparian, and slope types. As such, there are a few different sections of the newly updated Oregon Forest Protection Act that the parcel would have to comply with to legally harvest timber on site. The most relevant sections pertain to stream and slope protections, relevant for 9.71 acres or 47.9% of the parcel.

### Stream Protections

With 875 ft of Little Lobster Creek (a large, salmonid-bearing stream) running through the parcel and 3,473 ft of non fish-bearing tributaries within the parcel, there are certain protections which prohibit harvesting within stream/riparian buffers. Little Lobster Creek would require a 110 ft buffer and its tributaries would require a 35 ft buffer (at the small forestland owner minimum; OAR 629-643-0140(2)(a)). The Little Lobster Creek buffer would need to be increased to 130 ft if the small forestland owner tax credit was pursued (OAR 629-607-0400). The harvest acreage would be between 10.71 and 11.71 acres with only riparian protections in place.

### Slope Protections

Given the slope of the parcel and the proximity of Little Lobster Creek, regulations under OAR 629-630-0915(1) or OAR 629-630-0920(7) would increase the former stream buffers to 170 ft or add on 30 ft to the small forestland owner minimum riparian buffer (total of 140 ft). To pursue the small forestland owner tax credit, the 170 ft buffer would need to be in place. The total acreage available for harvest after slope and riparian protections amounts to 9.71 acres or 47.9% of the parcel.

### Commercial Harvest Feasibility

The protections outlined above show that commercial harvest at the site would be considerably limited. Consultation with the State Forester is heavily recommended due to the complexity of compounding protections required for commercial harvest.

### Non-Commercial Harvest Feasibility

If access at the site is acquired, there are a number of individual trees that could be sold to local woodworkers with less restrictions than a commercial harvest. While there are no estimates for what revenue could be generated through this route, it would require less formal considerations than a commercial harvest.



# FINANCING: CARBON CREDIT

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## VIABILITY OF FOREST CARBON PROJECT

An increasing number of forest owners in the U.S. are developing forest carbon projects to bring in additional sources of revenue for forest conservation. The vegetation, including in their roots, sequester carbon from the environment, and projects can be developed to sell the credits of sequestered carbon in the forest. Companies buy such credits to offset their carbon footprints (e.g. CO<sub>2</sub> emission) in voluntary carbon markets. We conducted back-of-the-envelope calculations to see whether a carbon project on the ACE forest parcel is financially viable. We found that due to the small size of the parcel, costs for current accounting methodologies, and the market price for forest carbon credits, a carbon project does not look feasible even under the most optimistic scenario for the ACE forest parcel.

A rough estimate of live tree carbon stock in the parcel in 2023 using The Resilient Land Mapping Tool of The Nature Conservancy<sup>18</sup> is 1,782 metric tones. Lower Step Douglas-fir has more carbon stock density than other forest types. The annual live tree carbon sequestration rate in the parcel is estimated at 0.79 metric tones/per year. For a 20-year project period, the revenue would be \$75,463, while the cost of project development, including carbon project registration, baseline and subsequent measurements, verification, and development of Greenhouse Gas Project Plan would be more than \$100,000. Although lower cost carbon project options for small land parcels do exist (see [NCX: https://ncx.com](https://ncx.com)), the market for such unverified carbon credits is uncertain due to recent controversies around some carbon initiatives that make it difficult to ensure the integrity of these projects.





# FINANCING: GRANTS

Perhaps the biggest hurdle to building a trail is obtaining the budget to do so. Above we have described the limited viability of both commercial timber harvest and carbon accounting. Both would be difficult if not impossible to administer at the site. Below are a few selected grant opportunities we recommend ACE consider applying to which are specific to our proposed ideas.

## FOREST ACQUISITION & TRAIL BUILDING RELATED GRANTS

GRANT	DESCRIPTION	ELIGIBILITY
<p><b>Local Government Grant</b> <a href="#">[LINK]</a> Oregon Parks &amp; Recreation</p> <p>\$40,000+ ; see matching criteria</p>	<p>Grant for land acquisition, development, &amp; major rehabilitation with goals consistent with statewide outdoor recreation goals &amp; objectives (<a href="#">SCORP</a>).</p>	<ul style="list-style-type: none"> <li>• Based on needs of public &amp; expected use</li> <li>• Emphasis on health &amp; safety</li> <li>• Projects should incorporate sustainability</li> <li>• conformance with state &amp; federal guidelines</li> </ul>
<p><b>Recreation Trails Grant</b> <a href="#">[LINK]</a> Oregon Parks &amp; Recreation</p> <p>\$10,000+ ; see matching criteria</p>	<p>Grant for construction of new trails or rehabilitation of existing trails, improvement of trailhead or support facilities, &amp; land acquisition for trail development, or safety and education projects</p>	<ul style="list-style-type: none"> <li>• Emphasis on project elements; signage, bridges, trail restoration, etc.</li> <li>• Purchase, lease, or rental of equipment dedicated to trail building and trail maintenance activities</li> </ul>
<p><b>Oregon Parks Foundation Fund</b> <a href="#">[LINK]</a> OCF 50</p> <p>\$1,000-5,000</p>	<p>Grant to assist with environmental, recreational, and educational improvements to Oregon's public parks.</p>	<ul style="list-style-type: none"> <li>• Connection to parks, publicly accessible or undeveloped land</li> <li>• Educational component for youth and/or adults</li> <li>• Park opportunities for underserved communities (e.g., low-income, minority, rural pop'ns)</li> </ul>

# FINANCING: GRANTS

GRANT	DESCRIPTION	ELIGIBILITY
<p><b>Community Forest Program</b> [<a href="#">LINK</a>] US Forest Service</p> <p>Up to \$60,000; requires 50% non-federal match</p>	<p>Supports aquisition of forests to provide public access and recreational opportunities, protect water supplies, habitat, and provide economic benefits from timber and non-timber forest products.</p>	<ul style="list-style-type: none"> <li>• Public access is required</li> <li>• Lands actively managed in accordance with community forest plan to provide community benefits.</li> <li>• Forest is at least 5 acres, suitable to sustain natural vegetation, and is 75% forested</li> </ul>

