

SOUTH SLOUGH RESERVE MANAGEMENT COMMISSION

July 8, 2026

174th REGULAR MEETING 10:00 am – 1:00 pm

**South Slough Reserve Auditorium
61907 Seven Devils Road, Charleston, OR 97420**

PUBLIC PARTICIPATION:

To receive the Zoom link, please email Patricia Fox, South Slough Reserve Manager, at patricia.fox@dsl.oregon.gov by noon on July 7, 2026. Public comments are for consent and action items only. If you would like to testify, please provide your name, address, and organization/affiliation, if any. Testimony will be heard in the order that requests for the meeting link are received. Written comments may be submitted until 12 p.m. on July 7, 2026, by emailing them to: patricia.fox@dsl.oregon.gov

AGENDA

I. Call-to-Order

II. Introductions

III. Review of Meeting Minutes

1. 172nd regular meeting minutes from April 16, 2026
2. 173rd regular meeting minutes from December 10, 2025

IV. Public Input*

V. Agenda Items

1. Updates – *Informational (including OMSI video)*
2. Fee Schedule - *Action*
3. Invasive Species Action Plan Discussion – *Informational*

4. Jade Pearison: Shifting Schools: Four Decades of Fish Biodiversity Change in South Slough, Oregon, USA - *Informational*
5. Other

VI. Information Reports

1. Administration/Facilities (presented by Rebecca Muse)
2. Education (presented by Jaime Belanger)
3. Training and Engagement (presented by Deb Rudd)
4. Science & Stewardship (presented by Shon Schooler & Alice Yeates)
5. Budget Reports May 2026 (presented by Rebecca Muse)
6. Friends of South Slough (presented by Christine Moffitt)

VII. Next scheduled meeting: October 7, 2026, at 10am

VIII. Adjourn

*Limited to 5 minutes each unless arranged in advance of the meeting.

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Minutes of the previous two meetings

Kaitlin Lovell

Agenda Items

- Updates – *Informational/Verbal /OMSI Video* (Patricia Fox)
- Fee schedule – *Action/Verbal* (Rebecca Muse)
- Invasive Species Action Plan – *Informational/Discussion* (Alice Yeates and Patricia Fox)
- Shifting Schools: Four Decades of Fish Biodiversity Change in South Slough, Oregon, USA – *Informational/Presentation* (Jade Peairson, OIMB, Master’s Thesis)

Information Reports

- | | |
|-----------------------------|-------------------|
| ○ Administration/Facilities | Rebecca Muse |
| ○ Education | Jaime Belanger |
| ○ Training and Engagement | Deb Rudd |
| ○ Science | Shon Schooler |
| ○ Stewardship | Alice Yeates |
| ○ Friends of South Slough | Christine Moffett |

**SOUTH SLOUGH NATIONAL ESTUARINE RESEARCH RESERVE
MANAGEMENT COMMISSION**

Minutes of the 172nd Regular Meeting
December 10, 2025

Commission members present:

Kaitlin Lovell, Chair
Jessica Quinlan
Lance Morgan
Maya Watts

Arnie Roblan
Kris Wall

South Slough NERR staff and others present:

Jen Kirkland
Todd Buchholz, FOSS
Christine Moffitt, FOSS
Jenni Schmitt
Kathy Andreasen
Victoria Grave
Jennifer Koester, NOAA

Juliana Ruble
Shon Schooler
Alice Yeates
Ali Helms
Deb Rudd
Sheena Miltenberger, DSL
Rebecca Muse

**The meeting was called to order at 10:00 a.m. by Kaitlin Lovell
Director of the Department of State Lands and Chair of the
Commission.**

Roll Call

Chair Lovell asked for a roll call from the meeting participants to ensure everyone present was recorded in the official minutes.

APPROVAL OF THE MINUTES OF THE PREVIOUS MEETING

Chair Lovell asked if there was a motion to approve the 171st regular meeting minutes from September 2025. Commissioner Roblan moved to approve, and Commissioner Quinlan seconded. The motion carried with all in favor.

PUBLIC INPUT

There was no public input.

AGENDA ITEMS

Activities Update – Informational

The Operations Manager informed commissioners on current activities. Grant funding was received for one year to extend the Seasonal Education Specialist position year-round with support from FOSS via the Judith A. Mogen Foundation. This position will support the Reserve's after-school program, Estuary Explorers, that was previously hosted by an AmeriCorps volunteer. Staff are extremely thankful for their support and are currently seeking grant opportunities for FY 2026. Staff hope to seek support from DSL for a legislative policy option package in the next long legislative session for 2027 to make this seasonal position a permanent full-time position.

Wasson Loop Trail Update: Reserve staff are currently learning the process for how our tribal partners name places. So far, we understand there is a formal process we can pursue with CTCLUSI but do not know about the Siletz and are still waiting to learn more from the Culture Committee of the Coquille Indian tribe about their process. Is this something the Board would like us to pursue for naming the new loop trail (currently being referenced as the Wasson Loop trail) as it is the first new trail in 25 years? It needs to overwinter and will not open until sometime next year to see how it

performs and to make any necessary corrections to the trail. A picture of the map is included in the briefing packet.

Water Rights Map: Commissioner Roblan inquired in the September meeting if the Reserve owned all the water rights within the South Slough Reserve boundaries. The Reserve's GIS and UAS specialist researched data provided by the Water Resources Department's database and has mapped that information for the Commission. She commented that it appeared that there are water rights within the Reserve that are not owned by the Reserve. A copy of the map is included in the briefing packet for this meeting.

DSL Rangeland Manager, Sheena Miltenberger said regarding municipalities, it appears that the Coos Bay/North Bend Waterboard has been given a blanket authorization by Water Resources to draw from groundwater wells. Additionally, she also found two internal certificates issued by Water Resources for in-stream water rights for wildlife/fish uses in the Winchester Creek tributary, a diversion #73089 dated 1992, and another #96288, dated Nov. 30, 2020. Commission Roblan commented that this was good news, as the water rights on Winchester Creek were of the most concern for him.

Chair Lovell thanked those who searched for information and provided records. She commented that as work towards the acquisition of the Deal property proceeds, there will be increased opportunities to understand water rights.

Informational/Presentation:

[2024 System Wide Monitoring Program Status and Trends Report](#)

Information on the System-Wide Monitoring Program was offered by the estuarine monitoring coordinator. The presentation was enhanced with UAS images throughout and developed with technical support from others on the science team. The national monitoring system, abbreviated as SWMP, develops quantitative measurements of short-term variability and long-term changes in the water quality, meteorological, biological systems, and land-

use/land-cover characteristics of estuaries for informing coastal zone management on local and national levels.

The SWMP provides baseline information for evaluating change in the function of ecosystems in response to natural and human disturbances, and the data obtained helps to address how environmental conditions vary through space and time in the [NERRS](#), as well as along a salinity gradient.

A map of monitoring locations and site expansion was included in the report and the drivers of change in hypoxia and eutrophication across the NERRS was discussed. Trends in increasing turbidity and phosphorus contribute to rising Chlorophyll a concentrations in US NERR estuaries, and trends in increasing temperature, chlorophyll a, and specific conductivity contribute to declining oxygen concentrations in US NERR estuaries.

Meeting participants discussed the presentation and voiced their appreciation for the information. The report is available for outreach if needed. A few questions were raised including anthropogenic vs. other drivers of changes in more developed estuaries vs. relatively undeveloped estuaries. The presenter gave an example of eelgrass degradation being more prevalent in the South Slough estuary, which is less developed, and smaller and closer to the mouth of the bay than the Coos Bay.

Other

Commissioner Wall asked that the minutes of the September meeting be corrected to reflect the fact that she was in attendance (on-line). The minutes have been corrected.

Information Reports

Staff shared highlights and progress from their program areas.

Administration and Facilities Update

Entrance Project – The Operations Manager reported that the network conduit is in the ground at the visitor center, and staff anticipate another 2 – 4 weeks out to be completely hardwired. There should be “boots on the ground” in early January and staff are anticipating an April completion date with the end of May to finalize the details – weather permitting.

Trails - Operations Manager Muse reported that a 25K Oregon Parks and Recreation grant was submitted in November for a full trail assessment for the South Slough Reserve. The grant will address trail accessibility for all visitors – including motorized access wheelchair users. Currently trails at the Reserve are non-motorized. The grant will focus on 4 – 5 trails that have the terrain to potentially support motorized wheelchair use. The Ops Manager clarified that after the assessment, if staff decide to further explore the option of motorized wheelchair use on some trails, they will bring the issue to the Commission for a vote on the subject.

Annual NOAA PAC Award – Operations Manager Muse reported that the federal grant will address South Slough Reserve’s resiliency upgrades, for example fire-safe siding, and conversion of the solar system for use in case of emergencies. Also addressed will be the septic system and water pumps, lighting, and also a much-needed new roof for the visitor center. The visitor center is currently the emergency evacuation site for the OIMB campus. The grant application is due in February 2026, and the cost will be about 600K to cover the whole project. Match will be needed, and while some staff support can be used, there will be additional funds needed to cover the match for the project. Chair Lovell offered that the Chief Resiliency Officer in Oregon would like to have a site visit at the Reserve to look at the facilities. Some funds might be available for the Reserve, as well.

The public involvement coordinator presented the **Fall Education Report** for September and October:

The Reserve hosted 13 school field trips, 2 college classes, 3 science camps, and 6 paddle trips, totaling 2,389 hours of environmental education. A new highlight: the Siltcoos River paddle trip, which offers a unique journey from freshwater to saltwater, allowing participants to explore fish ladders, salmon and lamprey lifecycles, and Western Snowy Plover habitat.

Funding from the Judith Ann Mogan Foundation allowed retention of the seasonal education specialist through the winter so the Estuary Explorers after-school program can continue. The program is being run at two schools, with more planned for spring. Three high school students have applied for internships to support the program, funded by the Oregon Coast STEM Hub.

The busiest season of community events was wrapped up, with staff participating in 8 major outreach efforts including the Coos Bay Farmers Market, Salmon Festival, and Octoberfish. These events reached 1,323 community members, helping raise awareness about estuaries and coastal ecosystems.

Seasonal interns Catelyn Toney, Olivia Mendoza, and Annika Vikstrom created engaging lessons on eDNA, Western Lily and ocean acidification. Long term volunteer Nat Jaeggli improved the Reserve's traveling exhibit by building a more accessible stand for the "plinko game" and he also assisted the education specialist with building kits for a popular community bat box building workshop in collaboration with the Coos Bay Public Library on Dec 20.

The education coordinator supported a grant proposal with tribal partners to develop interpretation for the dugout canoe fragment at the Visitor Center. The Oregon Heritage Commission awarded a grant to the Coquille Indian Tribe, in Coos Bay, to develop and fabricate a display for the traditional dugout canoe fragment housed at the South Slough Reserve Visitor Center.

Mini-Boat Update:

https://educationalpassages.org/boats/sloughinator/Sloughinator_1s

Deployed: 09/01/2025

Days at sea: 99 days, 22 hours

Position: 10.21535 °N, 164.18041 °W (Headed towards the Philippines)

Estimated Speed: 0.7 kts

Temperature: ~30 degrees Celsius/86 degrees F

Wind Speed: 12.6 kts

Wind Direction: 74.3 degrees

Current Speed: 0.1 kts

Current Direction: 299.7 degrees

Significant Wave Height: 2.3 m

Primary Wave Direction: 68.9 degrees

Science Update

Oregon's annual coastal conference, the **State of the Coast** is sponsored by Oregon Sea Grant and provides opportunities for participants to listen to informative talks on current marine science and policy issues, as well as participate in hands-on activities, and network with research, industry, and community leaders.

The Reserve's Research Coordinator shared slides from the 2025 conference which was hosted on the campus of the Southwestern Community College in Coos Bay on November 14-15. Links from the 10 presentations are included in the webpage referenced below:

[South Slough Reserve Management Commission Resources](#)

Stewardship Update

The stewardship coordinator spoke to some of the co-benefits of restoration projects. Many people of all ages have been involved in the Wasson Creek restoration. There has been a total of over 500 individuals so far that have participated in a variety of events to assist in the restoration effort at Wasson Creek.

The project grant has also served to train a number of restoration professionals throughout the Pacific Northwest including Alaska. The local community has also benefited in many ways by being involved in outdoor service activities on the restoration site. Commissioners commented on the good opportunities for school-

age children and the positive feedback they have heard about the project.

FOSS Activities

The Friends of South Slough Reserve, Inc. (FOSS) activities report to the commission and interested public was distributed to the meeting attendees. FOSS, founded in 1988, supports and enhances the mission of the Reserve. Their work continues with financial and in-kind support for programs. The following summarizes activities since the August 2025 meeting.

Entrance Redesign Work Begins -

FOSS president, Christine Moffitt spoke before the group and said that the implementation of the Purchase, Acquisition and Construction (PAC) grant from NOAA has been a milestone for many, with the start of internet conduit installation last October. This was a long-awaited start for the on-the-ground project to improve safety and access at the Visitor Center.

FOSS Continues Support for the Estuary Explorers Program -

South Slough Reserve's Estuary Explorers after-school program provides learning opportunities in Science, Technology, Engineering, Arts and Math (STEAM) to approximately 100 students annually. The program has been led by federally funded AmeriCorps interns, and the required match for 2024-25 (\$11,000) was provided by FOSS in 2024. In April 2025, the federal funding for the AmeriCorps program was abruptly terminated. FOSS stepped up to provide additional supplemental salary (\$8,963) to retain the AmeriCorps intern at South Slough. The educational program is a priority for the Reserve, with a goal of transitioning to a more stable full-time position. FOSS committed funds of \$12,000 per year in a recent grant application by the Reserve to the J.A. Mogan Foundation for a 2-year full-time Estuary Explorer educator. The Reserve received one year of funding from the Foundation. FOSS board member Jeanne Standley is working with Reserve staff to submit a grant application from FOSS to Bandon Dunes Charitable Foundation for the additional funds needed to secure the Estuary Explorers program through 2027.

Saturday Stewards -

FOSS continues to partner with Reserve staff to lead the Saturday Stewards program. The partnership allows FOSS to support the Reserve with hands-on stewardship activities. Saturday Stewards worked on invasive plant removal and restoration planting at Wasson Creek. The next event on December 6 will continue the restoration planting.

Friends of South Slough Annual Meeting & Social! -

Please join us at Wildflour Public House in North Bend on January 10, 2026, at 12:00 PM for a fun gathering with fellow volunteers, staff and supporters of the Reserve. Come mingle, share stories, and learn about our projects to protect and support the South Slough Estuarine Research Reserve. It's a great opportunity to learn how our Friends of South Slough Reserve works as a Non-Profit Organization to provide strategic support for the Reserve.

Chair Lovell expressed her thanks to the Friends for their support. FOSS Vice President Todd Buchholz added some comments to the meeting saying that in consideration of his 10 years on the board, he would like to commend both Patrica Fox, and Rebecca Muse for being very accommodating and easy to work with. He added that he appreciates the collaborative effort between the Friends and Reserve staff, as they work together to achieve mutual purposes and goals.

March Commission meeting

Chair Lovell asked if the construction scheduled at the visitor center would impact the next commission meeting scheduled for Wednesday March 4, 2026. The Operations Manager after conferring with the Project Manager said that the March meeting would likely be a virtual meeting to accommodate the construction schedule, and further information on that will be available as we get closer to the date.

ADJOURNMENT

Chair Lovell adjourned the meeting at 11:43 a.m.

**SOUTH SLOUGH NATIONAL ESTUARINE RESEARCH RESERVE
MANAGEMENT COMMISSION**

Minutes of the 173rd Regular Meeting
April 16, 2026

Commission members present:

Kaitlin Lovell, Chair	Laurabeth Barton
Cinamon Moffett	Arnie Roblan
Kris Wall	

Commission members absent:

Lance Morgan	Paul Peterson
Jessica Quinlan	Maya Watts

South Slough NERR staff and others present:

Patricia Fox	Mike Allman
Jen Kirkland	Juliana Ruble
Jaime Belanger	Ginny Hall
Jenni Schmitt	Alice Yeates
Shon Schooler	Veronica Grave
Ryan Scott	Alicia Helms
Mike Allman	Daniel Fenn
Todd Buchholz, FOSS	Christine Moffitt, FOSS
Gabby Bratt, Cultural Resources Specialist, Ko-Kwel Tribe	
Mike Graybill	

South Slough NERR staff absent:

Rebecca Muse	Deborah Rudd
Adam DeMarzo	Patrick Juarez

**The meeting was called to order at 10:05 a.m. by Kaitlin Lovell
Director of the Department of State Lands and Chair of the
Commission.**

Roll Call

Chair Lovell asked for a roll call of Commission members to ensure everyone present, in person and virtually, was recorded in the

official minutes. In addition, Chair Lovell needed to determine if there was a quorum for any agenda items that required action.

There was not a quorum so all agenda items that required action will be moved to the agenda for the next Commission meeting scheduled on July 8, 2026.

INTRODUCTIONS

APPROVAL OF THE MINUTES OF THE PREVIOUS MEETING

Because there is not a quorum, the action item for approval of the Minutes of the 172nd Commission meeting will be placed on the agenda of the 174th Commission meeting on July 8, 2026.

PUBLIC INPUT

There was no public input.

AGENDA ITEMS

Grants and Staffing Updates – Informational

Reserve Manager Fox gave an update on her trip to Washington DC in March 2026 for the NERRA Board meeting and the NOAA Management meeting. Manager Fox said overall there seemed to be a more optimistic tone than in previous years. She said although security was tight due to the current political environment, she was able to continue with her seven planned appointments made with Congressional Representatives and Senators. Manager Fox had prepared a one-page document on the economic benefits. This one-page document was created for the economic forum for the coastal caucus last autumn 2025. She also had a SWMP video clip which highlighted the importance of long-term data sets, our mission, and purpose of SSNERR. Manager Fox noted that the SWMP data sets and System Wide Monitoring Program video clip highlights the research that SSNERR does as the baseline for all Reserves. This system-wide program data set consists of meteorological and water

quality data. All presentations were very well received by the intended audiences and bi-partisan support.

The one-page document focused on the economic value and investment benefits of our Reserve. This document was extremely timely because Manager Fox met with Dr. Neil Jacobs, NOAA's Administrator who served in the first Trump Administration. Dr. Jacobs spent a lot of time with the Coastal Zone Management (CZM) program, the program managers and the NERRS managers. Dr. Jacobs stressed the importance of tying the NERRS system to the economic return on investment (ROI) the NERRS delivers. He said this is not something that has been traditionally done in the past. He wants to focus on this return on investment that SSNERR brings to the local and regional economy.

Dr. Jacobs asked about our focus on topics such as safety and security access of the ports, seafood, and the food source's safety for consumption. He said that topics like these are "triggers" that generally are bi-partisan and will gain the strong support for the NERRS system.

In addition, Manager Fox noted the timeliness of our Procurement, Acquisition and Construction (PAC) Award funded project that is specific to the safety and security of our Reserve. This is a \$1.6 million project. We didn't receive the 3rd year BIL funding that was promised. This 3rd year BIL funding was important because it directly impacts one of the positions that manages this project, which is the Project Manager position. However, we received a cash match from FOSS which supported this position. Without this support from FOSS, this project wouldn't be able to progress in the way that it has moved forward. This is a great example of being able to leverage our relationships, resources and conversations with people about how this funding directly impacts our projects and community.

On another note, Manager Fox received word that two new Reserves (one in Green Bay, Wisconsin and one in Atchafalaya Basin, Louisiana) will be brought into the NERRS system by year end 2026. This will make a total of 32 Reserves in the NERRS network.