## COMMUNITY ART RELATED GRANTS

<p><b>Our Town Grant</b> [<a href="#">LINK</a>] National Endowment for the Arts</p> <p>\$25,000 - \$150,000; requires equal match</p>	<p>A project-based grant; supports activities that incorporate art, culture, and design into local efforts that strengthen communities over the long term.</p>	<ul style="list-style-type: none"> <li>• Requires a partnership (local government or non-profit).</li> <li>• NEA offers the Our Town Creative Placemaking Technical Assistance (CPTA) program that supports grantees in training.</li> </ul>
<p><b>Arts Build Communities Grant</b> [<a href="#">LINK</a>] Oregon's Art Committee</p> <p>\$5,000; requires equal match</p>	<p>Project-based grant; supports community art-based projects that address community problems, issues, or needs</p>	<ul style="list-style-type: none"> <li>• Priority given to projects that provide access to art for historically and currently underserved and under-resourced communities; including socio-economic status and geography.</li> <li>• Successful projects build capacity to strengthen arts in community through partnerships.</li> </ul>



# COMMUNITY ENGAGEMENT



"Calling all Alsea Valley residents!

ACE would like to announce an exciting opportunity to join neighbors in choosing and planning what to do with the new community forest plot. Get in on the ground floor of planning; your input is valued and important. We have so many ideas to share and want to hear yours, too!"

## 01 What

A key element to the success of any community forest project is the support and participation of local residents. Integral to ramping up participation is clear communication about the parcel, the options available on the parcel, the level of engagement ACE wants from the community, and the decision-making power available to residents. Whether people will have voting rights or not in the activities, clarity about it will be important for people to feel comfortable participating. The goal is to remove as many barriers to participation as possible.

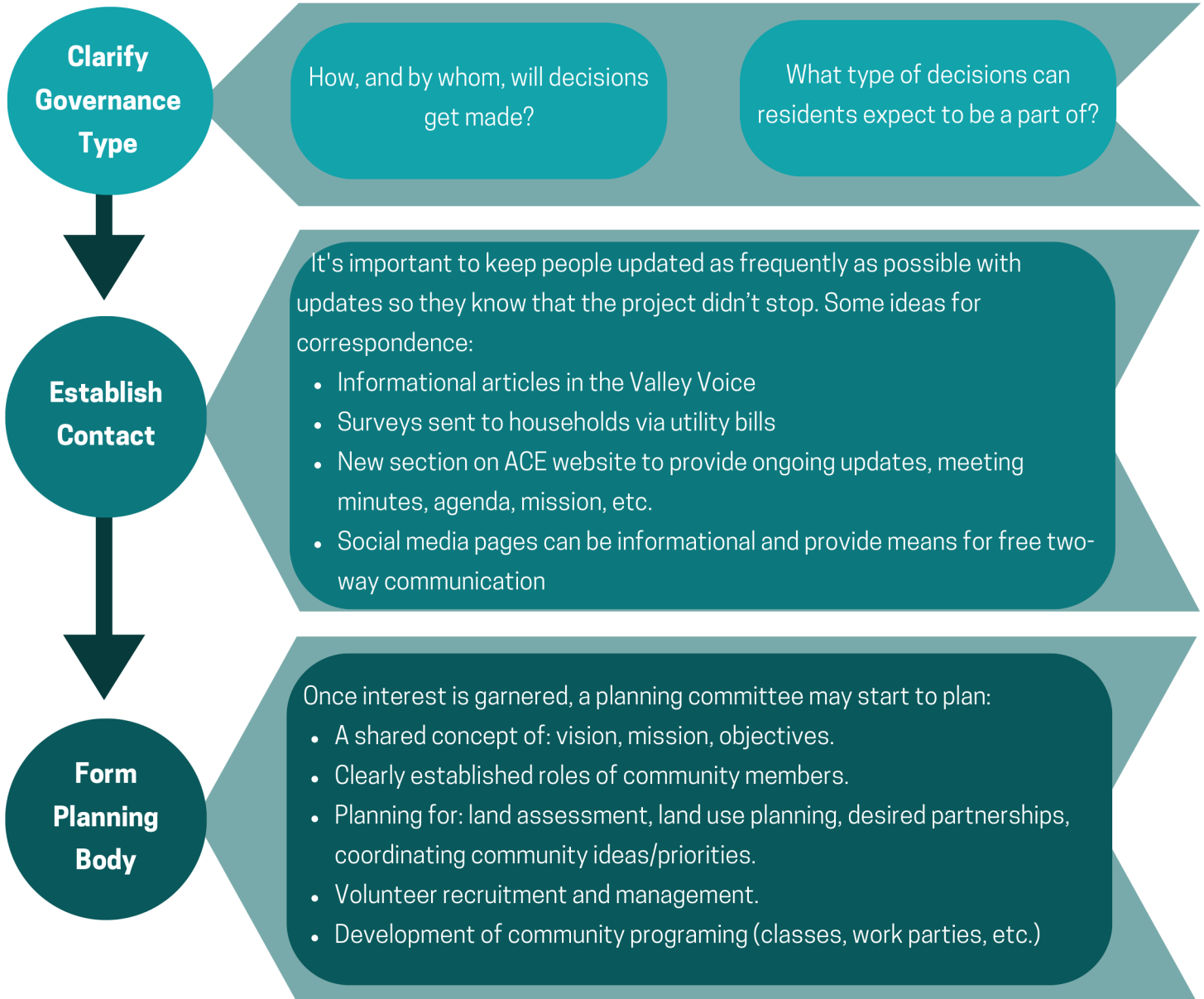
## 02 Why

The planning and development of the community trail can be started with as much community involvement as possible. For example, community members could be brought together at the very beginning to plan and execute ideas, like learning how to survey, clear brush, or build trails. Alternatively, ACE could (depending on funding) contract out the initial development work and then present the community with a project a little farther along so that community efforts can focus on programming in the forest rather than building out an accessible plot first. Bringing people in on initial planning stages can help foster stronger buy-in and a sense of ownership; however, considerations to prevent volunteer burn-out are good to keep in mind.

## 03 How

Once funding and parcel access are established, the next step is to engage the community. This might look something like sending out an informational article in the Valley Voice about the parcel, and/or including a survey in the Valley Voice to hear back from residents about their ideas for the parcel. This could lead to a section on the ACE website with more information and/or could lead to community meetings at the library to start building the asset map mentioned previously. These meetings can evolve into volunteer work parties for trail building or other land clearing and building activities. Depending on ACE's preference, the ACE website or the library could become the planning hub for keeping people in the know about current updates. The more people stay apprised of ACE parcel happenings, the more likely they will be to get involved in future projects. It may also be good to put out a long-term plan for the community forest, to help residents conceptualize at what points they could see themselves getting involved, as well as an outline of specific skill sets that may be needed for projects or that could be learned through the community trail development process.

# Model of Community Engagement Process



## Tips for Success In Communications

Establish a framework for communication strategies and how conflicts will get resolved, ideally before they occur.

Be clear about the benefits participants may gain to promote participation.

Consider bringing in a facilitator with experience in Community Forest coordination to help get the ball rolling for the participation and planning process.

Look to other community forests in the region for guidance on technical assistance and management.



# Conclusion

We hope that this document will help fuel the start of a prosperous community forest that can benefit the Alsea Valley for generations to come. We hope we have provided useful information, but we know this project may go in many different directions. This proposal is but one set of ideas that could play out on this landscape and we hope that at minimum we have sparked some inspiration and opened up some possibilities for the exciting future of this forest parcel.

Thank you!

# REFERENCES

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## Front Matter

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## Part I: Alsea Community Trail

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# Appendices



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# APPENDIX A: ADDITIONAL RESOURCES

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## Indigenous History

We encourage interested community members to learn more about Indigenous history and the ongoing impacts of colonization, and to strive to build relationships of mutual benefit with area Tribal members.

Some resources that may be of service include:

- **Quartux Journal:** by David Lewis, PhD (Confederated Tribes of Grand Ronde member and Professor of Anthropology and Ethnic Studies at OSU) (<https://www.ndnhistoryresearch.com/>)
- **Chachalu Museum and Cultural Center:** (<https://www.grandronde.org/history-culture/culture/chachalu-museum-and-cultural-center>)
- **Smoke Signals newsletter:** Confederated Tribes of Grand Ronde (<https://www.smokesignals.org>) Siletz newsletter (<https://www.ctsi.nsn.us/local-newsletters>)
- **The Voice of CLUSI:** - Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians (<https://www.ctclusi.org/communications>)
- **Coquille Tribe website:** (<https://www.coquilletribe.org>)

## Participatory Monitoring Manuals

- **Environmental Protection Agency; Volunteer Stream Monitoring: A Methods Manual**  
<https://www.epa.gov/sites/default/files/2015-06/documents/stream.pdf>
- **NRCS & BLM; Sampling Vegetation Attributes: Interagency Technical Reference**  
<https://www.nrcs.usda.gov/sites/default/files/2022-09/stelprdb1044175.pdf>
- **Handbook for wildlife monitoring using camera-traps:** [https://www.hutan.org.my/wp-content/uploads/Reports/Other%20reports/Camera\\_trap\\_manual.pdf](https://www.hutan.org.my/wp-content/uploads/Reports/Other%20reports/Camera_trap_manual.pdf)
- **NRCS; Forest Inventory Methods Technical Note:**  
<https://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=42554.wba>
- **NRCS; Soil Health Assessment(s):** <https://www.nrcs.usda.gov/conservation-basics/natural-resource-concerns/soils/soil-health/soil-health-assessment>
- **USGS; Monitoring Steam Temperatures - A Guide for Non-Specialists:**  
<https://pubs.usgs.gov/tm/03/a25/tm3a25.pdf>



# APPENDIX A: ADDITIONAL RESOURCES

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## Trail Building

- **Ready, Set, Plan Guide:** <https://www.blm.gov/sites/default/files/docs/2021-05/orwa-ReadySetPlan.pdf>
- **Ready, Set, Plan Guide Resource Links:**  
[https://docs.google.com/document/d/1SC160f0dqyWn0dsNfq3rRDyEvlHozjAlk\\_PHtbsPq7o/edit](https://docs.google.com/document/d/1SC160f0dqyWn0dsNfq3rRDyEvlHozjAlk_PHtbsPq7o/edit)
- **US Forest Service Trail Construction and Maintenance Notebook:** <https://www.fs.usda.gov/t-d/pubs/htmlpubs/htm07232806/page02.htm>
- **US Forest Service Trail Building and Maintenance Guide:**  
[https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb5343897.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5343897.pdf)
- **Wildcat and Linear Creek Trail Proposal:**  
<https://engext.ksu.edu/summer/files/summer/readings/Trail%20Proposal.pdf>
- **Willamette Partnership Accessibility Toolkit for Land Managers:**  
[https://willamettepartnership.org/wp-content/uploads/2020/10/AccessibilityToolkit\\_forLM\\_2020\\_Reduced.pdf](https://willamettepartnership.org/wp-content/uploads/2020/10/AccessibilityToolkit_forLM_2020_Reduced.pdf)
- **KASA Adaptive Trail Standards:** [https://kootenayadaptive.com/wp-content/uploads/2021/03/KASA-Adaptive-Standard\\_FINAL-EDIT2.pdf](https://kootenayadaptive.com/wp-content/uploads/2021/03/KASA-Adaptive-Standard_FINAL-EDIT2.pdf)
- **Coalition of Oregon Land Trusts:** <https://oregonlandtrusts.org/>
- **Trailkeepers of Oregon:** <https://trailkeepersoforegon.org/>