These two new Reserves will not be fully functioning right out of the gate so they will not be receiving full funding dollars. It remains to be seen how the overall Operations Award for 2026-2027 will be divided between all 32 Reserves.

Manager Fox showed the previously mentioned SWMP video clip that highlights our Science and Research team. This is one of three videos about SSNERR. The second video is focused on Stewardship and how we approach our work at the Reserve. The third video is about our Education department with an emphasis about the next generation. All were funded by the Wasson Restoration program. Having these videos and deliverables available to wider audiences help spread our message of coastal management, stewardship of these lands, and restoration actions which are all critical components to our research and further commitment to our estuary system and healthy economy and local community. In addition, incorporating indigenous knowledge into these projects informs our research and emphasizes the collaborative partnerships South Slough Reserve has with the local and regional Sovereign Tribal Nations.

Visitors Center Exhibit Planning for Canoe Fragment- Informational

Gabby Bratt, Cultural Resources Specialist with the Ko-Kwel Tribe, provided an update on the collaborative effort with the Reserve and the Confederated Tribe of Coos, Lower Umpqua & Siuslaw Indians Tribe on an Oregon Heritage Grant through the Oregon Parks and Recreation Department. This grant would support the expansion of the canoe fragment display in the Interpretive area of the Visitors Center. The purpose of this grant funding would be to install a display plaque with text about the canoe fragment. The text will be in English and native traditional language that incorporates telling the story about how/where this canoe fragment was found, the approximate age of this canoe fragment and how the canoe was used by the Tribe. The total amount of the grant that was awarded was \$7000. All work should be completed by the end of 2026. There is currently an open call for artists to design and create artwork centered on the canoe fragment. There are plans for a small

celebration once the final installation of the plaque and artwork is completed.

Fee Schedule-Action

Director Lovell noted that there will be no action taken on the Fee Schedule because there is no quorum. This action item will be placed on the agenda of the 174th Commission meeting on July 8, 2026.

Invasive Species Plan Outline and Decision-Making Progress

Alice Yeates, Stewardship Coordinator, presented this plan outline and progress on the decision-making steps. There were two hand-outs provided by Alice.

This presentation started with the scope and objectives of this Invasive Species Plan and moved onto the work that has been accomplished, what work is currently underway, and the work planned in the future.

There are four goals related to invasive species presence and its impact, best management practices, and education learned for future control management.

Goals:

1. Characterize and monitor the extent of invasive species affecting the Reserve which are the lands and waters that the Reserve manages.
 - Past Synthesis
 - PCW Data Source in 2015
 - Past Mapping Efforts and identifying gaps
 - Pull all data together from multiple collection sources both external and internal
2. Measure and track the impacts on coastal habitats, specifically our Oregon coastal habitat as a part of a national Reserve system and how we can develop research and better understanding of environmental and climate change impacts on a national scale.

3. Reduce the impact of invasive species negatively affecting or threatening the Reserve.
4. Increase distribution of information about the status and impacts of invasive species cases. The audiences are diverse and we're focused on our Management Commission, Tribes, collaborative partners, and our local public community using a variety of educational pathways.

Key Objectives and Current Management Efforts

1. Prevention: i.e. Cordgrass, Gorse, Jubata Grass, Biddy-Biddy. 5-Spine Crab in Slough
2. Focus on Priority Areas (Reserve Land and Waterways)
3. Management Strategies
 - a. Saturday Stewards
 - b. Staff Focus
 - c. Reducing Spread and Ongoing Eradication Maintenance

Proposed Decision-Making Process

1. Stewardship Coordinator identifies best management practices and best data information available
2. Ask the question "Is there Soil Disturbance, Chemical Use or Fire?"
 - a. Yes: Outline framework (Invasive Species Management Process handout attached)
 - b. No: Move to implementation, documentation, record keeping, effective monitoring and adaptive management. If this is not successful, we will look for another strategy and start from the beginning.
3. If there is Chemical Use or Fire, the Stewardship Coordinator will review non-target effects, risks and feasibility costs and then complete the specific control analysis. (Specific Control Plan handout attached)
4. If there is Soil Disturbance, the invasive species management practice is similar and the local Tribal Historic Preservation Officers (THPO) with our local Sovereign Nation Tribes are included to be sure that we're not uncovering, impacting or damaging potential tribal cultural resources.

5. Aquatic species, invertebrates, or invasive animals would be managed separately using different processes, methods, and approved practices. Reserve Managers will review and initiate this process and then hand-off to staff or other partners appropriately.
 6. The full Invasive Species Management Plan (Plan) is on the DSL Strategic Plan which is slated to be completed by the end of this year.
 7. Reserve Manager Fox noted that the full Invasive Species Management Plan in its robust expanded form will be presented at the July Commission meeting so that the Commissioners can review the Plan. Feedback will be gathered for full transparency before the Plan is finalized and presented to DSL Executive team for the DSL Strategic Plan.
- ❖ Recommendation from Director Lovell was for Programmatic Permits.
 - ❖ Comment from Christine Moffitt (FOSS) was to send this Invasive Species Plan information to other community partners (targeted audience) for additional partnership opportunities.

2025 Annual Report

This 2025 Annual Report will be included in the follow-up packet that will be sent out to all Commissioners. This Annual Report will also be posted on our website.

Highlights of this Report include the following:

- Collaboration with the Tribes
- Three core Programs: Research, Stewardship, & Education
- 8 Program Services such as Research Internships (high school and postgraduate), Teachers on the Estuary (TOTE), School Programs and Field Trips (ex. Estuary Explorers after school program), Public Outreach and Community Education programs
- 2025 number highlights

- ❖ 3,347 visitors (an increase of 350+ from previous year)
- ❖ 271 public programs (an increase from 164 programs in previous year) without an increase of staff.
- ❖ 119 volunteers (an increase from 67 volunteers in the previous year with help from FOSS)
- Wasson Creek Phase II
 - ❖ \$3.5 Bipartisan Infrastructure law (BIL) competitive grant
 - ❖ 119 acres thinned
 - ❖ 73 trees placed in the water channel to slow the flow, connect the flood plain, and provide habitats
 - ❖ 33 nurse cribs added in the tidal areas using different design features to further study their effectiveness
 - ❖ Constructed a 143-foot boardwalk and platform which offers views and immersion into this restoration project. This will be integral in our education programs and public awareness and learning.
 - ❖ Had a soft opening
- TOTE
 - ❖ Teachers throughout the State come to the Reserve, learn about estuary science and then take it back to incorporate in their classrooms.
 - ❖ Coordination with outside partners/programs (ex. Charleston Marine Life Center, a climate Institute, etc.) which highlights collaborative partnerships
 - ❖ Access to climate experts all around the country which supported a climate focused curriculum
- Current Status
 - ❖ Estuary Explorers after school program will be continued for the remainder of the 2025/2026 School Year
 - ❖ The Reserve received 2 Federal Grant awards that helped acquire 193 acres of critical habitat for the Reserve and also support our SWMP program and associated activities
 - ❖ The “Sloughinator”, a project from the 2025 Summer Interns, launched on Sept 1, 2025. By December 2025, the Sloughinator’s location was halfway between Hawaii and Papua New Guinea. The purpose of the Sloughinator is to give students an opportunity to learn about air and water temperatures through sensors on this unit. They also got to learn about currents and the essence of

exploration. This project was a partnership with Oregon Coast STEM Hub and CMLC.

- The Future
 - ❖ \$1.6 Million PAC grant with a 30% cash match from FOSS and State funds for our front entrance project. FOSS cash match supports a portion of the Project Managers payroll with the remainder of this position's payroll from the BIL grant
 - ❖ Awarded 2 different BIL grants that facilitated 2 different land acquisitions (Deal Triangle currently owned by Coos County (130 acres) and Winchester parcel currently owned by DSL Property division (80 acres). Management is working on completing title acquisitions which include extinguishing mineral rights and standard due diligence work
 - ❖ Lee Land swap
 - ❖ Wasson Creek Phase III
 - Cultural Garden in collaboration with the 3 Sovereign Tribal Nations (Ko-Kwel, CTCLUSI & Siletz)
 - New Trail

Information Reports

Administration/Facilities (presented by Reserve Manager Fox)

- Staff Retirement & Staff Resignation
 - ❖ Kathy Andreasen, Office Assistant, retired effective 3/31/26 after 28 years of service
 - ❖ Sabra Comet, Training & Education Program (TEP), resigned effective 3/13/26, after 6 years of service to pursue their doctorate degree in New Zealand
- Staff applied for a \$50,000 Judith A. Mogan Foundation grant which was approved and awarded. This grant award will support the Estuary Explorers program for the 2025/2026 school year. Management hopes to add the associated seasonal Education Specialist position to the next POP to make it a full-time year-round permanent position.

- Operations Manager Muse is working on our FY26/27 Operation Award budget
- PAC awards have not been announced yet. Management would submit for PAC grants to support
 - ❖ Roof replacement
 - ❖ Solar panels upgrade
 - ❖ Siding upgrade
- NOAA transferred their funding cycle from 1 year to 2 years
 - ❖ 1st year funding NOAA indicated to budget for \$50,000 more than the last 2 years which equals \$930,967
 - ❖ 2nd year funding budget would be for a 10% increase which is not guaranteed
 - Management will submit the draft budget with a 10% increase however a back-up plan will be drafted if the 10% increase is not received
- Union negotiated COLA and financial changes based on current Contract 2025/27 in place
- Make the Visitors Center more resilient and robust to natural disasters (earthquakes, tsunamis)
- Trails management and best practices for future planning in collaboration with Elliott State Research Forest staff
- Ribbon cutting for the Front Entrance project will be from 1:00PM-3:00PM immediately after the July 8th Commission meeting
- Ribbon cutting for the new Cultural Garden at Wasson will be Spring 2027

Education (presented by Jaime Belanger, Education Coordinator)

This reporting period during the wintertime is typically the slowest time of the year for our Education department. The program schedule doesn't have as many events compared to our spring, summer, and fall seasons. We use this time for:

- Reflection and Planning for future programs and schedules
- Preparing and submitting Progress reports for grants awarded
- Attending our Education Sector meeting
- Planning and coordinating Spring/Summer school field trips
Estuary Explorers, Summer Science Camps

- Planning and coordinating our Teachers Workshops held in the spring and summer
- Internship recruitment (applications review, interviews, selection) for high school and college interns for Summer Camps.
- Started the lottery selection process our Summer Science Camp participants (campers). These camps fill up quickly and we have large waiting lists for each of the different camps. We received wonderful feedback from a parent about our lottery system. This feedback was “I just want to reiterate how much I love the lottery program. It feels equitable.”

Training and Engagement (TEP)

- Biochar workshops are done in tandem with our Stewardship program. These workshops were held in late Fall 2025 and we had great participation and information shared. Future workshops will be in collaborative partnership with the Elliott State Research Forest (ESRF) staff.
- A market analysis and needs assessment (MANA) 2-year grant by the NERRS science collaborative was not awarded. Plans for this MANA are to include in the Operations Award with one year used by our TOTE program. The second year would be leveraged to include collaboration with our Education department and the newly combined position, Training and Education Outreach Coordinator. This plan incorporates collaboration and participation with most other departments at the Reserve.
- The Training and Engagement Coordinator resigned to pursue her doctorate degree in New Zealand. Their last day was March 13, 2026.

Science (presented by Shon Schooler, Ph.D., Lead Scientist)

- Partial Quote from Dr. Dan Taylor, Professor of Etymology at BYU:
 “Hi Sean, I hope you're doing well. It's been a few years, but I wanted to reach out and reconnect. I had the chance to take along several research projects that I did with you and others a while back. These experiences have helped me more than you might realize. If you remember, I helped out on a handful of

different projects. Electric fishing surveys for landfill grass work with folks from Oregon State Monitoring for green crabs. These trips were incredibly valuable to me and the invertebrate biology class I teach now. I frequently draw on the experiences when I'm teaching my students about field ecology and field research. Thanks again for all the opportunities you gave me along the core. They've had a lasting impact on my teaching.”

- Dr. Taylor’s time at the Reserve allowed him to explore our Reserve (in addition to many other Reserves around the country) which shows the importance of the NERRS network and how South Slough Reserve can help scientist, researchers and educators.
- Insect monitoring is in full swing at 12 sites on the Reserve. This monitoring and tracking provide data on different areas in the forest, marsh and estuary slough waterway. This data is incorporated into bird monitoring/surveys and can be linked to restoration sites planning and the forest management process and methods implemented.
- Eel grass surveys are taking place and are ongoing.
- Various biologists, scientists, and researchers spend time at the Reserve with our team out in the field. We can help draw attention and realization of the importance and value of this collaboration with our Reserve staff as well as the extensive travel reach these partnerships offer.

Stewardship (presented by Alice Yeates, Stewardship Coordinator)

- Biochar workshops (noted in TEP summary above) are done in tandem with our Stewardship program. The biochar process is a method of sequestration of carbon.
- Results were 150 cubic yards or 30 tons of biochar with 75 tons of carbon sequestered.
- This biochar will be used at the Reserve for various reasons:
 - ❖ Weed suppression
 - ❖ Soil augmentation in our Cultural Garden at the Wasson restoration site.
- Quote from one of the workshop participants: “The workshops at South Slough Reserve are unlike anything else on the coast. The instructors are outstanding, deeply knowledgeable and passionate about the work and their hands-on format means

you're not just learning new concepts. You're testing them in real conditions alongside fellow restoration professionals. I've walked away from every workshop with practical skills, fresh perspectives, and lasting connections that continue to shape my work." I will miss Sabra. We had a fantastic time organizing a lot of workshops together that offered valuable feedback as this quote suggested.

- Met with the ESRF staff about biochar workshops at ESRF in the future and how South Slough's team can collaborate with ESRF to integrate and implement these forest practices that were demonstrated in the biochar workshops. ESRF staff participated in site tours at the Reserve and learned about the carbonizer process in a hands-on workshop. Discussions included the feasibility of incorporating some of these practices on a bigger scale at Elliott.

Friends of South Slough (FOSS)

- Christine thanked Juliana for her help with coordinating the orange sweatshirts for the Morello Construction crew working on the Front Entrance project. This is FOSS's way of saying thank you. We thought it would be a great way to say thanks to this crew with South Slough bright orange hoodies as a great way to say thank you for the beautiful work they are doing within the budget parameters. The project is really coming along well and it's exciting to see.
- Todd had a shout out for Jeanne Standley for all her help with the bookstore/gift shop. She was unable to attend this Commission meeting today. Jeanne helps with ordering inventory. She's been instrumental with opening the bookstore early on many occasions. She's really been hands-on.

Wrap up comments from Chair Lovell

Juliana Ruble was recently recognized as one of the three DSL employees who were honored for being an Ambassador of Public Service. There is a luncheon on May 21st at the Governor's mansion for all the Ambassadors selected from the various State agencies.

The Reserve Manager continues to work with staff to update the Reserve's Management Plan. NOAA has approved a 2025 – 2030

timeframe for the document (updated from 2024 – 2029). The Reserve Manager intends to submit the draft plan to NOAA by May 30th.

Next regular meeting – The date for the next regular meeting is July 8, 2026 from 10:00AM -1:00PM. After this meeting, there will be a Grand Opening and Celebration of the Front Entrance project from 1:00PM – 3:00PM.

ADJOURNMENT

Chair Lovell adjourned the meeting at 12:06 pm.

March 31, 2026

TO: South Slough Management Commission

RE: Biennial Review of Fee Schedule:

The last time the fee schedule was reviewed was in March 2024. The statistics below cover the period of January 1, 2024 through December 2025. One new addition to the fee schedule is the Education programming fees that the Reserve took over from FOSS on January 1, 2025. I have included these costs as single line item below to show the income that was received during calendar year 2025.

Spruce Ranch

<u>Current Rates:</u>		
Spruce Ranch House	\$25/night	\$250/month
Spruce Ranch Yurts	\$25/night	\$250/month
Spruce Ranch Camping	\$15/night	n/a

Residents include South Slough interns, visiting researchers on SSNERR projects, visiting researchers on non-SSNERR projects, partner staff and DSL/SSNERR staff. The two years we are reporting on were some of our largest numbers in the last 10 years (non-paid).

Income generated by the Spruce Ranch - \$2,350 (increased from last report by \$750)

Total utility costs for Spruce Ranch - \$ 3,819.30

Net loss of \$1,469.30

Residents during this time frame:

AmeriCorps – 2 members for 11 months at a time

Visiting Researchers/DSL staff associated with SSNERR projects – 25 (some once and some scheduled every month for multiple days)

SSNERR Interns – 16

Partners/Staff that paid for housing –

ODFW– 3

DSL Staff - 2

Research on other housing costs in area			
SOCC Housing	Private Room	\$3,614/term	\$47/day average
(include meals/11 wk)	Double Room	\$3,120/term	\$41/day average
**New arrivals prior to the scheduled move-in dates each term are charged \$100 per day **\$250.00 housing deposit for long term residents			
OIMB Housing	Single room	\$50/night \$300/week \$700/month	

Auditorium Statistics

Current Rate: \$100.00 for up to 4 hours/ \$150 for up to 8 hours

- Income generated from Auditorium rental - \$500.00
- Utility costs are integrated with the Interpretive Center so no way to breakdown
- Multiple different renters which included:
General public, Coos Watershed

Room Rate Comparisons				
Coos Bay History Museum	\$35-100/hour Dependent on room	\$30-85/hour Non-Profit discount	\$50/hour for after-hours Staffing	5% discount for Friends Members
Ko-Kwel Casino	Sets custom rates depending on number in group and needs			
Coos Art Museum	\$115-190/hour Dependent on room	\$25-35/hour classroom	\$15-25/hour Prefontaine Meeting room	
North Bend Public Library	\$75/3 hours room for 96	\$100/4 hours	\$150/6 hours	\$200/8 or more hours

Education program fees:

Camp fees –\$8,034.66

Interpretive/TOTE Program fees –\$8,820

Total Education fees brought in \$16,854.66

Misc. Donations: \$1,250

Education fees being deposited into the SSNERR accounts is a new development as of 1/1/2025 so this is a new metric to track. Before this date, the money for educational programming went directly to FOSS where they used the income to support various SSNERR needs. After much discussion with FOSS and their capacity in 2024, Operations Manager Muse started the process to switch our programming dollars to come directly to SSNERR.

Recommendations for Fee Schedule for 2026

Currently, we recommend that the costs stay the same. Currently, we are recommending they stay the same for facilities. We are unique in the fact that we are a long way from the city areas whereas the other facilities we have price comparison on are closer to the services available. The Reserve has been working on a plan for coming up with a reasonable fee for Training & Engagement workshop fees, looking at other options for fee for service (i.e. Drone work, custom programs) as well as looking at our education programming fees to see if there are areas for improvement and adjustment of fees. Across the board in our education programs, we work to ensure that programming is affordable for all and increasing prices could negate that equal opportunity.



SOUTH SLOUGH RESERVE INVASIVE SPECIES ACTION PLAN [DRAFT]



Alice Yeates; Stewardship Coordinator
South Slough National Estuarine Research Reserve
2026

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1 Summary

The South Slough National Estuarine Research Reserve (the Reserve) Invasive Species Action Plan provides a science-based framework to prevent, detect, map, research, and manage invasive species that threaten the ecological integrity of the Reserve. The Reserve's estuarine, upland, and freshwater habitats are vulnerable to invasive plants and animals that can displace native species, alter habitat structure, and impair ecosystem functions. The Plan supports the Reserve's mission through proactive prevention, early detection and rapid response, effective management, and adaptive strategies informed by monitoring and research.