## Community Engagement

- **Community Forests (2011) Needs and Resources for Creating and Managing Community Forests (PDF):** <https://www.nwcommunityforests.org/your-forest>
- **Benefits of community-based forestry in the US:**  
<https://www.uvm.edu/~cdanks/RPTdocs09/Danks-IFR-final.pdf>

# APPENDIX B: FOREST PRODUCTS & SERVICES SPECIES LIST

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This section briefly overviews native plant species that can benefit the ecosystem and the greater Alsea community. All species listed are easy to establish and grow in partly shady to shady conditions. Cultural species are also noted. Indigenous Peoples have been stewarding these lands for millennia and have a wealth of knowledge regarding the benefits and management of native plant species. Recognizing and respecting this knowledge could help build relationships with surrounding Tribal Nations leading to more educational opportunities for the community.



**Food source, cover, or nesting habitat for birds**



**Food source or shelter for mammals**



**Nectar source for bees, butterflies, or other pollinators**



**Shelter for amphibians or reptiles**



**Edible plant parts**



**Cultural species traditionally used by Indigenous Peoples**



**Medicinal uses**

**Sources:** Agric4Profits, 2023; Bhusal et al., 2022; Caldwell, 2021; McMahan, 2008; Oregon State University, 2023; Phillips, 2016; University of Washington Bothell, 2023; USDA Forest Service, 2023

**Image source:** Oregon State University, 2023

# APPENDIX B: FOREST PRODUCTS & SERVICES SPECIES LIST

## Bigleaf maple

*Acer macrophyllum* Pursh.



**Description:** Large, deciduous, multi-trunked tree typically reaching up to 50 feet. Grayish brown, shallowly grooved bark. Large, deeply lobed leaves ranging from 4 to 12 inches across. Fruit is a green-brown, bristly, bi-winged samara. Supports many epiphyte species including moss, liverworts, and ferns.



**Uses:** Provides important habitat for many wildlife species. Ungulates, rodents, and invertebrates browse on the foliage. Small mammals and birds consume the seeds. Bees and other pollinators feed on the nectar. Frequent cover and nesting habitat for ungulates, rodents, birds, insects, and amphibians. The sap can be used to make maple syrup. Commercially used for lumber and to make furniture. Traditionally used by Indigenous Peoples as a fiber source to make clothing. Wood was used for making canoe paddles and household utensils. Medicinally used by Indigenous communities to treat sore throats.

## Red elderberry

*Sambucus racemosa* L.



**Description:** Large, deciduous, multi-stemmed shrub or tree reaching up to 20 feet. Opposite, pinnately compound leaves. Pyramidal clusters of white flowers mature into bright red berries.

**Uses:** Provides important habitat for many bird and mammal species. Browsing ungulates eat the foliage, while frugivorous birds and mammals consume the berries. Frequent nectar source for butterflies, bees, and other pollinators. While not typically eaten raw, cooked berries are often used in pies, jellies, and wine. Traditionally used by many Indigenous Peoples for its strong medicinal properties. Berries were used as an emetic, leaves were used to treat boils, and roots were used to treat stomach pains and sore muscles. Today, its medicinal uses range from treating sinus infections to reducing blood pressure. Extracts have been used in cancer treatments due to its anti-carcinogenic properties.





# APPENDIX B: FOREST PRODUCTS & SERVICES SPECIES LIST

## Cascara buckthorn

*Rhamnus purshiana* (DC.) A. Gray.



**Description:** Deciduous large shrub or small tree reaching up to 30 feet. Silver bark. Deeply veined, oblong leaves. Bell-shaped clusters of green-yellow flowers mature into purple-black berries.



**Uses:** Provides abundant thermal cover and shelter for wildlife. Common browse species for ungulates, especially during winter. Berries are consumed by several bird species, and nectar is consumed by butterflies and other pollinators. Strong medicinal properties. Bark is traditionally used by many Indigenous Peoples and in Western medicine as a laxative. Bark and dried berries were also used to create dyes.

## Beaked hazelnut

*Corylus cornuta* Marshall.



**Description:** Deciduous, multi-stemmed, large shrub or small tree reaching up to 20 feet. Velvety, doubly serrated, round to heart-shaped leaves. Hazelnuts are clustered in groups of 2 to 3 at the end of branches. Nuts are covered by a green, hairy husk forming a long "beak" extending past the fruit.



**Uses:** Important food source for many wildlife species. Hazelnuts are consumed by birds and mammals, and ungulates consume the foliage. Provides cover and shelter for birds and small mammals. Hazelnuts are edible and have many culinary uses. Traditionally used by Indigenous Peoples as a food source and to create household products, such as baskets, baby cradles, and fish traps. Medicinally used by Tribal Nations as an emetic and astringent.

# APPENDIX B: FOREST PRODUCTS & SERVICES SPECIES LIST

## Cascade Oregon grape

*Mahonia nervosa* Pursh.



**Description:** Low-growing, broadleaf, evergreen shrub growing up to 2 feet. Opposite, pinnately compound leaves. Dull, leathery, dark green leaflets with a prickly margin. Long clusters of bright yellow flowers mature into large, dark blue berries.



**Uses:** Provides year-round foliage cover for small mammals. Berries are consumed by a wide range of birds and mammals. Ungulates and small mammals browse the foliage, especially in winter. Common nectar source for butterflies and other pollinators. Berries are edible but tart and often cooked into pies and jellies. Traditionally used by Indigenous Peoples for medicinal purposes due to its strong antibacterial properties. Indigenous communities also used berries as a food crop and the roots to create dyes.