The Plan is organized into three sections. The first provides general information on the South Slough Reserve, invasive species, and invasive species management. The second summarizes achievements over the past 50 years in invasive species mapping, monitoring, and management at the Reserve, including key lessons learned. The third presents a strategic action plan with guidelines and resources for invasive species management within the Reserve and surrounding areas. This section outlines refinements to information collection, response coordination, and field decision-making, while emphasizing flexible, site-specific strategies that can address regulatory or environmental constraints and support innovative management approaches where conventional methods are not feasible. It also identifies research priorities and outreach and education strategies aimed at strengthening partnerships, increasing awareness, and supporting broader community involvement in invasive species prevention and management.

The Plan addresses four primary goals from the South Slough Reserve Management Plan 2017–2022: mapping invasive species, researching invasive species impacts, implementing invasive species management, and supporting education and outreach. Across all goals, the Plan emphasizes adaptive management that integrates prevention, monitoring, active management, and post-treatment evaluation. It builds on decades of invasive species work at the Reserve while identifying ongoing challenges such as limited resources, permitting complexity, and the need for long-term monitoring. The Plan concludes with recommendations to strengthen coordination, prioritize actions based on risk and feasibility, and sustain invasive species management as a core component of long-term ecosystem resilience at the South Slough Reserve.

2 Introduction

2.1 South Slough Reserve

The South Slough National Estuarine Research Reserve manages 6,960 acres [confirm acres] of lands and waters in the Coos Watershed (Fig. 1) and 11.62 acres [confirm acres] in the Lower Umpqua River Watershed (collectively referred to as South Slough Reserve or the Reserve). The South Slough Reserve was designated in 1974 as the first Reserve in the National Estuarine Research Reserve System (NERRS). The Reserve's Mission is "to improve the understanding and stewardship of Pacific Northwest estuaries and coastal watersheds" (2017-2022 Management Plan). While public access is concentrated around the 5 miles of public trails, the entire Reserve is open to public access. Reserve managed lands interface with people through recreation (e.g., hiking, nature watching, wild food gathering, hunting), education (e.g.,

school groups, public programs, youth groups), continuation of cultural practices (e.g., gathering materials for basketry, food and medicine), and scientific research (e.g., collaborations and staff projects). With the exception of oyster farms (up to 100 acres; OAR 142-010-0020 Restricted Activities no. 10) the Reserve excludes activities for commercial use and does not include agriculture or livestock. The surrounding watershed mainly comprises of county or private ownership actively managed for timber production (around 70%; Rumrill 2007).

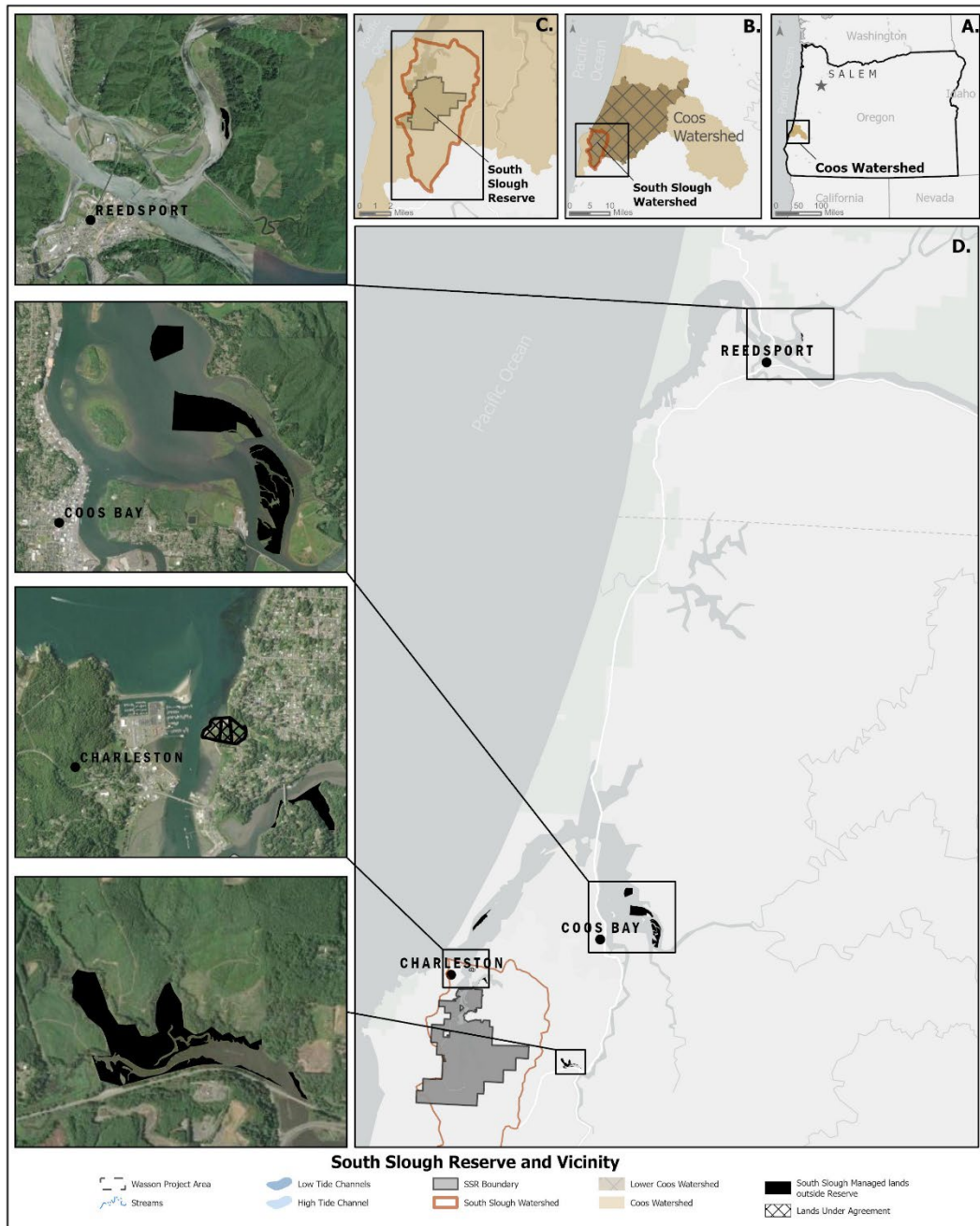


Figure 1: Map of Reserve managed lands (gray shading) and lands managed by the Reserve under agreement with DSL (black shading).

2.1.1 Invasive species goals and objectives

The South Slough NERR Management Plan 2017-2022 includes four goals relating to invasive species presence, impacts, management and education. Goals include:

Goal 1: Characterize and monitor the extent of invasive species affecting the Reserve.

Goal 2: Measure and track the impacts of invasive species in coastal habitats.

Goal 3: Reduce the impact of invasive species negatively affecting or threatening the Reserve.

Goal 4: Increase distribution of information about the status and impacts of invasive species to diverse audiences.

The geographic range of these goals vary from within the Reserve (including managed lands; Goal 1 & 3), local areas that threaten the Reserve (including South Slough and Coos watersheds; Goal 3) and regional (including Pacific Northwest coastal habitats; Goal 2 & 4). The objectives of this plan are to: 1) provide information on the status of invasive species and their management within, and in areas threatening, South Slough Reserve managed lands, 2) summarize current contributions to research and identify data gaps in Pacific Northwest coastal habitats, 3) outline processes for implementing integrated invasive species management, and 4) provide resources to guide best management strategies. The Action Plan will serve as a practical guide for Reserve staff, interns, and volunteers to help prevent introductions, increase early detection, and utilize best management practices. The Plan will also provide information for development of public outreach materials and events.

2.2 Invasive species overview

Invasive species are non-native (exotic) organisms that cause harm in their introduced range. Consistent with the management objectives of the South Slough Reserve, this Action Plan prioritizes species that negatively affect ecological integrity, including impacts to native biodiversity, habitat structure, and ecosystem processes. Noxious weeds with agricultural impacts (e.g., species toxic to livestock) are also managed to prevent their spread within the surrounding coastal community.

The introduction and spread of invasive species can degrade wildlife habitat, alter ecosystem function, increase fire risk, threaten rare or endangered species, and impose substantial economic costs for management.

Terminology

Exotic species: Any non-native species introduced to an area, including both invasive and non-invasive species.

Invasive species: A non-native species that establishes, spreads, and causes ecological, economic, or social harm, often by displacing native species and disrupting ecosystem processes.

Noxious weeds: A subset of invasive plants designated by federal, state, or local authorities as a priority for control due to their impact on agriculture, natural resources, or public health.

Biocontrol: The use of approved biological agents to manage invasive species. These agents are typically host-specific and undergo rigorous testing to minimize impacts on non-target species.

Propagules: Reproductive structures capable of generating new individuals, such as seeds, bulbs, tubers, spores, eggs, or vegetative fragments (e.g., rooting stem nodes).

Negative impacts: *Effects that harm ecological systems, human uses, or economic resources.*

Target: *The invasive species being actively managed.*

Non-target: *All other species (including humans), cultural resources, and abiotic environmental components that may be affected by management actions.*

There are many factors that contribute to the invasion success of exotic species; however, disturbed environments are particularly susceptible to colonization. Areas such as roads, trails, windthrow gaps, restoration sites, and forest management units often provide ideal conditions for invasive establishment (Lozon and MacIsaac, 1917; Nordheimer and Jeschke, 2018). Disturbance creates open niches within native plant communities, increases the availability of key resources (e.g., light, nutrients, and water), and—when associated with access points such as roads, trails, and boat launches—facilitates repeated introduction of propagules.

Although highly disturbed sites are especially vulnerable, some invasive species are capable of establishing in relatively intact ecosystems, where they may outcompete native species and impact sensitive habitats or rare species. Within the South Slough Reserve, invasive species are most commonly associated with areas of historic disturbance (e.g., former roads, forestry landings, and homesites), ongoing access corridors (e.g., roadsides and trails), and recently restored areas with exposed soils (e.g., Wasson Creek Watershed Restoration Project). Bird-dispersed species (e.g., ivy, cotoneaster, and holly) are occasionally found within otherwise intact forest stands. While typically present at low densities, these populations warrant early management to prevent expansion. If disturbances such as tree fall, fire, or forest management occur, these species may rapidly increase in abundance and become more difficult to control.

2.3 Invasive species management

2.3.1 Prioritization

Oregon state agencies are required to prevent, control, and where feasible, eradicate designated noxious weeds on lands under their jurisdiction in accordance with ORS Chapter 569 and Oregon Department of Agriculture (ODA) administrative rules. State policy establishes noxious weeds as public nuisances and prioritizes prevention of new introductions, followed by control and containment of established populations. Agencies are expected to implement an integrated pest management (IPM) approach that incorporates prevention, monitoring, early detection and rapid response, and a combination of mechanical, biological, chemical, and cultural control methods. State-listed noxious weeds—particularly species identified as high priority for eradication or containment—must be actively managed, and agencies are expected to coordinate with ODA, county weed programs, and regional partners to support reporting, response, and landscape-scale control efforts. In practice, this framework requires state-managed lands to maintain awareness of invasive species risks, document and monitor infestations, and respond promptly to new detections to minimize spread and ecological impact.

Resources: Noxious Weed Policy and Classification System 2024 [\[Link\]](#)

2.3.2 Stages of management

Invasive species management occurs across several complementary stages: prevention, early detection and rapid response (EDRR), mapping spatial extent, active management, post-management monitoring, and adaptive management. Species may fall into multiple stages simultaneously. For example, a species may be actively controlled in high-priority areas, monitored across its full distribution, and prevented from establishing in non-infested areas. Accordingly, invasive species within or threatening the South Slough Reserve are addressed through one or more of these stages. This section describes each stage and its application within the Reserve.

Prevention

Preventing invasive species introduction is the most effective and cost-efficient management strategy. Prevention includes identifying potential threats and reducing the introduction and spread of propagules. The Integrated Noxious Weed Program for the Coos Bay District Environmental Assessment (USDI 1997) identifies prevention, education, and awareness as top priorities for invasive plant management.

Engagement with local invasive species networks helps identify emerging threats and reduce propagule pressure from surrounding areas. Preventative measures include cleaning equipment and footwear, limiting use of mechanical devices on trails (e.g., remote-controlled vehicles), and discouraging illegal dumping of yard waste. Education and outreach further reduce introduction risk by increasing community awareness. Incorporating requirements in all contracts for equipment cleaning prior to entering the Reserve substantially reduces the likelihood of introducing invasive species from other worksites.

Geographic scope: Prevention actions occur both at the Reserve boundary (e.g., equipment sanitation prior to entry) and in the surrounding landscape (e.g., managing nearby infestations to reduce propagule sources). Coordination with partners managing adjacent watersheds is essential to minimizing invasion risk.

Early detection and rapid response (EDRR)

Early detection enables rapid response, minimizing ecological impacts, management costs, and staff time. Increasing awareness among staff, volunteers, and the public of species not yet present in the Reserve improves detection likelihood. Engagement with regional networks supports information sharing on emerging threats. The Reserve collaborates with partners including the South Coast Cooperative Weed Management Area (CWMA; [link](#)), Gorse Action Group (GAG; [new website in development](#)), Oregon Invasive Species Council (OISC; [link](#)), and the Coos Watershed Association (CoosWA; [link](#)).

Geographic scope: EDRR efforts occur both within the Reserve and in adjacent areas that may serve as invasion pathways. Coordination with regional practitioners and subject-matter experts strengthens detection capacity and response effectiveness.

Mapping spatial extent

Documenting the spatial distribution of invasive species supports assessment of infestation status (e.g., isolated vs. widespread), trend tracking (e.g., stable vs. expanding), prioritization of management actions, and evaluation of potential impacts. Staff and the public contribute to mapping using tools such as iMapInvasives, EDDMapS, and iNaturalist. The Reserve has also tested QuickCapture and Field Maps; however, broadly used platforms have proven more accessible for volunteers. Emerging technologies, including drone-based surveys and AI-assisted image classification, offer additional opportunities for detecting invasive species in remote areas (e.g., Singh et al. 2024).

Geographic scope: Mapping within the Reserve informs management prioritization, while mapping in surrounding areas helps identify potential threats. Fine-scale mapping within treatment areas supports evaluation of management effectiveness and informs adaptive management.

Active management

Active management includes any action taken to reduce invasive species populations, either by eliminating individuals or reducing their vigor, reproduction, or spread. Integrated pest management (IPM)—the use of multiple complementary methods—is often employed to improve effectiveness. All methods are subject to site-specific constraints, regulatory requirements, and internal approval processes, and include appropriate disposal of plant or animal material. The Reserve relies heavily on volunteers for manual control efforts and contracts with specialists for herbicide application, wildlife control (e.g., nutria), and large-scale projects requiring specialized equipment or labor.

Geographic scope: The Reserve conducts active management on lands under its jurisdiction and provides technical guidance within the broader coastal watershed. In adjacent high-risk areas, the Reserve collaborates with partners (e.g., CoosWA) and landowners to control priority species before they spread into Reserve lands.

Post-management monitoring

Monitoring evaluates treatment effectiveness, identifies the need for follow-up or alternative actions, and contributes to the development of best management practices. Monitoring results inform subsequent management decisions and help determine progress toward management objectives.

Geographic scope: Monitoring focuses on treatment sites and adjacent areas where reinvasion or spread is likely.

Adaptive management

Adaptive management is an iterative process that uses monitoring results and field observations to refine management strategies over time. Effective approaches may include combining methods or repeating treatments until management goals are achieved.

Geographic scope: Adaptive management is applied at the treatment site and surrounding areas, informed by ongoing monitoring and site-specific conditions.

2.3.3 Management methods

Invasive species management at the South Slough Reserve uses an integrated framework of control methods selected to maximize effectiveness while minimizing impacts to native ecosystems and cultural resources. These methods include physical, mechanical, biological, chemical, and fire-based approaches, as well as strategies that promote competitive native vegetation. Weed Control User Tool (WeedCUT; [Link](#)) provides a comprehensive summary of techniques.

The Reserve generally prioritized physical control due to its low ecological impact and value for community engagement. Mechanical and chemical methods are applied selectively where infestations are extensive or resistant to manual control. Biological control and revegetation strategies provide longer-term, landscape-scale suppression by reducing invasive species dominance. Across all methods, implementation is guided by site conditions, regulatory requirements, and resource availability, with coordination to protect culturally significant sites. Adaptive management, including ongoing monitoring and consultation with Tribal Historic Preservation Officers (THPO), ensures management remains effective and culturally appropriate.

Physical control

Physical control involves manual removal using hand tools or direct effort. Methods include hand-pulling plants (removing the full root system), cutting stems or reproductive structures, and covering plants with plastic to suppress growth. It may also include manual removal or killing of invasive animals (e.g., nutria, five-spine crab).

This is the primary method used at the Reserve due to its minimal impact on native species and cultural resources, and its suitability for volunteer engagement. However, it is labor-intensive, may require repeated treatments over multiple years, and is not always feasible for large or well-established infestations.

If soil disturbance occurs, the Reserve Stewardship Coordinator coordinates with THPO to avoid impacts to cultural resources or burial sites. Personal protective equipment, including gloves, is required, as some species pose health risks (e.g., spotted knapweed (*Centaurea stoebe*) has carcinogens and skin irritants; Parker 2008 [Link](#)).

Mechanical control

Mechanical control uses powered equipment to remove invasive species, including excavators, winches, chainsaws, mulchers, and similar tools. These methods are effective for large infestations but require trained personnel, regulatory compliance, and sufficient funding. As with physical control, any ground disturbance requires coordination with THPO to protect cultural resources.

Biocontrol

Biological control (biocontrol) uses host-specific natural enemies to suppress invasive species populations. These agents undergo rigorous testing to ensure minimal impacts to non-target species. While the Reserve does not develop biocontrol agents, it may serve as a release or redistribution site. In some cases, managed grazing (e.g., goats) may be used as a site-specific form of biological control to reduce aboveground biomass.

Competing species

Establishing or restoring dense native vegetation can reduce resource availability (light, nutrients, space) and limit invasive species establishment. For example, planting woody shrubs such as willow can suppress reed canary grass (*Phalaris arundinacea*). Revegetation is often used following initial control efforts to maintain treatment success. As a general principle, removed invasive plants should be replaced with native species to occupy available space and reduce reinvasion risk; however, if repeated management is required to allow effective suppression, then this should be completed prior to replanting as planting can make management more difficult.

Chemical or herbicide

Herbicides may be used when mechanical, manual, or cultural control methods are ineffective, impractical, or unlikely to achieve long-term control, particularly for invasive species that resprout, spread vegetatively, or are difficult to eradicate manually. The Reserve minimizes chemical use whenever feasible and relies on licensed applicators and certified contractors for all herbicide applications. Only targeted application methods designed to minimize drift and reduce impacts to non-target species, habitats, and water resources are authorized within the Reserve.

All herbicide use within the Reserve must comply with applicable federal, state, and local regulations, including label requirements and permitting restrictions.

Oregon Herbicide Requirements Applicable to the Reserve [\[Link\]](#)

- *Ground-based herbicide applications are prohibited within 10 feet of fish-bearing or fish-use streams.*
 - *A written pesticide application plan is required for any application occurring within 100 feet of fish-bearing streams.*
 - *Pesticide applicators must provide notification to the Oregon Department of Forestry (ODF) at least 15 days prior to application where required.*
 - *Forest landowners and applicators are required to prevent, contain, control, and report pesticide leaks or spills.*
 - *Herbicide waste, rinse water, and chemical containers must be disposed of in accordance with all applicable regulations.*
 - *Applicators must maintain daily application records, including treatment location, weather conditions, herbicide used, application rate, and applicator information.*
 - *All applications must comply with herbicide label directions and the requirements of the U.S. Environmental Protection Agency (EPA), Oregon Department of Agriculture (ODA), Oregon Department of Environmental Quality (DEQ), Oregon Water Resources Department (OWRD), and Occupational Safety and Health Administration (OSHA).*
 - *Herbicides containing aminocyclopyrachlor (ACP) are prohibited in natural areas and will not be used within the Reserve.*
-

Fire

Fire can be used in several ways, including prescribed burning, flame weeding, and pile burning. Prescribed and cultural burns may support broader habitat management objectives, though they are not currently a primary tool for invasive species control within the Reserve. There is currently a draft Fire

Management Plan for the Reserve, that will include details on fire stewardship including risks for stimulating invasive species and benefits for treating invasive species.

Flame weeding is most effective on seedlings, while pile burning can be used to dispose of biomass and stimulate germination of the seed bank for subsequent treatment. Because some species release toxic compounds when burned, all materials must be evaluated for safety prior to burning.

2.3.4 Choosing the right management strategy

Best management practices

Selecting best management practices (BMPs) for invasive species requires careful evaluation of multiple, and often competing, factors to ensure that management actions are both effective and responsible. Key considerations include the likelihood of successfully reducing or eradicating the target species, the potential for non-target impacts to native species, habitats, and cultural resources, and the feasibility of implementation given available funding, staff capacity, regulatory requirements, and site conditions.

Because no single method is universally effective, the South Slough Reserve applies an IPM approach that combines physical, mechanical, biological, cultural, and—when necessary—chemical methods. Integrating multiple approaches often improves treatment effectiveness, increases efficiency, and reduces the risk of unintended consequences.

Adaptive management is also central to BMP selection. Management actions are monitored, evaluated, and adjusted over time in response to treatment outcomes and changing environmental conditions. This iterative process supports continuous learning and improves long-term management success.

Staff are encouraged to use available decision-support tools and technical resources (e.g., WeedCUT) and to engage with regional expert networks, including the South Coast Cooperative Weed Management Area (CWMA), Oregon Invasive Species Council (OISC), Gorse Action Group (GAG), and the Coos Watershed Association (CoosWA), to inform BMP selection and remain current on emerging methods and species-specific guidance.

Non-target effects

Minimizing unintended impacts is a central objective of the South Slough Reserve Management Plan and underpins all invasive species management decisions. This includes both reducing the ecological harm caused by invasive species and ensuring that management actions do not adversely affect non-target species, habitats, or cultural resources.

Non-chemical management approaches are prioritized where they are effective and feasible. Chemical control is considered selectively, particularly in situations where it provides a lower overall impact compared to other methods or where alternative approaches are unlikely to achieve management objectives. When herbicides are used, they are applied using targeted techniques designed to minimize off-target exposure.

Decision-making around chemical use is supported by tools such as HaZEL [\[Link\]](#), which provides information on human health and environmental risks associated with registered herbicides. Where

access to such tools is limited, the Reserve may coordinate with partner organizations (e.g., CWMA) or pursue external funding opportunities to support informed chemical selection.

Across all management approaches, coordination with Tribal Historic Preservation Officers (THPO) is required when there is potential to affect cultural resources, ensuring that management actions remain both ecologically and culturally responsible.

3 The first 50 years of invasive species work at the Reserve

The South Slough National Estuarine Research Reserve (SSNERR) Management Plan (2017–2022) identified invasive species management as a key priority, while the SSNERR Upper Watershed Restoration Action Plan (Robinson 2009) emphasized the need for comprehensive inventories of invasive plant populations to support development of a proactive strategy to prevent their spread.

In response to this guidance, Reserve staff and external collaborators have collected and maintained spatial data on invasive species within and adjacent to the Reserve, identified priority species and management areas, and directed targeted management and research efforts.

To date, the Reserve has concentrated work on a set of focal taxa selected based on either their high-risk status (e.g., gorse, purple loosestrife, jubata grass, and nutria) or identified knowledge gaps requiring additional research to inform management (e.g., five-spine crab, reed canary grass, and tall wheatgrass). In parallel, the Reserve has prioritized key management areas where multiple invasive species co-occur and coordinated control efforts can increase efficiency, ecological benefit and reduce spread.

This section summarizes these targeted efforts and synthesizes lessons learned to inform ongoing adaptive management.

3.1.1 Purple loosestrife (*Lythrum salicaria*)

From 1999-2003 Coos Watershed Association (CoosWA) conducted extensive purple loosestrife surveys in the Coos Estuary and its tributaries. CoosWA surveyed 70 sites and found 47 with purple loosestrife present. The only invaded site in the South Slough watershed was at Barview Wayside, an Oregon Department of Transport (ODOT) mitigation site. In 2011 areas of concern within the Reserve were identified, mapped and surveyed, with no additional sites identified (Fig. 2.a-b). Due to the infestation site's proximity to the Reserve and the high impact risk of the species, the Reserve identified this as a high priority for prevention and worked with ODOT to start managing the site. From 2018 to present the Reserve has conducted yearly monitoring and management (hand pulling) of the site (Fig. 2.c).

Lessons learned: Purple loosestrife is most visible during flowering times (usually in July-August); however, flowering coincides with seed production (seeds mature from the bottom of the inflorescence; McCaughey and



Alice Yeates recording purple loosestrife location at Barview Wayside

Stephenson 2000) making it challenging to manage the plant prior to seed set. Reduce seed production by managing in early-July and use previous survey maps to prioritize search areas.

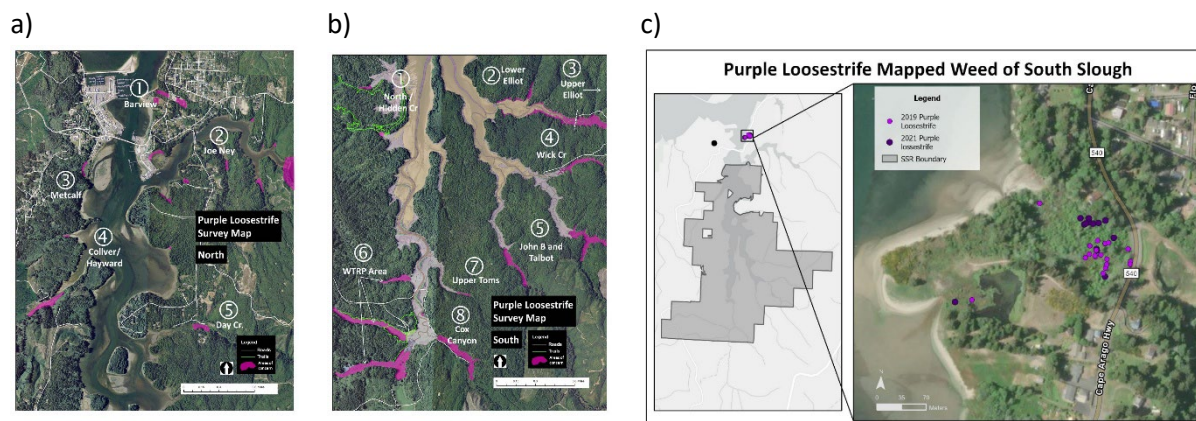


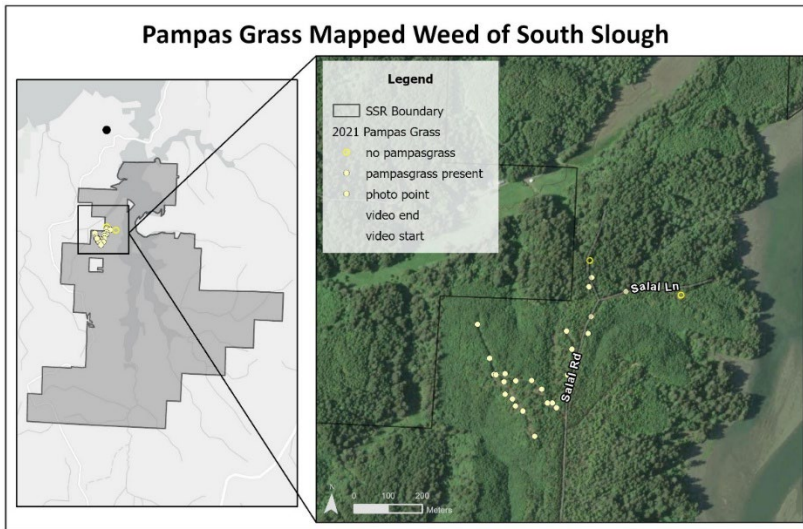
Figure 2: Wetland areas suitable for purple loosestrife (*Lythrum salicaria*) in the a) northern and b) southern parts of the South Slough estuary (2011 surveys) and c) location of plants managed at Barview Wayside in 2019 and 2021.

3.1.2 Jubata grass (*Cortaderia jubata*)

During the development of the South Slough Fire Management Plan a large infestation of jubata grass, in the Salal In and Hayward Inlet area, was identified as a high fire risk (Fig. 3). In January 2021, the Reserve worked with Coos Forest Protective Association to remove over 5,000 mature jubata grass plants from a 15-acre area. The work took approx. 650 labor hours and resulted in around 140 cubic yards of plant material removed. Jubata grass seeds are short lived in the seed bank (Drewitz and DiTomaso 2004) and management of small plants from 2022-2023 almost eradicated the species from this area. Monitoring in December 2025 documented approx. 100 small plants (Fig. 3), which were subsequently managed by the Saturday Stewards in Spring 2026. The site will continue to be monitored every few years as some plants still survive on steep slopes where access is unsafe for volunteers.

Lessons learned: Management using physical removal methods need to be conducted in the wet season, when soil is loose and the ground is easier to dig. Thorough search and hand-pulling of small plants should be conducted for two years following mature plant removal, when seeds are still viable in the soil, followed by periodic surveys to ensure small plants were not missed.

a)



b)



Figure 3: Jubata grass (*Cortaderia jubata*) a) population extent in the Salal In area and b) before (top) and after management (bottom) photos.

3.1.3 Five-Spine Green Crab (*Carcinus maenas*)

The five-spine green crab has been transported around the world during the last century and has colonized many temperate coastlines. Numerous research studies have examined the biology and ecology of five-spine crabs and have found it to be an aggressive invader that negatively affects native species, important estuarine and marine habitats, and fisheries. The five-spine crab became established in the San Francisco estuary prior to 1989. Since then, coastal currents have been seeding larvae into the estuaries of the Pacific Northwest, including Coos Bay.

South Slough Reserve scientists started monitoring five-spine crab in South Slough and Coos Bay in 2016, continuing and expanding the monitoring that Dr. Sylvia Yamada (OSU) started in 2002. Prior to 2016 recruitment was linked to strong northwards ocean currents during El Niño years, as indicated by a mixture of high abundance years, low abundance years, and extinction events. However, since 2016 the abundance of five-spine crabs has been continuously increasing in Coos Bay and is now at levels where negative impacts are expected to occur.

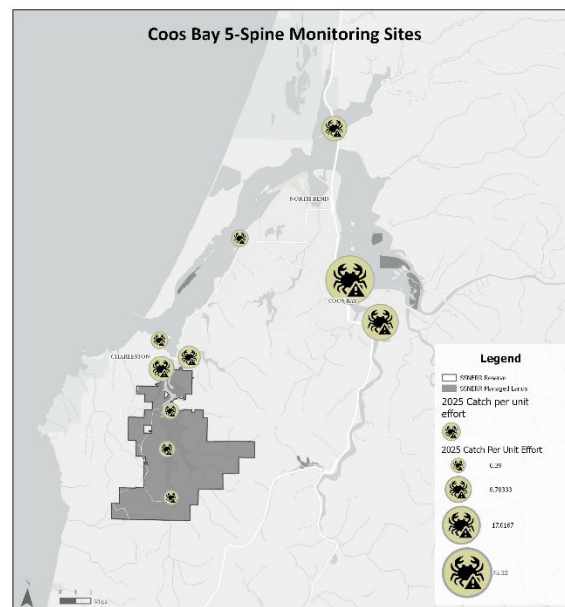


Figure 4: Ongoing monitoring sites for the five-spine crab in the Coos and South Slough estuaries. Symbol reflects average catch per unit effort in 2025 (0.35-25.33 crabs per trap).

South Slough is leading several research projects on the ecology and management of the five-spine crab in the Coos estuary (Fig. 4) and partnering with other researchers along the Oregon and Washington Coast. The primary long-term project includes monitoring changes in adult five-spine crab abundance and juvenile recruitment in the Coos Bay Estuary. Several other research projects study the impacts of five-spine crabs on native and commercially important species such as eelgrass, clams, oysters, and other crabs. Additional projects are aimed at developing management methods. Currently the only feasible management method is physical removal. Research projects include studying the effect of consistent and repeated trapping and developing recreational and commercial markets for five-spine crabs to encourage sustained removal over time.

3.1.4 Nutria (*Myocastor coypus*)

In 2015 the Reserve worked with US Department of Agriculture's Wildlife Service (Roseburg) to control nutria in the southern part of the Reserve, including Winchester Creek and tributaries between Hinch Road Bridge and the Reserve's south boundary. Control efforts included nighttime hunts for five site visits (2 hrs/night) over a two week period using .22 caliber firearm (w/muzzle suppressor).

There is currently no Nutria Management Plan for Coos County and landowners address nutria issues through trapping season and pest management companies (*pers. comm.* Anthony Martinez, ODFW, May 19th, 2026). Trapping in the Reserve is prohibited, except for research or management purposes and then only with the approval of the Manager (OAR 142-010-0020 Restricted Activities #25).

3.1.5 Gorse (*Ulex europaeus*)

In 2014-2018 the Reserve received USFWS NCWC Grant Program funds to purchase, conduct a cultural and biological survey, identify needs, and conduct initial management of the 357-acre Indian Point property. This included working with Coos Watershed Association to manage a mature population of gorse. As gorse seeds can remain viable in the seed bank for decades (Hill et al. 2001) the site is regularly surveyed, with hundreds of seedlings and a few mature plants removed each year by volunteers and staff.

In addition to the large population on Indian Point, gorse has been detected and managed at two other locations within the Reserve. A single mature plant was found on the northern riparian edge of Elliott Creek in [need to confirm year] and monitoring of this site occurs every couple of years to avoid population expansion in this isolated location. The other site spans road edges along West Beaverhill Rd, Seven Devils Rd and the associated forestry roads in the Reserve. Due to the large population of gorse on County property immediately to the south of the Reserve, the high disturbance conditions of roadside edges, and the high introduction frequency of propagules fire vehicles, this area is regularly monitored through car surveys for early detection rapid response.



Alice happy to have removed a mature gorse plant at Indian Point in 2020

Lessons learned: Burn piles stimulated the seedbank, resulting in localized large germination events; therefore, managing seedlings is a high priority following any accidental or intentional fire management

in this area. Additionally, repeated burning of a managed site can be used to deplete the seedbank and minimize reestablishment.

3.1.6 Smooth (*Spartina alterniflora*) and dense-flowered cordgrass (*S. densiflora*)

Spartina species that are invasive along the Oregon coast are native to Atlantic and Gulf coasts saltmarshes of North America. These species were introduced to, and are having large impacts in, Willapa Bay (Washington) and San Francisco Bay (California) and are invading Oregon's estuaries (Pfauth et al. 2026). Invasive spartina are ecosystem engineers that convert mudflats to marsh, putting native eelgrass beds at risk and resulting in monoculture of the invasive grass (Morgan and Sysma 2010).



Dense-flowered cordgrass at
Jordan Cove site in 2025

Two species of cordgrass have been recorded and managed in the Coos watershed (Schmitt et al. 2015). In 2005, smooth cordgrass was detected and managed at Barview Wayside (Rumrill 2006; Schmitt et al. 2015). The site was intensively surveyed by Oregon Department of Agriculture and researchers from Portland State University (PSU) in 2025, with no plants found (2025 PSU Oregon State Weed Board Report). In 2013, dense-flowered cordgrass was found near Jordan Cove and subsequently throughout the Coos Estuary. While neither species has been found in the Reserve, they are considered high risk to estuarine habitats and have a high risk of invasion from nearby sites. Due to this high risk the Reserve prioritizes prevention and early detection rapid response through collaborative efforts with ODA and Coos WA. Sites are surveyed and managed twice a year.

Lessons learned: Digging plants to remove the roots results in long lasting depressions that may alter the hydrology of the site, the most effective management is one-to-three applications of [confirm rates] (pers. Com. Carri Pirosko, Noxious Weed Specialist ODS).

3.1.7 Reed canary grass (*Phalaris arundinacea*)

Reed canary grass forms dense, persistent stands that outcompete native wetland and riparian vegetation. Establishing woody vegetation, particularly willows, has been shown to reduce reed canary grass biomass and facilitate native plant re-establishment (e.g., Kim et al. 2025). However, there is limited research on the effectiveness of other native shrub species for this purpose.

In 2022, the Reserve initiated an experimental planting in the upper Wasson Creek valley to evaluate strategies for restoring reed canary grass-dominated wetlands. The study tested two planting densities (low and high) and two species compositions (willow-only and mixed native shrubs). High-density plots were planted at approximately 2 live cuttings per m² (150 stakes within a 5 m radius), while low-density plots were planted at approximately 1 cutting per m² (75 stakes within a 5 m radius).

Willow-only plots included a mix of four species: *Salix hookeriana*, *S. lasiandra*, *S. scouleriana*, and *S. sitchensis*. Mixed-species plots consisted of approximately 25% willow, combined with red-osier

dogwood (*Cornus sericea*), twinberry (*Lonicera involucrata*), Pacific ninebark (*Physocarpus capitatus*), and rose spiraea (*Spiraea douglasii*).

Plant survival was monitored in October 2023 and September 2024 (one and two years post-planting). Overall survivorship was low, declining from 19% in 2023 to 10% in 2024. Willows consistently outperformed other species, with survival rates of 28% in 2023 and 14% in 2024, compared to 5% and 2% for non-willow species. Across all treatments, few individuals exceeded the height of the surrounding reed canary grass, indicating strong competitive suppression.

Based on these results, the following management recommendations were identified:

- Use taller willow cuttings to improve initial establishment and competitive ability;
- Reduce competition by cutting or “brushing” reed canary grass around plantings until shrubs exceed the height of surrounding vegetation; and
- Prioritize willow species over other native shrubs when the primary objective is to suppress reed canary grass.

Building on these findings, the Reserve partnered with the Coos Watershed Association (CoosWA) and Swanson Ecological in fall 2025 to test an enhanced approach using larger planting stock and active competition management. Willow stakes approximately six feet in length were installed and protected with tree tubes. Follow-up brushing treatments are planned for 2027 and 2028 (pending funding). Although this approach requires greater upfront investment in materials and labor, it is expected to improve survivorship and accelerate suppression of reed canary grass.

3.1.8 Tall wheatgrass (*Thinopyrum ponticum*)

In 2012 USGS established 386 emergent marsh vegetation plots on the Bull Island complex and in 2018 surveys the exotic tall wheatgrass was recorded. In 2018 and 2019 Reserve staff mapped large areas of dense wheatgrass, along with a number of individual plants or small patches (Figure 5). Due to the unstructured survey method, it is likely that additional small populations were present and not recorded at this time.

Tall wheatgrass is not classified as a noxious weed in Oregon; however, a review of the literature showed that studies have primarily focused on the economic benefit of this species rather than the ecological impact in natural areas. The rapid spread and establishment of dense populations of tall wheatgrass on Bull Island warrants further examination to determine if populations are continuing to expand, if management is feasible and required, and if further ecological impact studies are needed. Consequently, the South Slough Reserve developed a monitoring plan to track spread of tall wheatgrass on Bull Island and corresponding response of native plant community.



Figure 5: Map of southeastern Bull Island with emergent vegetation plots surveyed in 2012 (green points) and 2018 (brown points), and tall wheatgrass (*Thinopyrum ponticum*) patches and isolated plants surveyed in 2019 (orange polygons).