## Evergreen huckleberry

*Vaccinium ovatum* Pursh.



**Description:** Multi-stemmed, evergreen shrub growing up to 15 feet. Reddish-brown twigs covered in short hairs. Numerous, thick, glossy, dark green leaves. Flowers and fruits are abundantly produced. Clusters of small, bell-shaped, white flowers mature into purplish-black berries.



**Uses:** Berries provide an important food source for a wide variety of bird and mammal species. Considered a valuable browse species for elk in the Oregon Coast Range. Dense thickets offer suitable shelter and nesting habitat for birds and mammals. Berries are sweet and frequently used in cooking. Traditionally used by many Indigenous Peoples as a food source. Foliage is commonly used in cut flower arrangements.



# APPENDIX B: FOREST PRODUCTS & SERVICES SPECIES LIST

## Salal

*Gaultheria shallon* Pursh.



**Description:** Small, dense, low-growing, evergreen shrub reaching up to 5 feet. Reddish-brown stems with peeling bark at maturity. Thick, leathery, dark green leaves. Showy clusters of white to pink, bell-shaped flowers droop downward. Flower clusters are sticky. Fruits are purple to black, berrylike, and covered in small hairs.



**Uses:** Foliage serves as an important food source for ungulates. Berries are consumed by a wide variety of birds and mammals. Evergreen foliage provides year-round cover and shelter for amphibians, reptiles, birds, and small mammals. Nectar source for hummingbirds and other pollinators. Fruits can be eaten raw or used to make jellies, preserves, and flavoring agents. Traditionally used by many Indigenous Peoples as a food source and a medicine to treat coughs, tuberculosis, and diarrhea.

## Trailing blackberry

*Rubus ursinus* Cham. & Schltld.



**Description:** Low-growing, evergreen shrub with trailing vines reaching up to 20 feet in length. Densely prickled stems turn from green to brown as they mature. Deeply lobed, slightly hairy, toothed leaves with 3 leaflets. White flowers mature into shiny black berries when ripe.



**Uses:** Supports a large variety of wildlife species. Ungulates frequently browse the stems and leaves. Dense foliage cover provides good nesting habitat for birds and shelter for mammals. Berries are sweet, edible, with a wide range of culinary uses. Traditionally used by many Indigenous Peoples as a much-loved food source. Leaves and stems were used to make teas and tinctures, which served as a diuretic or mild astringent. Today, plant parts are used for an array of medicinal purposes as an anti-inflammatory. Berries are rich in antioxidants and essential nutrients providing immune support, promoting heart health, and reducing the risk of chronic diseases.



# APPENDIX B: FOREST PRODUCTS & SERVICES SPECIES LIST

## Salmonberry

*Rubus spectabilis* Pursh.



**Description:** Branching, perennial shrub reaching up to 12 feet. Stems have small thorns and brown, flaking bark. Large, compound leaves with 3 leaflets. Large, star-shaped, bright pink flowers. Fruit color varies from yellow and orange to deep red.

**Uses:** Provides important foraging source for numerous wildlife species. A variety of birds and mammals consume its fruits, seeds, stems, and leaves. A common nectar source for hummingbirds, bees, butterflies, and other insects. Dense, prickly foliage provides shelter and cover for birds and small mammals. Fruits are edible and tasty. Traditionally used by many Indigenous Peoples as a food source and medicine. Leaves and bark were used to treat diarrhea, burns, and sores on the skin.



## Stinging nettle

*Urtica dioica* L.



**Description:** Dense, spreading, perennial forb reaching up to 9 feet. Caution when touching, as leaves, stems, and flowers are covered in stinging hairs. Square-shaped stems. Opposite, heart-shaped, coarsely toothed leaves. Numerous, small, greenish flowers appear in drooping clusters.

**Uses:** Common indicator species of high soil fertility. Provides cover and nesting habitat for birds and some small mammals. One individual plant can support over 40 insect species. Boiled leaves are edible and high in vitamin C and iron. Leaves can serve as a vegetable substitute, and powder made from the leaves can be added to breads and pasta to increase nutrients. Fibers are used in the textile industry to make clothing. Traditionally used by many Indigenous Peoples to make cordage and fishing nets. Roots were also used to treat rheumatism. All parts of the plant possess anti-inflammatory, antioxidant, anti-infectious, hypotensive properties. It can treat respiratory issues, reduce the risk of prostate cancer, boost the immune system, prevent kidney stones, strengthen bones, and improve feminine health, heart health, gastrointestinal health, and blood circulation.



# APPENDIX B: FOREST PRODUCTS & SERVICES SPECIES LIST

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## Pacific bleeding heart

*Dicentra formosa* (Andrews) Walp.



**Description:** Herbaceous perennial herb reaching up to 2 feet. Delicate, deeply lobed, fern-like leaves. Clusters of pendant-shaped, pink to purple flowers droop downward.

**Uses:** Ideal groundcover species providing shelter for amphibians and reptiles. Nectar source for butterflies, bees, hummingbirds, and other insect pollinators. Roots were traditionally used by Indigenous Peoples to treat toothaches and stimulate hair growth. Today, the root can be used as a pain reliever for sprains and bruises, and as a sedative to alleviate anxiety, stress, or insomnia.



## Northern inside-out flower

*Vancouveria hexandra* (Hook.) C. Morren & Decne.



**Description:** Deciduous, perennial herb reaching up to 2 feet. Ternately compound, delicate leaves shaped like a duck's foot. Numerous, small, white to pink flowers droop downward. Petals are turned up resembling a shooting star.



**Uses:** Ideal ground-cover species providing shade and shelter for amphibians and reptiles. Supports bees, other pollinators, and beneficial insects. Medicinally used to treat sinus congestion, chronic rhinitis, and hay fever.