3.2 Focal Areas for multiple species

Priority areas within the Reserve includes high use areas (e.g., Visitor Center, maintenance buildings), high disturbance areas (e.g., Wasson Creek Watershed Restoration Project), previous large scale infestation sites (e.g., Indian Point, Salal In) and areas with known or previously managed high risk species (e.g., purple loosestrife, Gorse; Figure 6).

The South Slough Saturday Stewards program meets monthly to provide regular stewardship to the Reserve. This group of 5-30 volunteers focusses on invasive plants in high priority areas. The majority of the Reserve's invasive species management is conducted through volunteer efforts.

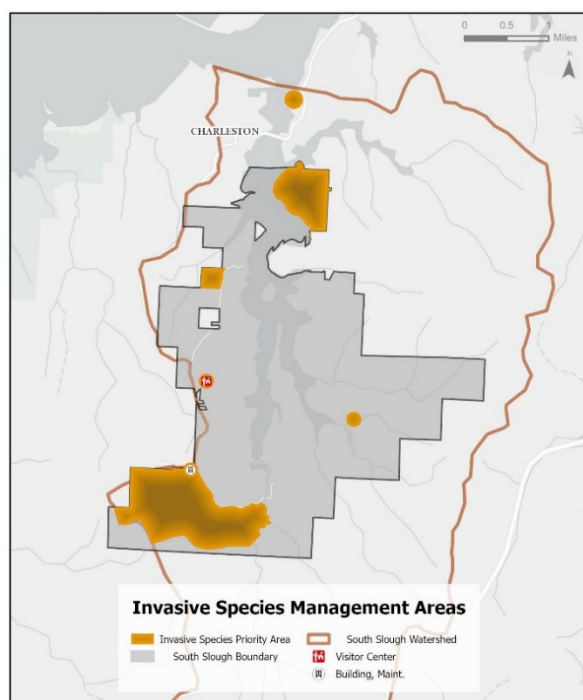


Figure 6: Map of South Slough watershed with high priority areas (orange shading, Visitor Center and Maintenance Building) determined by ongoing management of high-risk species or areas of high disturbance that are at risk of invasive species establishment.

3.3 Mapping invasive species

Mapping and tracking invasive species has been an important component of management activities at the SSNERR. Over time, multiple digital tools and applications have been used by staff, volunteers and

members of the public to document invasive species occurrences, support treatment planning, and track management outcomes. Early mapping efforts used a variety of geographic information system (GIS) tools, applications and technologies (e.g., Trimble Geo or similar handheld GPS models, Field Maps, Survey123, Avenza Maps, QuickCapture, iNaturalist, EDDMapS West, and iMapInvasives (iMapApp)) to record invasive species locations during field surveys and management work. These tools allowed staff to capture spatial data in real time, including GPS coordinates, field notes, and photographs. Due to non-standardized data collection methods and workflows these records were not centralized or consistent. These data records are being integrated into the Reserve's GIS framework as a comprehensive record of historic data.

In addition to internal mapping efforts the Reserve has contributed to regional monitoring efforts through platforms such as iNaturalist, EDDMapS West, iMapInvasives (iMapApp) and working groups such as the Gorse Action Group (GAG). These applications provide standardized species reporting workflows and allow SSNERR observations to contribute to broader regional and statewide invasive species datasets. Use of these platforms has also helped improve species verification and data sharing with partner organizations and agencies.

4 Strategic action plan for invasive species management

The final section of this plan provides guidelines and resources for invasive species management in the Reserve and surrounding areas. It outlines key refinements to the Reserve's invasive species management approach, with a focus on improving how information is collected, how responses are initiated and coordinated, and how decisions are made in the field. It also addresses the need for flexible, site-specific strategies that can accommodate regulatory or environmental constraints, including opportunities to trial innovative management approaches where conventional methods are not feasible. In addition, this section highlights ongoing research priorities and describes strategies for outreach and education aimed at strengthening partnerships, increasing awareness, and supporting broader community involvement in invasive species prevention and management.

4.1 Prevention

Prevention aims to keep invasive species out of Reserve managed lands. Typical introduction pathways are human, animal, and environmental transport (e.g. water, wind). Strategies to prevent new introductions include: identifying threats and understanding introduction pathways, assisting partners with invasive species monitoring and control programs in the Coos watershed, identifying and controlling invasive organisms near Reserve managed lands, washing equipment before it is used on Reserve managed lands, and limiting recreational activities that may introduce invasive species.

Proposed language to include in contracts to reduce introductions (based on BLM contract language):

Vehicle Washing – Prior to entering South Slough Reserve lands, Contractor vehicles shall be washed to remove all dirt, mud, grease, and plant parts that may carry noxious weed seeds or vegetative parts. The

COR or Project Inspector shall inspect Contractor's vehicles at any time during the duration of this contract. Vehicles that drive or park in roadside vegetation will be cleaned before returning to South Slough Reserve lands. Vehicles body, undercarriage, wheel wells, grill, inside bumpers, frame, bed, etc. shall be washed at least twice a month.

Mechanized Equipment – All mechanized equipment operations shall be limited to 35% slopes with allowances to 45% slope for short pitches up to 300 feet. All operations on granitic soils shall be limited to 25% slopes with allowances to 35% slope for short pitches up to 300 feet. Mechanized equipment shall be cleaned before returning to South Slough Reserve lands. All mechanized equipment shall be washed at least twice a month.

4.2 Early detection rapid response

Early detection and rapid response (EDRR) is a critical component of invasive species management, enabling the Reserve to identify and address new infestations before they become established and more costly to control. The Reserve actively participates in regional invasive species networks (e.g., the South Coast Cooperative Weed Management Area Working Group) to stay informed about emerging threats and species of concern in the surrounding landscape. These partnerships facilitate information sharing, coordinated response efforts, and early awareness of species likely to spread into the Reserve.

Within the Reserve, new invasive species detections occur through multiple pathways. Staff regularly encounter invasive species during routine activities, including annual vegetation monitoring (e.g., permanent plots and restoration sites), site inspections, and management work. Trained volunteers, interns, and visitors also play an important role in detection by reporting observations through established communication channels and community science platforms. Expanding invasive species identification training and outreach programs will further strengthen early detection capacity by improving the ability of staff and the public to recognize and report priority species.

Once a new species or infestation is detected, rapid response actions are prioritized to contain or eradicate the population while it is still limited in extent. This may include immediate manual removal, site assessment, consultation with regional experts, and development of a targeted control approach appropriate to the species and site conditions. Documenting detections and response actions in the Reserve's centralized database ensures that information is accessible for follow-up monitoring and adaptive management.

Emerging technologies offer additional opportunities to enhance detection efforts. Drone-based vegetation mapping and remote sensing approaches can improve the ability to identify invasive plants in remote or difficult-to-access areas, particularly for species with distinctive spectral or structural characteristics. As UAS program capacity allows, they may be incorporated into the Reserve's invasive species monitoring program to complement ground-based surveys.

Together, these approaches support a proactive EDRR framework that increases the likelihood of successful eradication, reduces long-term management costs, and limits ecological impacts.

4.3 Mapping and monitoring

Data collected through various mapping tools (e.g., FieldMaps, Avenza, Trimble, iMapInvasives) are being compiled into a centralized database maintained by the Reserve. This system integrates spatial observations, species identifications, and management records, enabling staff to track invasive species distributions across Reserve habitats and evaluate management outcomes over time.

Moving forward, the Reserve will adopt more standardized data collection protocols to improve consistency, data quality, and long-term usability. The primary field data collection platform for staff will be Field Maps, which supports direct integration with the Reserve's GIS database and allows for offline data entry in remote areas. External partners and volunteers are encouraged to submit invasive species data to [EDDMaps, iMapInvasives when possible the reserve will access and review external data sources to inform management on the reserve.

Standardized data fields will be used to ensure consistent documentation of key information for each observation or treatment area, including:

- Species identification
- Date type: initial detection, treatment, and follow-up monitoring
- Date
- Name of data collector or manager
- Geographic location (GPS point or polygon)
- Estimated population size (e.g., number of individuals or patch extent)
- Estimated percent cover of site
- Management actions implemented
- Monitoring results and treatment effectiveness

Adopting standardized mapping protocols will improve data comparability across projects, enhance coordination among staff and partners, and strengthen the Reserve's ability to assess treatment effectiveness and prioritize future invasive species management actions.

4.4 Management

There are multiple factors that contribute to the invasive species management decision making process. These include, but are not limited to, habitat type (e.g., proximity to water may limit herbicide use), risk of non-target impacts (e.g., damaging or contaminating cultural resources, pollinators or nearby biological and environmental conditions), and access (e.g., mechanical methods may require road access or dry conditions). In addition to these site conditions there are cultural considerations (e.g., perceptions of herbicide safety). While there are safe and precise herbicide application methods, with little to no non-target impacts, there are methods and situations where this is not the case. Inappropriate use of herbicides that have had negative impacts on the surrounding environment and to human health has led to a mistrust of this management method. Therefore, where herbicide application is deemed the best management strategy, it needs to be coupled with both an intensive review of potential impacts and meaningful public engagement. The local community needs to be able to trust the

Reserve to make good decisions and that it will clearly communicate when herbicide use is the preferred strategy.

4.4.1 Best management actions

Methods to manage invasive species are continuously refined as new techniques and information become available. These strategies are regularly updated, summarized, and modified for regional conditions by numerous public organizations. These sources should be studied before beginning any new invasive species projects. See Appendix 2 for management options for local species and Appendix 6 for links to resources for current best management practices.

4.4.2 Decision making and approval process

The decision-making process for invasive species management is designed to ensure that control actions are effective, compliant, and environmentally responsible (Figure 9). After determining the most effective management strategy the proposed treatments begin with an assessment of potential non-target effects, followed by review and approval from the Reserve Manager and, where applicable, Tribal Historic Preservation Officers (THPO). A detailed Specific Control Plan is then developed to guide implementation, and all necessary permits are secured prior to action. Public communication is conducted to inform local community of planned activities. Management actions are subsequently implemented, with effectiveness monitoring used to evaluate outcomes. Results inform an adaptive management approach, allowing strategies to be refined over time to improve efficacy while minimizing unintended impacts.

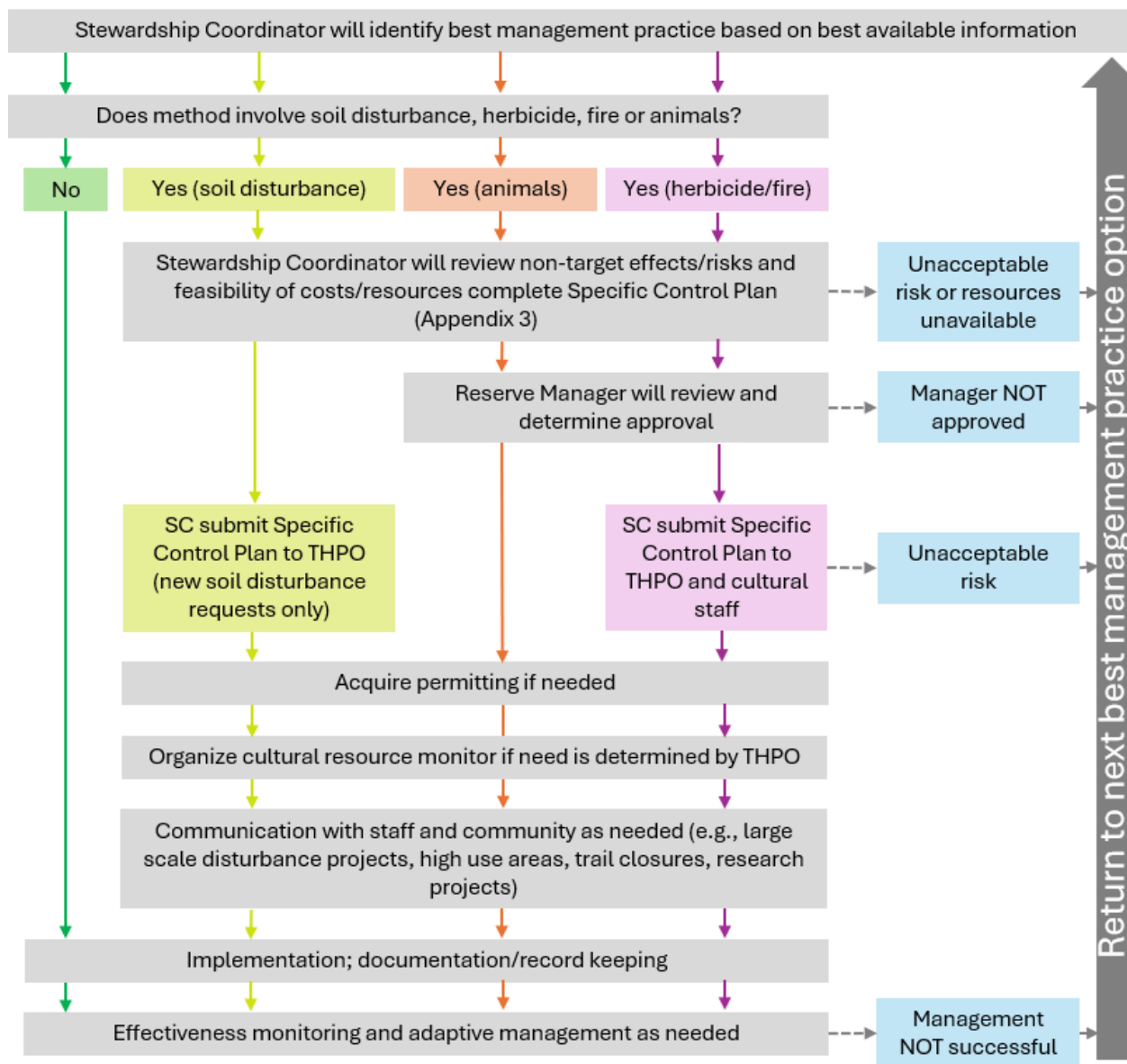


Figure 9: Decision making and approval process for each potential management type. If a decision point is unsuccessful then the process resets and the next best management strategy is considered.

4.4.3 Specific control plan

A specific control plan (Appendix 3) is a site-specific targeted management document that outlines the strategies, methods, and timeline for controlling or eradicating invasive species within a defined area. It incorporates local conditions—such as habitat type, species present, land use, and cultural resource considerations—to guide effective and context-appropriate management. These plans include clear objectives, selected control methods, monitoring protocols, and adaptive management approaches to ensure that actions remain effective over time and minimize unintended impacts.

A site-specific control plan is warranted when infestations are extensive, occur in sensitive or regulated areas, involve high-risk species, or require coordinated use of multiple treatment methods over time.

These situations demand clear objectives, careful method selection, and documented monitoring to ensure effectiveness and avoid unintended impacts. In contrast, small, isolated infestations of low-risk species in non-sensitive areas can often be addressed through immediate manual removal (“pulling the weed”) without the need for a formal plan, provided the action is low-impact and unlikely to affect surrounding resources.

4.4.4 Trialing innovative management approaches

As described in Section 4.4.1, invasive species management often requires balancing competing constraints and adapting methods to site-specific conditions. This case study describes a pilot treatment developed for jubata grass (*Cortaderia jubata*) within a culturally sensitive historic site where soil disturbance and herbicide use are prohibited by SHPO protections.

Jubata grass is a large perennial bunchgrass that regenerates readily following cutting or burning (see Sections 3.4.2 and 3.1.2). While manual excavation has been effective elsewhere at the Reserve, these methods cannot be used at this infestation, which occupies an approximately 20 × 20 m protected area.

In April–May 2027, the Reserve will implement a pilot occultation (light exclusion) treatment intended to suppress jubata grass without chemical inputs or ground disturbance. Plants will be cut near ground level, flowering material removed to prevent seed dispersal, and remaining biomass spread thinly outside the treatment area. The site will then be covered with black silage tarp secured with sandbags.

From June–September, the tarp will be inspected biweekly and maintained as needed, including cutting any regrowth beneath the cover. The tarp will be removed during winter months for monitoring, and the seasonal treatment cycle will be repeated annually until regeneration ceases.

Following apparent eradication, the site will be monitored for at least one year to confirm suppression success and evaluate native vegetation recovery. Coordination with SHPO and THPO will continue to ensure any seedbank recruitment is addressed using culturally compliant methods.

4.5 Research

Balancing research objectives with invasive species management needs requires careful coordination to ensure that neither goal compromises the other. Research activities—such as experiments, long-term monitoring, or pilot studies—can provide critical information to improve management effectiveness over time. However, these activities must be designed and implemented in ways that do not inadvertently facilitate the spread of invasive species or delay necessary control actions.

When conflicts arise, management actions take precedence where there is a clear and immediate risk of ecological harm, regulatory concern, or rapid spread of high-priority invasive species. In these cases, research may be modified, relocated, or discontinued to prevent negative outcomes. Conversely, when conditions allow, integrating research into active management areas can provide valuable opportunities to evaluate treatment effectiveness, test innovative approaches, and improve long-term decision-making.

Clear communication between researchers, Reserve managers, and partners is essential throughout project planning and implementation. All research proposals should include an assessment of potential invasive species risks and identify mitigation measures where appropriate. Adaptive management principles are used to adjust both research and control activities as new information becomes available, ensuring that ecological protection and knowledge generation remain aligned.

4.6 Outreach and education

Outreach and education are essential components of invasive species management at the South Slough Reserve, supporting prevention, early detection, and long-term stewardship. Because many invasive species are introduced and spread through human activities, informed and engaged communities play a direct role in reducing invasion risk and improving management outcomes.

The Reserve uses a combination of on-site interpretation, volunteer programs, partner collaboration, and regional outreach to increase awareness of invasive species issues. Volunteer stewardship activities provide hands-on opportunities for participants to learn species identification, understand management techniques, and contribute directly to control efforts. These programs also help expand the Reserve's capacity for detection and monitoring across a broader geographic area.

Educational materials, signage, and guided programming are used to communicate key messages about invasive species pathways, prevention practices (e.g., cleaning equipment and gear), and the ecological impacts of invasions. Targeted outreach is also directed toward contractors, land managers, and adjacent landowners to reduce propagule pressure from surrounding areas and improve coordination across boundaries.

Partnerships with regional organizations, including invasive species working groups and watershed associations, further extend the reach of educational efforts and support consistent messaging across the landscape. Where appropriate, the Reserve also participates in community science platforms and public reporting tools to encourage early detection and reporting of new invasive species.

Overall, outreach and education efforts are designed to build shared responsibility for invasive species prevention and management, strengthen regional collaboration, and support long-term ecological resilience across Reserve habitats and the surrounding coastal landscape.

4.7 Required resources

Implementation of invasive species management activities requires a combination of staff time, volunteer support, equipment, and contracted services. Reserve staff provide coordination, planning, field oversight, and monitoring, while volunteers play a key role in manual control efforts and early detection activities. Supporting volunteer participation through basic provisions (e.g., food, water, and safety equipment) is important for maintaining engagement and productivity during field events. Field tools and equipment—such as hand tools, protective gear, and mapping devices—are necessary for effective implementation of both manual and monitoring activities. For larger-scale infestations or treatments requiring specialized expertise, the Reserve relies on contracted professionals, particularly for herbicide application and heavy mechanical removal work. Ensuring access to these resources in a

timely and coordinated manner is essential for effective, safe, and efficient invasive species management.