# APPENDIX B: FOREST PRODUCTS & SERVICES SPECIES LIST




## Wild Mushrooms

Western Oregon is home to a rich diversity of wild edible mushrooms. This section provides a brief overview of several common species found in this region. **Please exercise caution** when mushroom foraging and consult with additional resources or experts before consuming wild mushrooms.



Scientific name	Common name	Foraging season	Associated vegetation	Photo
Cantharellus formosus	Golden chanterelle	July- November	Douglas-fir, oak, western hemlock, ferns, vine maple, Oregon grape	
Boletus edulis	King bolete	May- October	Douglas-fir, oak, western hemlock	



# APPENDIX B: FOREST PRODUCTS & SERVICES SPECIES LIST

Scientific name	Common name	Foraging season	Associated vegetation	Photo
Morchella spp.	Morels	April-August	Deciduous trees	
Hydnum repandum	Hedgehog	October-February	Mixed conifer and hardwood trees	
Hypomyces lactifluorum	Lobster mushroom	July-October	Conifer trees	

# APPENDIX B: FOREST PRODUCTS & SERVICES SPECIES LIST

Scientific name	Common name	Foraging season	Associated vegetation	Photo
Tricholoma magnivelare	Matsutake	September-November	Pine, western hemlock	
Pleurotus ostreatus	Oyster mushroom	March-May	Deciduous hardwood trees	

Sources: Central Oregon Mushroom Club, 2023; Jones & Buttolph, 2012; Oregon Discovery, 2016; Pearce, 2023

Image sources: Oregon Discovery, 2016; Pearce, 2023

# APPENDIX C: INATURALIST PROJECT EXAMPLE

Title of the Class



## Stats

Totals

**1538**  
Observations »

**419**  
Species »

**23**  
People »

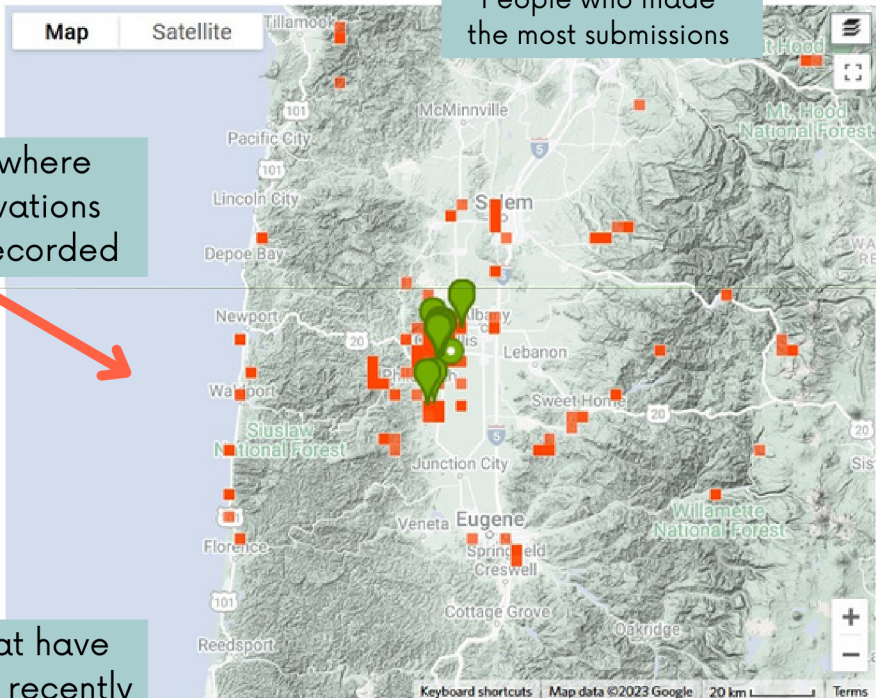
Total Number of People/Students

People who have seen the most diversity

Most Observations	Most Species	Most Observed Species
<b>User 1</b> 110 observations	<b>User 1</b> 97 species	<b>Nuttall's Toothwort</b> 24 observations
<b>User 2</b> 105 observations	<b>User 3</b> 90 species	<b>Osoberry</b> 22 observations
<b>User 3</b> 101 observations	<b>User 4</b> 87 species	<b>Coastal Manroot</b> 20 observations
<b>User 4</b> 91 observations	<b>User 2</b> 87 species	<b>Pacific Bleeding Heart</b> 19 observations
<b>User 5</b> 79 observations	<b>User 6</b> 75 species	<b>Giant White Fawn Lily</b> 19 observations

People who made the most submissions

Map where observations were recorded



Plants that have been seen recently

Recent observations [View All »](#)

**Members** 24 members

[View All Members »](#)

**Your Membership** 68 observations

**Add from Your Observations**  
[Download template for use in the bulk uploader](#)

**Export Observations**  
Atom / CSV

**Usage stats**

**About**

This is a private class project for the 2023 BOT425/525 Flora of the Pacific Northwest course at Oregon State University.

Instructor created this project on March 30, 2023

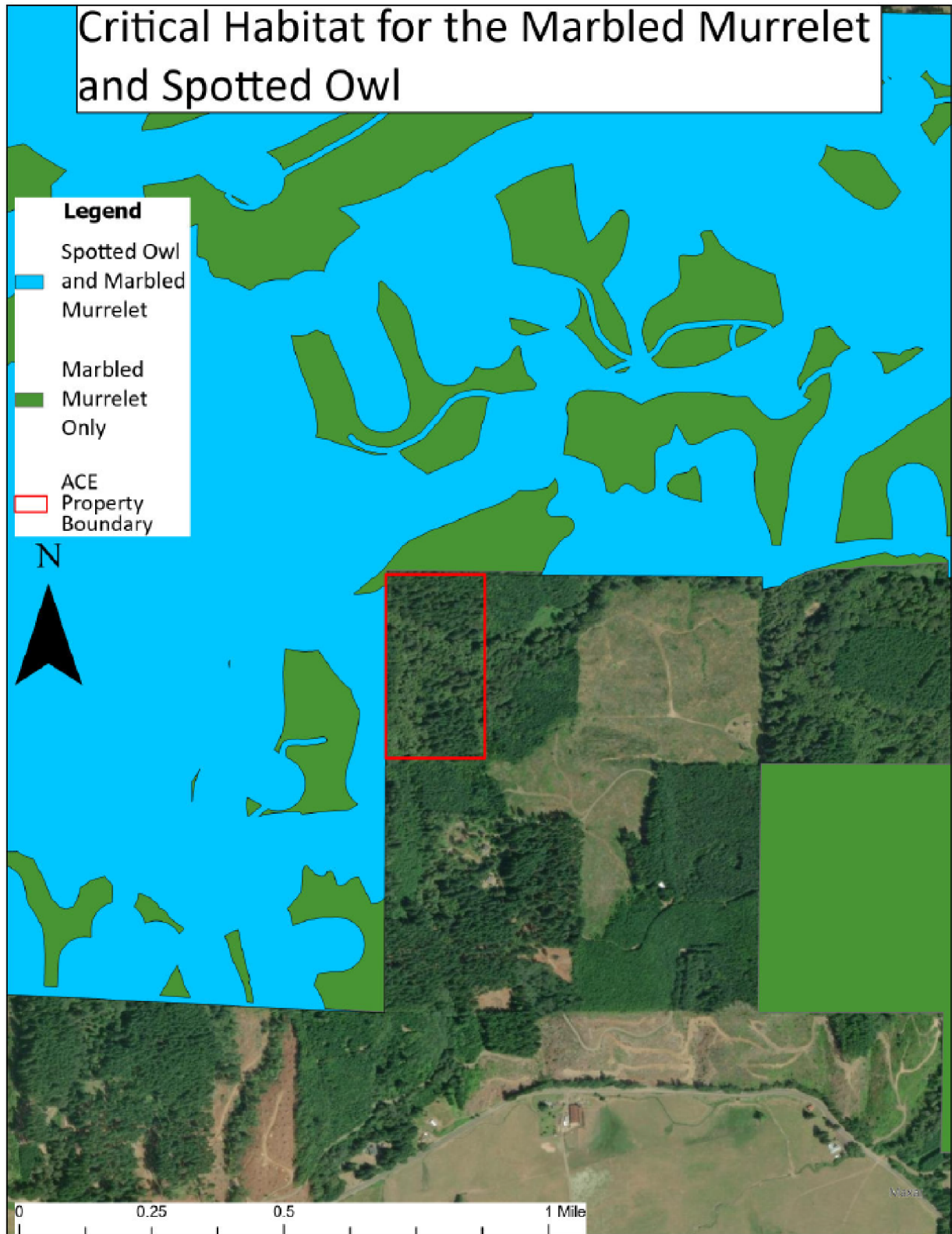
Is this inappropriate, spam, or offensive? [Add a Flag](#)