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[Add additional reference]

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6 Appendices

- Appendix 1: Invasive species documented in South Slough and Coos watershed
- Appendix 2: Management strategies for local invasive species
- Appendix 3: Specific Control Plan example
- Appendix 4: Species to report to Stewardship Coordinator
- Appendix 5: Helpful resources

Appendix 1: Invasive species documented in South Slough watershed and priority status

This appendix summarizes invasive species documented within the South Slough watershed and their associated management priority status. Records were compiled from the South Slough Site Profile (Rumrill 2006), PCW database (Schmitt et al. 2015), internal mapping efforts, and regional observation databases including [iMapInvasives](#) and [iNaturalist](#).

Priority rankings are intended to guide invasive species management and resource allocation based on factors such as ecological threat, distribution, rate of spread, and feasibility of control. Species records and priority designations may be updated as new survey and monitoring information becomes available.

Species are characterized by the following factors:

High risk: as determined by local invasive species experts

Noxious weed: designated by the Oregon State Weed Board

Priority notification: high risk species that staff/community need to be able to identify and notify Stewardship Coordinator when detected

Map: capture spatial extent by mapping all populations for control planning and effectiveness monitoring

Eradicate: early detection/rapid response species (new invasions) and high impact species

Control: control population size and spread

Species	Location		Impact		Alert		Current management objective		
	Detected in South Slough Reserve	Detected in Coos Bay	High risk	Noxious Weed	Priority notification	Map	Prevent	Eradicate	Control
Woody Plants									
Gorse	X	X	X	B	X	X		X	
Brooms	X	X		B		X			X
Blackberry (Himalayan, cutleaf)	X			B					X
Ivy	X			B					X
Butterfly bush				B	X	X		X	
Cotoneaster	X			-					X
Holly	X	X		-		X			X
Herbaceous Plants	X								
Biddy-biddy	X	X		B		X			X
Purple loosestrife		X	X	B	X	X	X	X	
Field bindweed	X	X	X	B	X	X		X	
Pennyroyal				-					
Poison hemlock				B					
Thistles	X			A-B					
Spotted knapweed	X	X	X	B	X	X		X	
Birdsfoot trefoil	X	X		-					
Creeping buttercup	X	X		-					
Shiny-leaf geranium				B	X	X			
Wild radish		X		-					
Dalmatian toadflax				B	X				
Jubata grass / Pampas grass	X	X		B	X	X		X	
Giant knotweed		X	X	B	X	X	X		

	Location		Impact		Alert		Current management objective		
Graminoids									
False brome	X			B	X			X	
Reed canarygrass	X	X	X	B					X
Tall wheatgrass				-					
Cordgrass / Spartina spp.		X	X	A	X	X	X	X	
Japanese eelgrass	X	X		-		X			
Animals									
5-spined green crab	X	X	X	N/A					X
Mitten crab			X	N/A					
Japanese eelgrass	X	X		N/A					
Star tunicate		X		N/A					
New Zealand Burrowing Isopod		X		N/A					
Club sea squirt		X		N/A					
Lacy crust bryozoan		X		N/A					
Japanese orange-striped anemone		X		N/A					
Harris mud crab		X		N/A					
New Zealand mud snail		X		N/A					
European salt marsh snail		X		N/A					
Purple varnish clam		X		N/A					
Asian clam		X		N/A					
Atlantic soft-shelled clam		X		N/A					
Manila clam		X		N/A					
Nutria	X	X	X	N/A				X	

Appendix 2: Management strategies for local invasive species

Management recommendations for species currently managed within the Reserve, including management notes, disposal requirements (e.g., seeds and other plant material), recommended treatment timing, and known current locations. Recommendations are based on Reserve management experience and referenced information sheets (links provided).

Species and resource link	Management notes	Disposal	Management timing	Location in/near Reserve
Biddy-biddy (<i>Acaena novae-zealandiae</i>) [Link]	Manual: Repeated hand-pulling/digging Herbicide: Escort XP, Activator 90 (previously used)	All plant material	Before seed set in late summer	Visitor Center, maintenance yard, forestry access roads
Bindweed/morning glory (<i>Convolvulus arvensis</i>) [Link]	Manual: Repeated hand-pulling/digging (every 2–3 weeks) to exhaust root reserves Herbicide: various success [Link]	All plant material	Continuous	Visitor Center
Blackberry (<i>Rubus spp.</i>) [Link ; Link]	Manual: Cut and either dig out roots or cover with black geotextile (SSNERR trialing a 2-year treatment) Herbicide:	Leave	Before seed set in Aug/Sept	Widespread
Brooms (<i>Cytisus spp.</i>) [Link ; Link]	Manual: Hand pull small plants; weed wrench for medium-large plants	Seed pods	Before seed set in June	Widespread
Butterfly bush (<i>Buddleja davidii</i>) [Link]	Manual: Remove flowers to prevent seed production; cut and dig out roots Herbicide: cut-stump glyphosate or triclopyr	Seed heads	Most visible in May/June during flowering. Herbicide: later summer/early fall	?
Canada thistle (<i>Cirsium arvense</i>) [Link]	Manual: Repeated digging making sure to remove tap roots and rhizomes (small populations)	Seed heads	June when plants bolt but before seed set	Wasson
Cotoneaster (<i>Cotoneaster franchetii</i> / <i>C. lacteus</i>) [Link]	Manual: Weed wrench, dig out roots. Cutting above ground stems will cause multi-stem plants and make it more difficult to remove with weed wrench, but repeated removal may deplete below ground vigor and slow seed production.	Fruit	Cutting just after seed set is most effective at depleting below ground storage	Widespread

False brome (<i>Brachypodium sylvaticum</i>) [Link]	Manual: Hand pull small plants (remove all root fragments) Herbicide: Mowing before herbicide application can increase success (Large populations)	Seed heads		
Gorse (<i>Ulex europaeus</i>) [Link]	Manual: Hand pull small plants; weed wrench for medium-large plants Herbicide: Large populations [Link]	Seed pods	Before seed set in May	Indian Point, Seven Devils and W. Beaverhill Rds
Holly (English) (<i>Ilex aquifolium</i>) [Link]	Manual: hand pull or weed wrench small plants. Cutting above ground stems will cause multi-stem plants and make it more difficult to manage. Herbicide: Injection or cut-stump glyphosate or triclopyr	Fruit	Herbicide during active growing season (late spring/early summer)	Scattered through forests
Ivy (<i>Hedera spp.</i>) [Link] ; [Link]	Manual: hand pull rhizomes Herbicide: foliar spray (3% triclopyr, 2% glyphosate, 1% siltac), cut stump (25% glyphosate)	All plant material	Hand pull in wet season, herbicide application in late spring/early summer (young leaves absorb more than older leaves with waxy layer).	Widespread
Jubata grass (<i>Cortaderia jubata</i>)	Manual: hand pull (small plants), dig roots or use truck winch (larger plants), trial black plastic for no dig areas	Plumes	Wet season	Salal In, 900 Rd, west side of Beaverhill Rd, Indian Point
Knapweed (<i>Centaurea sp.</i>) [Link]	Manual: hand pull Caution: Use gloves	Seed heads		
Knotweeds [Link]	Manual: black geotextile Herbicide: glyphosate Caution: Do not mow!	Do not spread!	Herbicide before flowering to minimize impacts on pollinators	
Purple loosestrife (<i>Lythrum salicaria</i>)	Manual: hand pull roots (small populations) Biocontrol agents: several of varying efficacy (large populations)	All plant material	Late June/early July	Barview
Tansy ragwort (<i>Senecio jacobaea</i>) [Link]	Manual: hand pull Biocontrol agents: several species (large populations)	Seed heads	Before seed set in mid-August	Wasson

Appendix 3: Specific Control Plan (example)

SPECIFIC CONTROL PLAN

Scientific name: *Hedera helix* **Common name:** English Ivy

Updated: 2/12/2026

A. PRIORITY: High

B. DESCRIPTION

Ivy is a highly invasive, shade-tolerant, evergreen perennial vine native to Europe, Western Asia, and Northern Africa. It spreads locally rapidly via trailing stems that root at nodes and regionally via seeds, which are dispersed by birds. Stem material can propagate and quickly re-establish.

C. CURRENT DISTRIBUTION ON THE SITE

Northwestern side of 1300 Rd, approx. 70m from West Beaver Hill Rd. Infestation site approximately 0.2 acres with 100% ground cover of invasive plant.

Location coordinates: 43°16'16.93 N 124°21'05.51 W

D. DAMAGE & THREATS

Ivy climbs trees, often killing host trees by blocking light and adding weight. Ivy also suppresses understory vegetation by forming dense ground covering mats. Specific risk in area: forest thinning has provided optimal conditions for local spread, high risk of establishing a large patch and not achieving restoration objectives.

E. GOALS

Local eradication if possible, otherwise suppress population growth until forest canopy re-establishes and shading reduces vigor long term.

F. OBJECTIVES (Measurable)

Reduce percent cover by 50% over infestation site (0.2-acre area) within 2 years and reduce to less than 10% cover at the site within 5 years with no new infestations within 20m buffer around original infestation.



G. MANAGEMENT OPTIONS

Viable control options are:

Option 1 (recommended)

Method: Woody debris removal (moved off site or pile burning) followed by herbicide application then hand grubbing of ivy rhizomes

Recommended by: Swanson Ecological (restoration contractors and licensed applicators)

Potential non-target effects: While this area is easily accessible and may be used by foragers, there are currently little to no edible plants present and young trees have little cultural harvest value. No habitat for endangered species present.

Likelihood of success: Moderate to high. Foliar spray has variable success on ivy and may require additional applications.

Option 2

Method: Woody debris removal and hand grubbing of ivy rhizomes

Potential non-target effects: none, area has been cleared by THPO

Likelihood of success: Low. Due to dense ivy ground cover and obstacles (woody debris), this is a challenging site to remove ivy by hand. Long term intensive labor and frequent on-going management is required to succeed.

H. ACTIONS PLANNED (Treatments and monitoring)

Treatments

Option 1: Pile woody debris in center of patch and burn by mid-May year 1 or remove from site. Cut-stump with 50% triclopyr on stems climbing trees; folia spray with 3% triclopyr, 2% glyphosate 1% siltac (surfactant) using hand-held applicator in early summer (June/July) year 1. Follow-up application in year 2 (June/July) and hand grubbing during following wet season (Nov.-Mar.; when soils are loose), place material in trash bags and deliver to garbage dump.

Monitoring

Method: Visual assessment, entered into survey app and uploaded to centralized database

Metric: Approximate area of infestation (acres), percent cover of that area occupied by ivy.

Timeline: Prior to application, 2 months after herbicide application, immediately after hand grubbing and yearly until population has met objectives.

I. HOW ACTIONS WILL BE EVALUATED (Criteria for success)

During monitoring efforts, the observer will record approximate area of infestation and percent cover (Section H) and note when these meet management objectives (Section F).

J. RESOURCE NEEDS

Option 1: Contract crew to buck and burn woody debris and apply herbicide (1 day for initial management and 1-2 hrs per supplemental application; up to two applications) and volunteer events (one initial with potential follow-up every other year as needed). Cost estimate for 2026 (e.g., resources/contractor) ~\$4,300. Funding: BIL Wasson Grant. Reserve staff time: minimal

Option 2: Contract crew to remove woody debris to provide access for hand crews (one day). Several volunteer events during several wet seasons. Cost estimate (e.g., resources/contractor) ~\$3,000. Funding: BIL Wasson Grant. Reserve staff time: high

K. RESULTS OF EVALUATION

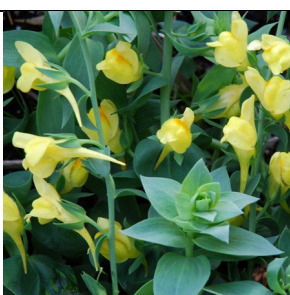
(This section is to be filled in later, when monitoring data has been taken and evaluated, at least preliminarily. The evaluation should be used to determine whether any of the sections B-K above should be modified.)

Appendix 4: Species to Report to Stewardship Coordinator

This section identifies invasive species present in Coos County that could pose a threat to the Reserve but are not currently widespread within Reserve boundaries. Any species listed here, as well as any newly observed invasive species, should be documented in FieldMaps under the Invasive Species layer, and the Stewardship Coordinator should be notified promptly for assessment and follow-up. Species were identified in PCW Data Source (Schmitt et al. 2015), are on Oregon’s official noxious weed priority list as designated by the Oregon State Weed Board (OSWB; [[Link](#)]), listed as highest priority in the BLM Management plan [[Link](#)] and/or recently documented in or near the Reserve. OSWB designation includes:

- A Listed: small enough infestations to make eradication/containment possible
- B Listed: regionally abundant but may have limited distribution in some counties,
- T Listed: A or B Listed species selected for prevention and control within Coos County [Noxious Weed Control District Advisory Board; [Link](#)]).

TREES/SHRUBS			
	Gorse (<i>Ulex europaeus</i>) B Listed, T Listed		Scotch broom (<i>Cytisus scoparius</i>) and French broom (<i>Genista monspessulana</i>) B Listed, T Listed
Spanish Heath (<i>Erica lusitanica</i>) B Listed		English holly (<i>Ilex aquifolium</i>)	

	Butterfly bush (<i>Buddleja davidii</i>) B Listed	
Herbaceous		
	Yellow flag iris (<i>Iris pseudocorus</i>) B Listed, T Listed	 Purple loosestrife (<i>Lythrum salicaria</i>) B Listed
Giant hogweed (<i>Heracleum mantegazzianum</i>) A Listed Do not touch!		Japanese knotweed (<i>Polygonum cuspidatum</i>; <i>Reynoutria japonica</i>; <i>Fallopia japonica</i>) B Listed, T Listed Do not cut! 
	Tansy ragwort (<i>Senecio jacobaea</i>) B Listed, T Listed	 Spurge species (<i>Euphorbia</i> spp.) A/B depending on species
Herb Robert (<i>Geranium robertianum</i>) B Listed		Dalmatian toadflax (<i>Linaria dalmatica</i>) B Listed 

	Shiny leaf geranium (<i>Geranium lucidum</i>) B Listed		Knapweeds (<i>Centaurea spp.</i>) B Listed, T Listed Use gloves!
Garlic mustard (<i>Alliaria petiolata</i>) B Listed		Policeman's Helmet (<i>Impatiens glandulifera</i>) B Listed	
	Biddy-Biddy (<i>Acaena novae-zelandie</i>) B Listed, T Listed		
VINES			
	Old Man's Beard (<i>Clematis vitalba</i>) B Listed		Field bindweed, morning glory (<i>Convolvulus arvensis</i>) B Listed
English Ivy B Listed, T Listed			

GRAMINOIDS			
Cordgrass (<i>Spartina spp.</i>) A Listed		False brome (<i>Brachypodium sylvaticum</i>) B Listed	
	Jubata grass (<i>Cortaderia jubata</i>) B Listed, T Listed		Mannagrass (<i>Glyceria x occidentalis</i>) (image in floating leaf form)
Reed canary grass (<i>Phalaris arundinacea</i>) B Listed, T Listed			
THISTLES			
Italian thistle (<i>Carduus pycnocephalus/ C. tenuiflorus</i>) B Listed, T Listed		Bull thistle (<i>Cirsium vulgare</i>) B Listed, T Listed	
	Wooly distaff thistle (<i>Carthamus lanatus</i>) A Listed		Canada thistle (<i>Cirsium arvense</i>) B Listed

Appendix 5: Helpful resources

Local Invasive Species Groups

- South Coast Cooperative Weed Management Areas (CWMA) – Localized partnerships coordinating invasive species control across public and private lands [\[Link\]](#)
- Coos Watershed Association (CoosWA) Weed Program – Regional implementation partner for invasive plant management in coastal Oregon watersheds [\[Link\]](#)
- Oregon Marine Board Aquatic Invasive Species Program – Focused on prevention and spread of aquatic invasives through boating and recreation pathways [\[Link\]](#)
- Oregon Invasive Species Council has an information hub that can be searched by species (all taxa). Includes alerts for emerging threats and information on high priority species, is not a comprehensive guide to control methods [\[Link\]](#), [\[Link\]](#)

Information hubs

- U.S. Geological Survey (USGS) Nonindigenous Aquatic Species Database – Primary source for aquatic invasive species distribution and early detection records [\[Link\]](#)
- Best Management Practices (BMPs) for Herbicide-Based Approaches to Invasive Plant Management. Latest, greatest... NOT OUT YET, but should be soon.
- In 2021, Cal-IPC, DPR, and a team of advisors created the [Weed Control User Tool \(WeedCUT\)](#), a decision support tool that provides guidance on a range of methods for managing invasive plants in wildlands using non-chemical approaches. We are in the process of expanding this tool to integrate guidance on when and where chemical treatment would be most effective. Once complete, this tool will provide land managers with the best available information on situation-specific methods for controlling invasive plants. [\[Link\]](#)
- Best Management Practices for 4-County CWMA (NW Oregon) has comprehensive BMP Factsheets for several species [\[Link\]](#)
- Oregon State University Extension Service – invasive plant identification, control methods, and integrated pest management resources [\[Link\]](#), [\[Link\]](#)
- USDA Forest Service – Pacific Northwest Region Invasive Plants Program (management guidance, monitoring protocols, research summaries, species databases, federal policy summaries, and Oregon-specific resource collections) [\[Link\]](#)
- State of Oregon Integrated Pest Management (IPM) Coordinating Committee - most recent report (2022-2024) [\[Link\]](#)
- Chapters from the management guide/book put out by CA University Cooperative Extension: Weed Control in Natural Areas. Chapters for many invasive weed species with both non-

herbicide and herbicide tables. See attached for two examples (many more species though): Scotch broom and jubata grass.

- Managing invasive plants in natural areas: Moving beyond weed control [\[Link\]](#)

Herbicide and communicating about herbicides

- Presentation that Kaci Buhl (OSU) did for the National Park Service, specifically geared toward glyphosate [\[Link\]](#).
- A “Is it Safe?” fact sheet with tips for communicating about pesticide risk with the public [\[Link\]](#)
- Herbicide Use in Forestry (ODA) [\[Link\]](#)

Mapping tools and hotlines

- iMapInvasives – GIS-based platform for reporting, tracking, and visualizing invasive species distributions; supports early detection and rapid response efforts [\[Link\]](#)
- EDDMapS – National invasive species mapping system widely used in Oregon for reporting and tracking invasive plant and animal occurrences
- Oregon Invasive Species Hotline (via Oregon State University and partners) – Public reporting tool for suspected invasive species sightings
- Oregon Flora Project – Comprehensive database of native and invasive plant species in Oregon [\[Link\]](#)

Scientific Literature and Decision-Support Tools

- Chan, S., Flitcroft, R. (2025) Integrating Economics and Ecology to Inform Climate-Ready Aquatic Invasive Species Management for Vulnerable Pacific Northwest River Communities [\[Link\]](#)
- Network-based and decision-support tools for prioritizing invasive species management under limited resources (e.g., optimization and spatial prioritization models) [\[Link\]](#)
- Emerging AI and remote sensing approaches for invasive plant detection using drone imagery and machine learning classification systems [\[Link\]](#)

Funding Opportunities

- Oregon State Weed Board Grant Program [\[Link\]](#)
- National Institute of Food and Agriculture – Invasive Species Program [\[Link\]](#)
- USFWS - Rapid Response Fund [\[Link\]](#)
- Invasive Species Center [\[Link\]](#)
- Creating Online Resources for Invasive Species Awareness in Oregon [\[Link\]](#)Extra

Administrative/Facilities Report

***Staff: Patricia Fox, Reserve Manager
Rebecca Muse, Operations Manager
Michael Allman, Facilities Lead
Daniel Fenn, Park Ranger Assistant
Patrick Juarez, Procurement/Contract Assistant
Ed Oswald, Information Systems Technician (on Leave)
Veronica Graves, Temp Information Systems Technician
Ginny Hall, Administrative Specialist
Juliana Ruble, Project Manager***

Staffing updates

During the reporting period management recruited for and filled the Training and Engagement Outreach Specialist position that was vacated in March. After internal recruitment Deborah Rudd was successful in being promoted into the position. She started on 5/1/26 and has been working through a transition period for both positions. Prior to this recruitment there were several items in Debs old position that were committed to for the busy season. Those commitments are still being honored, and management is working on a plan to reorganize the work that Ms. Rudd used to do.