Description of the Project



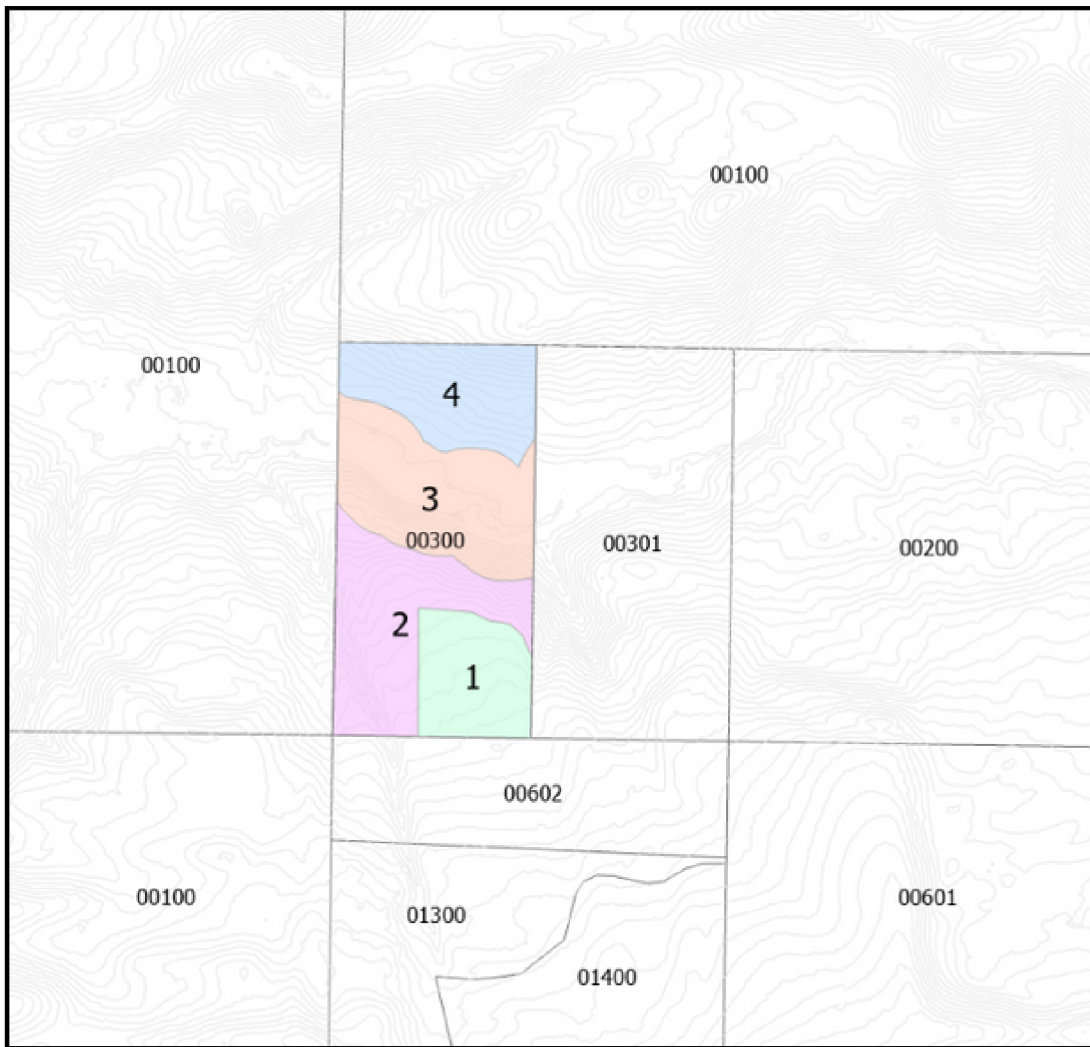
# APPENDIX D: CRITICAL HABITAT

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Map generated using USFWS Threatened and Endangered Species Data:  
<https://ecos.fws.gov/ecp/report/table/critical-habitat.html>

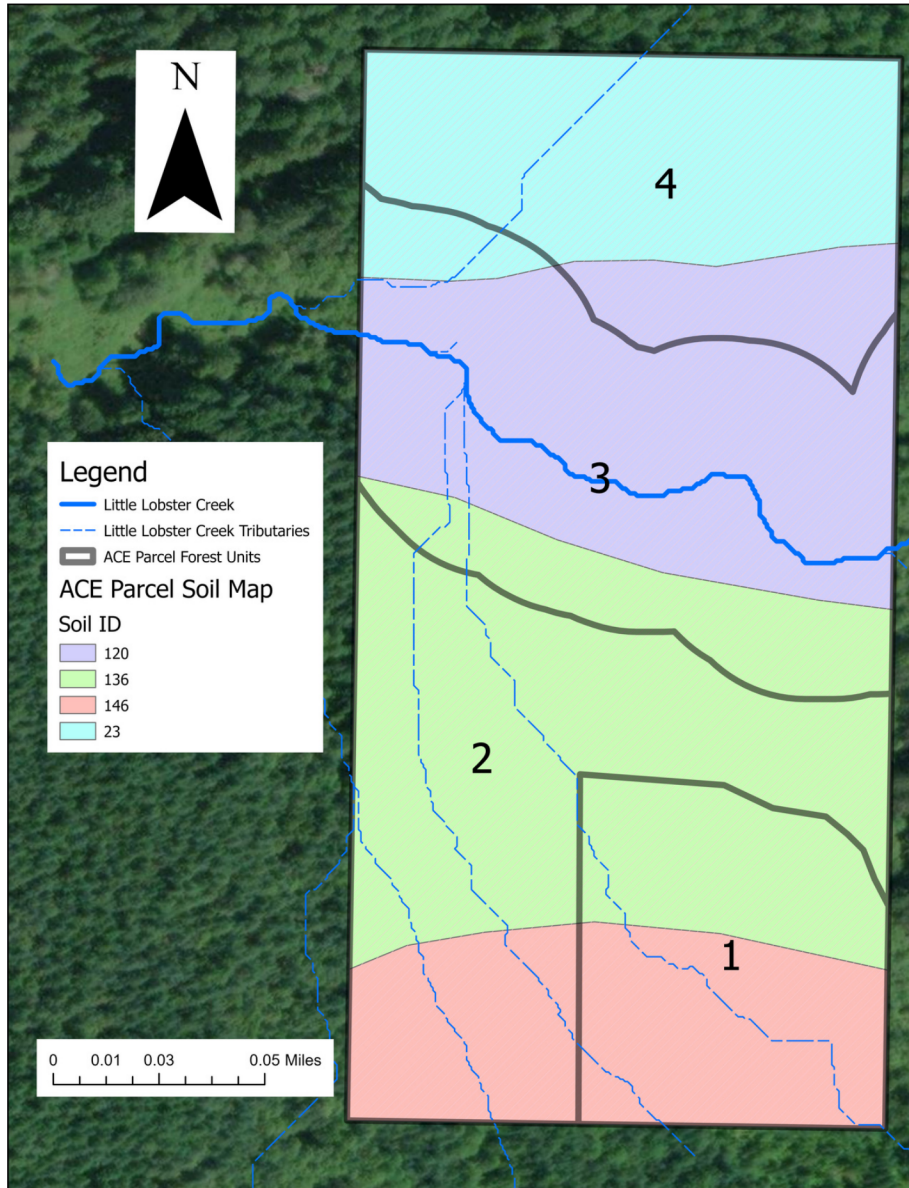
# APPENDIX E: TAX LOT INFORMATION



Simplified tax lot map showing the 4 vegetation type units and topography of the area. 10 ft contour lines show gradually sloped “flats” that lead to sudden drops in the landscape all the way to Little Lobster Creek.

OWNER	TAX LOT
ACE	300
Carr Living Trust	301
Alison Carr	200
Carr Living Trust	602
Alison Carr	601
US Government	100

# APPENDIX F: SOILS INFORMATION



Soil ID	Soil Types	Slope	Area	Drainage	Site Index	Erosion Hazard	Restrictive Layer Depth
120	Meda-Trehanne-Wasson Complex	0-20 %	5.5 acres	Well drained	Douglas-Fir-126.0ft	Moderate	6.1-10.2 cm
136	Preacher-Bohannon-Slickrock complex	35-60 %	7.5 acres	Well drained	Douglas-Fir-110.0ft	Severe	57.6-96.0 cm
146	Slickrock gravelly medial loam	3-25 %	3.5 acres	Well drained	Douglas-Fir-138.0ft	Moderate	5.1-7.6 cm
23	Bohannon-Preacher complex	30-60 %	4.1 acres	Well drained	Douglas-Fir-137.0ft	Severe	69.6-117.9 cm

Map generated from: [landmapper.ecotrust.org](http://landmapper.ecotrust.org) Data Sources: Soils: NRCS; Basemap: ESRI