Administrative

Attached are the state budget reports for the 2025-2027 biennium through April 2026.

Operations Manager Muse is monitoring the federal grants we currently have and working on getting costs spent and reimbursed quickly.

The FY27 Operations Award planning and budgeting has been in full swing, and the final grant was submitted on June 9th to grants.gov.

This year NOAA was going to transition all Reserves into a 2-year funding cycle/grant application but at the last minute changed this plan to continue doing only one year at a time. Total budget on this grant included \$931,000 in federal funding with a state match requirement of \$399,000.

Operations Manager Muse continues to submit the required progress reports on multiple federal grants per usual timelines. These progress reports are required for every 6-month period and at the end of a grant for closeout.

Operations Manager Muse is currently writing a NOAA Procurement, Acquisition and Construction (PAC) grant to assist with some resilience upgrades to the Visitor Center that will include replacement of solar system, replacing siding with fire rated options, roofing and some upgrades that will assist with the site becoming an evacuation site for OIMB/UO campus and locals along Seven Devils in the event of a disaster. We have contracted with HGE Design to assist in our options and pricing for this project so that our grant application/writeup could be prepared. HGE Design's preliminary assessment has come back, and we are currently looking at what options we must reduce the budget to something that would be more reasonable but also get to our reserve goals with the project. More info to come at later meetings about how this process is progressing. Current NOAA timelines have been pushed back to sometime in Fall for the grant deadline.

Facilities/Trails

Long time Facilities Lead Mike Allman has given his notice that he will be leaving us at the end of September. Operations Manager Muse and Project Manager Ruble have been working with Mike to ensure that his knowledge of certain facility systems and processes are documented in a way that they will translate to whomever takes the position over. Mr. Allman has been here for close to 11 years so has a lot of knowledge of system/processes of the facilities. He will be missed when he moves on to his next adventure.

Staff continue working on the trail system and facilities doing routine maintenance.

Regular upkeep and maintenance on all our vehicles is an ongoing need.

Operations Manager Muse has started to research and plan around updating our very outdated trails plan. We have written a task into our NOAA operations plan to work through this update and attach some funding to the work to hire a contractor for assistance. Our trails plan has not been updated since the late 1980- early 1990s. More details to come as we are working through the needs on this task.

Grant updates

Land Acquisition grants -

Staff continue working through the due diligence tasks needed for both the Deal/Triangle and Winchester acquisitions. Both grants were competitive BIL funded acquisition grants. Management has started negotiations with Coos County for the Deal/Triangle parcels. We plan on late Fall/early Winter to take it to Land Board for approvals. Winchester was taken to Land Board in April and approved for the next step. Acquisition should be completed by fall. Management has been working with DSL Lands staff from Bend for the due diligence tasks.

The Winchester 80-acre property is a Common School fund, managed by Oregon Department of Forestry, property that will be transferred to SSNERR management for conservation. The grant will compensate the Common School fund for the transfer.

The Deal/Triangle 113-acre property is currently owned by Coos County Forestry and managed for timber harvest. This property consists of upland timber and wetlands.

Visitor Center Entrance and Parking Improvement Grant

NOAA PAC funding for the construction project for relocation and improvement of the Visitor Center entrance, network infrastructure & parking expansion kicked off in July 2024. The total approved budget for this project is \$1,621,516. Contractors have been onsite since the first week of January 2026.

Our new Project Manager, Juliana Ruble, took this project and ran with it. She has been working through day-to-day management of the project with contractors onsite. Most of this project is completed and PM Ruble is working through final punch list items with the contractor. At the writing of this report, we are waiting for our driveway permit final sign off so that we can open the new road. After the Commission meeting we will have a grant opening ribbon cutting of the project!

Management is also still working through the steps to complete the Lee Land trade. This task will swap “equal value” lands so that the Reserve’s entrance is no longer encroaching on private property. It went to the Land board on April 14th, 2026, and everything was approved for final closing of the land swap. Once we receive the driveway permit sign off, we will close the old entrance to decommission it for the Lees.

The Reserve would like to thank FOSS for their continued financial support of this project. It could not have happened without it!

BIL IRA Grant Infrastructure – returning access to Wasson and SWMP Piling replacement

The replacement pilings for the Charleston and Valino Island SWMP stations are completed and ready for SWMP stations to be installed. SWMP Staff will work on installing the stations in 2026.

TrailKeepers of Oregon (TKO) volunteers, SSNERR staff and our contractor have all be working hard on building the new trail to be added to the South Trail system with the final field work day scheduled for June 26, 2026. We have been watching it over winter to see what areas need to be adjusted once weather and rain hit the trail. This spring we have had TKO out for a few field days where

they are fixing drainage issues that arose over the winter as well as adding gravel to certain areas to help stabilize the substrate.

Management has started discussions on planning an official “Opening” of the trail. This is the first brand new trail at the Reserve for around 20 years. Naming of the trail will be a coordinated process with Tribal input.

SSNERR Education Program Update

Staff: Jaime Belanger, Education Lead
Eric Dean, Education Specialist
Deborah Rudd, Public Involvement Coordinator
Cherie Turner, Seasonal Education Specialist

March 1, 2026 – May 31, 2026

The education team planned a limited amount of onsite programming during March and April due to construction of the front entryway. A few programs were held in March, and the team selected two days a week for school field trips to the Reserve. During May normal programming around the building resumed. The Visitor Center operated on the usual schedule, open Tuesday-Saturday from 10 AM – 4 PM during March and April except for March 31st, due to paving in front of the building. In May the Visitor Center began closing for 1 hour during lunch, 12 – 1 PM. At that time all doors are locked.

Four regular education staff worked during March and April, including the Seasonal Education Specialist Cherie, whose additional time in early March was supported through a grant from the Judith Ann Mogan Foundation. In May Deborah, the Public Involvement Coordinator, took on a new role as the Training and Engagement Coordinator. Three regular education staff worked during the month of May, with continued support from Deborah on outreach events, as well as intern and volunteer coordination. Two administrative staff managed Visitor Services in the Visitor Center through the end of March. When Kathy Andreson retired at the end of March, an administrative staff took over the Visitor Services role.

Two high school interns, Kylee Hall from North Bend High School, and Bryce Wilson from Marshfield High School, continued assisting with the Estuary Explorers after school program and weekend outreach events through May 2026. Both interns are supported by grants from the Oregon Coast STEM Hub.

Staff Training, Innovations

Most of the education team, as well as one education volunteer, participated in the annual Science Sharing Day event in April. The science team provided information and updates about the invasive 5-spine green crab, water quality monitoring and the SWMP program, marsh gas monitoring, and the upland forest restoration work. In addition, the education team members participated in the advancements described in this section.

Deborah Rudd actively participated in the following groups and committees in her role as Public Involvement Coordinator:

- Coos Hispanic Allies
- DSL Diversity, Equity, and Inclusion (DEI) Committee
- Mayfly Planning Committee
- South Slough Reserve DEI Committee

- IT image library migration/organization

Between March 1-May 31, 2026, Deborah participated in a range of professional development opportunities, including virtual digital coast, in-person communications, and in-house staff training.

- March 13: Part 1: Virtual NERRS Education Sector Meeting, 3 hours
- March 18: Last Pass Training, 1 hour
- March 20: Part 2: Virtual NERRS Education Sector Meeting, 3 hours
- April 17: Science Sharing Day, 5 hours
- May 13: Module 1 - Introduction to Economic Analyses and Valuation, 2 hours
- May 27: Module 3: Introduction to Benefit-Cost-Analysis, 2 hours
- May 27: Science Communications with Janine Castro, 3 hours
- May 28: Module 3: Introduction to Benefit-Cost-Analysis 2, 3 hours

Eric Dean collaborated with Cherie and the library to design and implement birding program with the Coos Bay library described above, in addition to the usual spring field trips and programs.

Jaime Belanger continued contributing to the canoe fragment interpretation project by review submissions from artists. She worked on grant applications requesting funding for the Seasonal Education Position from the Bandon Dunes Charitable Foundation and Judith Anne Mogan Foundation, as well as a small grant application to support supplies for the Estuary Explorers afterschool program from the Weyerhaeuser Giving Fund. Jaime worked with Watershed Monitoring Coordinator, Jenni Schmitt, and Deborah to select 3 college interns and 2 high school interns who will support summer science camps. She also continues to participate in the following groups:

- Reserve DEI Committee
- Oregon Coast STEM Hub Leadership Council
- Coos Watershed Association's Outreach and Education Committee
- Co-chair of the NERRS Estuary Education Resource Working Group
- Oregon Natural Resources Education Program (ONREP) Facilitator

Jaime attended the following professional meetings and training opportunities either virtually or in person during the last three months:

- NERRS Education Spring Virtual Meeting, 3/13 & 3/20/2026
- 5 ONREP Facilitator Summit virtual sessions, 3/17 – 3/19/2026
- Tsunami Curriculum workshop for educators, 3/17/2026

- Getting Started with Digital Accessibility, 4/23/2026
- Creating Accessible Documents, 5/9/2026
- Virtual Communications Training with Janine Castro, 5/11/2026
- Economic Guidance for Coastal Management Professionals: Pathways to Valuing Ecosystem Services, 5/20/2026
- Science Communications Training with Janine Castro, 5/27/2026

Cherie Turner continues to lead the Estuary Explorer After-school program. The following schools were reached during the spring session of the 2025-2026 school year:

- Cultural Afterschool Program, 1st-6th grade, 6-week cohort (April- May 2026)
- North Bay Elementary 5th grade, 6-week cohort (April-May 2026)

Cherie has also attended a professional development course to help enrich lessons and activities.

- Tsunami Curriculum Workshop for Educators (March 17, 2026) (1.5hrs)

Cherie has also continued to support and help with interpretive programs, community outreach and school field trips with Education Specialist Eric Dean. During this time, a new program was started with the Coos Bay Public Library called Citizen Engagement. The program will include three sessions spread throughout the spring and summer. The objective of the program is to teach community members about local birds, the proper way to build and hang a birdhouse, and participate in citizen engagement with data collection on what birds are nesting in the area.

- March 2026: Presentation on local birds, birdhouses and data collection on bird nesting. Birdhouse supplies were donated by Oregon Department of Fish and Wildlife. Participants took home a birdhouse they built during the program, a list of local birds, and a data sheet to record observations of their birdhouse for 10 minutes per week from April through July 2026.
- May 2026: Jr. Birding at Millicoma Marsh Trail. Participants learned how to bird and took home a birding 101 handout to continue their practice.
- July 2026: Participants turn in their data sheet from their observations through the summer for an end of summer celebration at the Coos Bay Public Library

Education Program Metrics

Between March first and the end of May the Reserve provided education programming that served 2, 113 people, amounting to 3,113 hours of estuary learning. About 145 hours were committed to program planning, reflection, and post-program work. The numbers above include all student education, community programs, teacher training, outreach, and public stewardship delivered directly by Reserve education staff. Including visitors who enter the Visitor Center to ask questions and explore exhibits, the Reserve education and visitor center staff directly

interacted with 2,815 people during this period. These numbers are consistent with similar time periods from previous years.

Summary data are also submitted twice a year to NOAA, along with information about the presentations conducted by the science staff, as one of the required performance indicators to the National Estuarine Research Reserve's performance measures database.

Visitation and Visitor Services

The Reserve Visitor Center was open for 64 days during this period. Trails and waterways were open from dawn to dusk daily. 702 visitors were counted entering the building, an average of almost 11 each day it was open. Staff provide additional visitor services through communication with the public online and the phone at the front desk.

Formal Education & Training

The Reserve categorizes education program types based on audiences and learning goals, aligning with NOAA Education categories as closely as possible. Formal education includes programs provided to pre-K-12, undergraduate and graduate students, classroom, pre-service teachers and other non-formal educators. These education opportunities for students and teachers are a core area for Reserve education across the national system. The Reserve education team focuses not only on how many participants they can serve, but also the time the participants spend learning to build deeper knowledge and understanding. Students and teachers often spend multiple hours or days learning with the education team.

The formal education programs offered during this time included field trips and classroom visits for elementary, middle, high school and college students, as well as teacher professional development. 36 field trips and classroom presentations lead to 2087 hours of learning by 799 students. Topics included watershed hikes, mudflats exploration, water quality, field methods and restoration ecology. In April, a one-day teacher workshop offered in partnership with Oregon Shores, the Oregon Coast STEM Hub and ONREP provided 17 elementary, middle and high school teachers with training about watersheds, beach surveys, marine debris, and incorporating art into science.

Community Education & Interpretive Activities

Community and interpretive programs at the Reserve are learning opportunities for public audiences. These classes and estuary activities occur at the Reserve, as well as locations throughout the watershed and are delivered through a variety of formats. In addition to programs led by Reserve education staff, these numbers include people the Reserve talks to at information tables, attendees of programs presented in collaboration with partners, and those engaged in learning through stewardship activities.

A total of 39 informal education activities for 1,066 people led to 864 hours of public learning about the Reserve and coastal habitats. Programs were attended by individuals of all ages and included interpretive activities like birding, tidepooling and nature hikes, monthly Saturday Stewards events, Estuary Explorers afterschool, community events and volunteer training.

Public Involvement

Intern and Volunteer Program Numbers

Spring season brings an increase in volunteer activity with school field trips, community education and field work. During March 1-May 31, 2026, 16 volunteers/interns contributed 250.4 hours, valued at \$9,114.56.

South Slough Reserve Internship Program

The South Slough Reserve Internship Program gives participants hands-on experience in estuarine science, environmental education, and natural resource management. Interns contribute directly to essential Reserve activities. A structured onboarding process clearly outlines policies, procedures, and performance expectations, ensuring consistency and professionalism throughout the internship.

The South Slough Reserve has recruited and onboarded 10 interns for the summer season. This cohort includes two high school nature education interns and two high school science interns supported by the Oregon Coast STEM Hub. The Reserve is also hosting two NOAA Hollings Scholars, one focusing on water quality and eelgrass, and another working in forest restoration. Through the National Centers for Coastal Ocean Science, two additional interns will contribute to GIS, drone operations, communications, and a joint science–education role. Another intern will complete a combined education and social science internship through the Oregon Sea Grant Scholar program and a Restoration Education intern is funded by the Wasson restoration grant. Interns began arriving May 26, with staggered start and end dates through August 21. Five of the college-age interns will reside on-site at Spruce Ranch.

Volunteer Engagement

During this reporting period, volunteers contributed to several Reserve activities, including supporting education field trips, tabling at community events and participating in stewardship projects in the Reserve.

Additionally, a Youth Estuary Ambassador training session was held on Saturday, April 11 at the South Slough Reserve. Two students from Lighthouse School attended. Both Jr. Ambassadors, Gwyn Hughes and Simone Hinman have been doing a fantastic job tabling at community events. Another youth training class is planned for the fall when school is back in session. There will also be an adult Estuary Ambassador training scheduled soon.

Community Outreach

Interns and volunteers played a key role in supporting the Reserve's outreach efforts by staffing booths and leading activities at a variety of community events, including the Crab Festival, Ocean Crest Elementary Fair, Paddling Film Festival, Coos Watershed Earth Day Celebration, Family Fun Day, Western Flyer visit, Mayfly Festival, and the Farmer's Market. These events help raise public awareness of the Reserve's mission and programs, while fostering meaningful community engagement and support.

Internal Program Support

Public Involvement supported several internal South Slough Reserve programs this period, including collaborative grant proposals for trail accessibility improvements and funding for the Seasonal Education Specialist to lead Estuary Explorers. The accessibility proposal was not selected, and the Bandon Dunes Charitable Foundation grant is still pending. There was also coordination with Co-Stewardship activities at Wasson, leading guided hikes for school field trips, assisting FOSS volunteers during the spruce tip harvest and release event, and providing transportation support for the 5-spine meat extraction workshop at SWOCC. Additional outreach included co-leading a toddler insect program with the Coos Watershed Association and helping maintain nurse cribs in Wasson Valley.

Communications Summary:

Recent efforts have focused on maintaining outreach and visibility for key programs and construction updates. Social media engagement remains active, with coordinated posts and visual assets. Updates on front entryway construction, such as tree removal, are being shared on social platforms and in newsletters, along with information on parking and visitor access. The Wasson One Pager has been updated, and outreach for the new Reserve video series was received favorably by the public. Overall, communications continue across newsletters, social media, signage, and public inquiries, with growing engagement on Facebook, Instagram, Google, and YouTube.

Training & Engagement Program, March 1 -May 31, 2026
Deborah Rudd, TEP Coordinator

TEP Knowledge Transfer Events

The National Estuarine Research Reserve System (NERRS) formally updated the name of the Coastal Training Program (CTP) to the Training and Engagement Program (TEP) as part of its 2022–2026 strategic plan implementation. This rebranding reflects an expanded program scope that now extends beyond training coastal decision-makers to include enhanced community engagement, technical assistance, and collaborative science initiatives. A minimum of five of these engagements are required each fiscal year.

The previous TEP Coordinator, Sabra Comet, departed the Reserve on March 13 to pursue a PhD program in New Zealand. Recruitment for the position concluded in April, and Deborah Rudd, who has served as the Reserve’s Public Involvement Coordinator since 2006, assumed the role on May 1, 2026.

Although no training was delivered during this reporting period, several priority topics are under development in coordination with partner organizations. The new coordinator is conducting a targeted market analysis and needs assessment to identify existing resources and align them with emerging community training needs. Early findings from the DLCD Coastal Planners meeting indicate strong potential for training focused on community resilience, shoreline stabilization (SB 504). Additional technical assistance needs may also emerge around the Goal 5 Cultural Areas rule (OAR 660-023-0210), including support for communication between tribes and local governments to help communities understand options for preserving cultural resources while planning for growth.

The coordinator plans to attend future Partnership for Coastal Watershed Meetings with the intent of facilitating those in the future and to identify needs in the community, specifically with the Coos Bay Estuary Management Plan (CBEMP).

Additionally, the coordinator is working with Reserve Lead Scientist, Shon Schooler to identify community needs surrounding the commercialization of invasive European (5 spine) crabs to help reduce the population and limit the economic impacts to local fisheries.

Meetings /Trainings Attended:

NERRS TE Orientation: May 11, 12-1 pm

Economic Guidance for Coastal Management Professionals: Pathways to Valuing Ecosystem Services: May 20: 12-2 pm

Community Presentation on Oregon Offshore Wind Energy Research: May 26, 5-7 pm

Module 3 - Introduction to Benefit-Cost Analysis Day 1: May 27, 12-2 pm

Science Communications with Janine Castro: May 27, 3-5 pm

Module 3 - Introduction to Benefit-Cost Analysis Day 2: May 28, 12-2 pm

SCIENCE and STEWARDSHIP PROGRAM UPDATE
March 1st, 2026 – May 31th, 2026

Staff: Shon Schooler, Lead Scientist
Ali Helms, Estuarine Monitoring Coordinator
Alice Yeates, Stewardship Coordinator
Jenni Schmitt, Watershed Monitoring Coordinator
Jennifer Kirkland, GIS & UAS Coordinator
Adam DeMarzo, Estuarine Monitoring Analyst
Ryan Scott, Restoration Technician

MONITORING

NERRS System-Wide Monitoring Program (SWMP)

Ali Helms and Adam DeMarzo continued to operate the water quality, weather, and nutrient components of SWMP.

SWMP Data:

Science staff completed monthly field and lab work associated with the water quality, meteorological and nutrient long-term primary monitoring stations. This included monthly and quarterly station maintenance, data uploads, instrument cleanings and calibrations, and data submissions to the NERRS SWMP Centralized Data Management Office (CDMO). Quarterly submissions for water quality and meteorological data were submitted 2/1/2026 and 5/1/2026. Annual submissions for 2024 data were completed in April 2025 (water quality) and May 2025 (weather). Annual submission for nutrient data were due on 6/17/2025; however, the nutrient data results continue to be delayed due to issues with the University of Washington Marine Chemistry Laboratory. To resolve this SSNERR began partnering with the Moss Landing Marine Lab (MLML) Summer 2025, UW shipped remaining unanalyzed 2024 and 2025 samples to MLML and analyses for backlogged nutrient data are underway. SWMP data submissions include data that have undergone several levels of quality assurance and quality control (QA/QC) procedures, metadata development, calibration and field logs, and instrument and sensor inventories. After annual data reviews are completed, datasets are authenticated, having undergone tertiary review and are available as final authoritative data. SWMP data for the SSNERR and other Reserves are accessible online at nerrsdata.org.

Staff completed work associated with installing new pilings for Charleston Bridge and Valino Island water quality stations with funds from NERRS IRA. Oregon Marine Construction completed the steel piling installations November 24-26, 2025. New pilings for Charleston Bridge and Valino Island water quality stations were installed November 24-26, 2025 by Oregon Marine Construction. Staff will be deploying side by side instruments at the new and old piling locations to satisfy CDMO requirements for moving stations. The new pilings will be set up as primary telemetry water quality stations in Summer 2026.

The science staff completed monthly weather station maintenance, data downloads, and field logs for March – May 2026 at Tom’s Creek marsh. The SWMP weather station (sostcmet) real-time data are available at nerrsdata.org/get/realTime.cfm.

The science staff completed field deployments, retrievals, and calibrations for three Coos estuary SWMP water quality stations located at Isthmus Slough, Catching Slough, and Coos River, and data were uploaded using the non-SWMP tool provided by the CDMO.

Science staff are collaborating with education and tribal partners on a new 7,000 square feet Natural Sciences exhibit with Oregon Museum of Science and Industry about climate change and wetland restoration for Spring 2026. Project partners conducted on site interviews, and eelgrass monitoring and restoration lab and fieldwork demonstration 10/23/2025 with science staff and tribal partners from CTCLUSI, CIT, and CTSI along with OMSI exhibit developers and film producer Julianne Sato-Parker. The Nancy Stueber Natural Sciences Hall Climate of Change exhibit opened at OMSI on April 25th, 2026 and features SSNERR’s film *Caring for the Coast*.

CDMO Data Management:

The Centralized Data Management Office (CDMO) is the technical support team dedicated to data management activities associated with the SWMP data collected at the 30 reserves. Recent activities of the CDMO include supporting data management for Wetlands and Water level vegetation and sediment monitoring datasets, including standardized templates for Surface Elevation Table (SET) data, nutrient laboratory intercomparisons, and implemented a new SWMP data DOI for citations (<https://doi.org/10.25921/vw8a-8031>).

South Slough has submitted and finalized CDMO review for the 2024 and 2025 Wetlands and Water levels tidal marsh vegetation datasets.

SWMP Status Reports:

The Reserve system developed tools for creating Annual Status Reports on water quality, nutrient, and weather summaries for each Reserve. The CDMO provides the R software package for download and updates files annually. Matt Dornback, Environmental Scientist with the Office of Coastal Management prepares the status report files for the Reserve system. The Reserve completed a SWMP status report for 2024 data in Fall 2025, after receiving the 2024 annual package from OCM in September.

NERRS SWMP Syntheses:

South Slough participated in a NERRS wide SWMP data synthesis project. The synthesis project team was led by Kait Reinl (Lake Superior), Robert Dunn (formerly North Inlet-Winyah Bay), and Kim Cressman (Catbird Stats, contracted through OCM) to understand trends and drivers of change in hypoxia and eutrophication across the NERRS, with final reviews of a manuscript submitted to Nature, Communications Earth & Environment in May 2026. A multi-Reserve (21 Reserves, including SSNERR) collaborative research proposal, *SWMP SURGE: SWMP Synthesis for University*

Research Graduate Education was funded by the NERRS Science Collaborative in August 2025 then funding was rescinded for all NERRS Science Collaborative projects due to funding cancellation for the NSC program. The He'eia Reserve continued work on swmp analyses with Reserve partners participating in a pilot version of the course for working with graduate students conducting time-series and statistical analyses using SWMP data to investigate research questions submitted by participating Reserves. SSNERR staff mentored two pairs of graduate students, with one pair that studied impacts of restoration and the second pair looked at impacts of storm pulses.

Climate Reference Network:

The NOAA Climate Reference Network station at Frederickson Marsh collects air temperature and precipitation data as part of a US network of over 130 climate monitoring stations. Staff completed maintenance for the station rain gauges in March 2026. NOAA staff completed annual station maintenance Fall/Winter 2025. Two of three air temperatures sensors were not functioning, and NOAA staff replaced sensors. Data are available for this station (OR Coos Bay 8 SW) at: ncdc.noaa.gov/crn/current-observations.

Bacteria Monitoring:

Staff continued monthly monitoring of fecal indicator bacteria (total coliforms and *Escherichia coli*) at the four SWMP nutrient monitoring stations. The bacteria data are of interest for the Coos Bay Estuary Data Source, Oregon Department of Environmental Quality for Total Maximum Daily Load standards and to Oregon Department of Agriculture as they conduct commercial and recreational shellfish bacteria assessments.

Volunteers from the Surfrider Foundation use the lab for their monthly monitoring of fecal indicator bacteria (*Enterococcus sp.*) at five local beach sites (Miner Creek - Bastendorff Beach, Bastendorff Beach primary, Big Creek - Sunset Bay, Sunset Bay primary, and Lighthouse Beach).

Eelgrass Monitoring:

SSNERR science staff, interns and volunteers conducted quarterly eelgrass sampling at Valino Island in April 2026 using the SeagrassNet sampling protocol.

MarineGeo/SeagrassNet is an international monitoring program established to document the status and health of seagrasses. Eelgrass abundance declined at the permanent monitoring plots at Valino Island in 2015 with little natural recovery; however, plots at the lowest depth transect have shown an increase in abundance with some evidence of natural recovery at depth. Staff observed *Zostera japonica* (non-native eelgrass) in one of the shallow depth plots, for the first time. Science staff and collaborators completed projects to investigate environmental factors contributing to the declines, with air and water temperature, watershed disturbance and turbidity found to be primary drivers of eelgrass declines. Staff are working on collaborative projects to understand seed-based restoration methods, develop national Submerged Aquatic Vegetation protocols and data syntheses. Lea Hinsley (2026 summer NOAA Hollings Scholar) began her internship on 5/26/26 with her project evaluating eelgrass donor site performance in a riverine

restoration area of Sengstacken Arm, South Slough estuary with transplants from three sites.

Northwest Association of Networked Ocean Observing Systems (NANOOS):

As a participant in the US Integrated Coastal Ocean Observing System (IOOS)/ Northwest Association of Networked Ocean Observing System (NANOOS), SSNERR operates telemetry systems at all four of the core SWMP water quality stations and the weather station to provide real-time data available at nvs.nanoos.org/Explorer.

South Slough temporarily disabled satellite transmissions from the Winchester Creek and North Spit water quality stations due to Sutron satellite transmitters that utilize out of compliance equipment for NOAA standards. They will be replaced with Yellow Spring Instruments Storm telemetry systems that are in compliance.

The NANOOS 5-year award (FY21-25) to sustain the Pacific Northwest component of the US IOOS, includes funding to support South Slough, OR Estuary Observations. Staff submitted the Statement of Work, Budget and Justification, CV, itemized equipment and lease vs buy analysis, Indirect Cost Rate Agreement (nothing requested for SSNERR), SF424a forms, and signed institutional letter for the new 5 year award (FY26-FY30) on 3/6/2026.

South Slough received additional funding from the NOAA Inflation Reduction Act for replacement of a piling, sensors, and boat trailer. Since both of the pilings could be replaced with NERRS IRA funds, staff have re-prioritized these funds for water quality equipment and station hardware, boat trailer, and UAS sensors.

SSNERR partners with one of the local tribes, Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians (CTCLUSI) to provide telemetry equipment for their North Spit BLM sonde station in lower Coos Bay. The data are available to end-users through the NANOOS Visualization System nvs.nanoos.org.

SSNERR is partnering with the Southeast Coastal Ocean Observing Regional Association (SECOORA) on their Web Camera Observation Network to host a beach webcam at Bastendorff Beach County Park overview for recreational beach use and shoreline change. The web cam installation was completed February 2026:
<https://webcoos.org/cameras/bastendorff/>.

NERRS Wetlands and Water Levels Program:

The NERRS Wetlands and Water Levels (WWL) program pairs the long-term SWMP water quality and water level data with physical and biological data quantifying other factors (e.g., marsh elevation, plant community, vertical accretion, soil salinity, groundwater level) to help interpret long-term changes in emergent marshes, eelgrass beds, and forested tidal swamp communities.

Monitoring for the 2026 calendar year focuses on the following tidal marsh sites: Metcalf Marsh (MM), Metcalf Islands (MI), Valino Marsh (VM), and Little Valino Island (VI). During this reporting period, staff began annual data collection for salinity and water level using loggers in groundwater wells (two at VM, four at MM) and water level loggers only at remaining wells (two at VM). All data loggers are downloaded and salinity loggers re-calibrated quarterly (March in this reporting period). Also during this reporting period, staff submitted 13 years of prior marsh vegetation data to the CDMO, who reviewed and posted it to be available for public download.

Staff completed quarterly eelgrass monitoring in April 2026 at the Valino Island long term monitoring plots with data collection including cover of macroalgae and eelgrass, vegetative and flowering shoot density, canopy height, sediment cores, and the exchange of Hobo temperature sensors at two transects.

A tide gauge with water level sensor will be deployed in Winchester Creek, near the Hidden Creek marsh sentinel station to collect high-precision (mm) water level data to meet requirements of South Slough Reserve's Wetlands and Water Levels project goals. Staff have received the NOAA Nile microwave radar sensor and telemetry system, worked with NOAA National Ocean Service, CO-OPS for assistance with a custom data logger program and system configuration with help from the Chesapeake Bay, MD and Pacific Operations Branch, Seattle, WA, and are planning for sensor installation Summer 2026. Staff acquired a system use agreement and real-time platform transmission information for the tide gauge station data management. Staff completed reconnaissance for planning leveling surveys using Hidden Creek marsh benchmarks and planned surveys for Summer 2026 at Hidden Creek.

SSNERR Wetlands and Water Levels marsh sites are being used as reference sites to assess effectiveness of the Wasson Restoration Project (see below). Staff are also using WWL data in several manuscripts, including assessing the use of uncrewed aerial Systems (UAS, a.k.a. drones) as a new method to measure elevation change in eelgrass beds. A second manuscript from a recent National Estuarine Research Reserve System Science Collaborative project titled National Synthesis of Tidal Marsh Response to Sea Level Rise is also leveraging SSNERR WWL data.

Wasson Watershed Monitoring:

The Wasson Monitoring Plan outlines the research questions, hypotheses, parameters and methods recommended to understand the Wasson Ridgetop to Valley Restoration Project. During this reporting period, the monitoring team met approximately monthly to provide technical assistance to leads responsible for implementing actions within the plan, begin a manuscript for research publication (evolution of hydrological processes one year following restoration), and organize tasks for the 2026 field season.

Monitoring efforts at Wasson and nearby reference sites in this reporting period include the following data collection and processing activities: quarterly downloading of data

loggers at 35 groundwater wells (which collect groundwater depth, temperature, and salinity (tidal areas only)), quarterly download of 12 stream temperature data loggers, continuous (15-minute) data sonde turbidity, conductivity and temperature measurements at two sites, including monthly instrument recalibrations, stream flow measurements, download and servicing of soil temperature loggers, real-time kinematic GPS elevation data collection, nurse crib plant survivorship, elevation and soil moisture data collection, greenhouse gas chamber measurements, beaver activity surveys, stream benthic macroinvertebrate surveys, bird surveys, forest plot monitoring following thinning implementation, and maintenance of upland microclimate stations. GIS staff, using Uncrewed Aerial Systems (UAS) and high precision GPS data collection have additionally collected multispectral, thermal infrared, and lidar data to assist with monitoring changes to vegetation, surface temperature, wetland elevation, and channel morphology. This reporting period, images were analyzed for log placement, channel density, spatial heterogeneity, thermal, UVVR and elevation.

For more details on restoration implementation work, see Wasson under the Stewardship section.

Western Lily Monitoring:

Staff continue to protect and monitor endangered western lily populations annually and will periodically track changes to herbaceous, shrub and tree cover metrics related to the tree thinning restoration project that occurred in early 2018. Plants were sprayed with PlantSkydd in late May to protect them from herbivory. Science and stewardship staff are also part of a multi-agency western lily recovery work. During this reporting period, the workgroup submitted a funding proposal for seed propagation, developed sampling methods to collect plant tissue for a genetic variability study, presented on promoting cultural burns to promote the health and recovery of this species and collaborated with external partners to look at western lily soil types.

Lamprey Monitoring:

The South Slough watershed hosts at least two native species of lamprey (western brook and Pacific). We have been collecting annual abundance data at three permanent sites in the Winchester Creek basin since 2018 to evaluate status of lamprey in the watershed. Staff are beginning to analyze the data to determine population trends.

Coho Monitoring:

The South Slough has teamed up with Coos Watershed to take over the final data collection for the Winchester Coho Life Cycle Monitoring Program, which was terminated by Oregon Department of Fish and Wildlife (ODFW) in 2025. Staff from both organizations will cover the 2026/26 adult spawning ground surveys on the West Fork Winchester Creek within Coos County Forestry land and deliver data to ODFW to inform Coho marine survival.

RESEARCH

SSNERR Projects

Studying the Changes in the Fish Community of the South Slough Estuary:

South Slough Research Coordinator Shon Schooler is working with a University of Oregon Clark Honors School undergraduate student, Jade Peairson, on a project looking at how the South Slough fish community has changed over 40 years. We are replicating methods that were conducted in 1987 and 2016-2017. We found a large decrease in diversity, abundance, and biomass from 1987 to 2016 and are interested to see how the community has changed since 2017. We have completed 30 fish seines at 6 locations in the estuary from June through October 2025. Jade analyzed the data and successfully defended her thesis on May 12, 2026. She will submit the final thesis in June 2026.

Invasive 5-spine (aka Green) Crab (*Carcinus maenas*) in the Coos Estuary:

South Slough Reserve is leading the monitoring and research on 5-spine crabs in the Coos estuary, including South Slough. The overall goals of the work are to: 1) compare the relative abundance of 5-spine crabs and native crabs in the estuary across years and locations, 2) examine linkages between environmental conditions and 5-spine crab abundance, 3) study the potential impacts of 5-spine crabs on native and commercially important species, 4) better understand the life cycle of 5-spine crabs in Oregon estuaries, and 5) develop management methods and generally reduce 5-spine crab abundance through consistent and repeated trapping. We have completed our 2025 annual sampling of 10 sites around South Slough and Coos Bay, including adult summer sampling (June-August) and juvenile sampling (September). We completed our 2025 status report in February 2026 ([link to report](#)). We also organize sampling in other estuaries along the Oregon Coast and collect the data into a publicly available database.

South Slough Research Coordinator, Dr. Shon Schooler, is advising South Slough's 2024-2026 Davidson Graduate Fellow, Lizzie Diel (Oregon Institute of Marine Biology), in a project studying the negative impacts of 5-spine crabs on native clams and commercially important Dungeness crabs and Pacific oysters (more details below).

Shon is advising a Masters Student, Brandon Lindsey (OSU), on a project looking at the effect of 5-spine crabs on oyster cultivation. South Slough provides field assistance, accommodation, equipment, lab space, and office space for Brandon when he is on site. He plans to defend his thesis in June 2026.

In addition, as we trap crabs we preserve 5-spine crab samples to send to Dr. Carolyn Tepolt (Woods Hole Oceanographic Institution) for a study on population genetics as part of a west-coast ongoing research and monitoring program. Samples collected and frozen in September 2025 were sent in February 2026.

We are also partnering with Dr. Cat De Rivera (PSU) on a project studying predation rates of 5-spine crabs on juvenile Dungeness crabs. This involves tethering juvenile

Dungeness crabs in areas with varying abundance of 5-spine crabs and recording the number of crabs removed. We completed this experiment at 4 sites in July and August and are now analyzing the data and working on a research paper.

Margaret A. Davidson Fellow Research:

Lizzie Diehl is our 2024-2026 Margaret A. Davidson Graduate Fellow. She is a graduate student at the Oregon Institute of Marine Biology (OIMB) and Dr. Aaron Galloway is her university advisor. She started her Fellowship with South Slough on August 1, 2024 and plans to finish her dissertation in 2027. She is studying the food webs associated with 5-spine green crabs using novel lipid analysis and eDNA metabarcoding.

Eelgrass Pilot Transplant at Valino Island, South Slough Estuary:

In April 2026, science staff completed quarterly monitoring of eelgrass transplanted from Clam Island to Valino Island in plots along an elevation gradient (deep, low, mid) and planted during different seasons to understand the potential to restore intertidal eelgrass to Valino Island using adult vegetative transplant methods. Transplanted plots at the lowest elevation transects have higher eelgrass abundance with deep and low elevation plots maintaining planting densities. The highest elevation plots (mid intertidal) are bare or have low eelgrass densities. As of April 2026, plots planted in the summer and fall have higher eelgrass abundance while winter and spring plots have lower abundance. Staff are planning for project statistical analyses with eelgrass restoration spanning 5 years, for effects of temperature and depth on eelgrass restoration abundance.

Eelgrass pilot study evaluating the potential of UAV lidar to replace traditional elevation surveys for long-term monitoring eelgrass beds in the reserve:

In summer 2025, South Slough Reserve science staff and interns developed a new monitoring method using drones to measure eelgrass elevations across our current monitoring sites. Elevation measurements across these sites have historically relied on Real-Time Kinematic (RTK) GPS surveys and traditional leveling methods tied to local benchmarks. These long-term datasets provide valuable insight into the relationship between eelgrass distribution, sediment accretion, and estuarine hydrodynamics. The data for summer 2025 was summarized in the spring of 2026 and submitted to Drones Journal. Phase II of this project will occur during the 2026 summer with analysis over the winter with plans to submit a manuscript next year.

Partner Projects

The Partnership for Coastal watersheds

The PCW is a local group of civic-minded community members that includes representatives of South Slough Reserve, Coos County Planning Department, Cities of Coos Bay and North Bend (planning and city council), Confederated Tribes of Coos, Lower Umpqua and Siuslaw Indians, Coquille Indian Tribe, South Coast Development Council, Coos Watershed Association, Department of Land Conservation and Development, Southwestern Oregon Community College, Oregon Department of Fish

and Wildlife, Oregon State Parks, US Fish and Wildlife Service, International Port of Coos Bay, Oregon Department of Environmental Quality, and citizens at large.

The PCW meets approximately monthly and is currently working towards several goals concurrently:

- The PCW continues to be a proponent and supporter for local governments to update the Coos Bay Estuary Management Plan.
- The PCW continues to be a sounding board for researchers doing work around the Coos estuary. Dr. Matt Brand (Louisiana State University) is leading a NOAA-funded project to enable our community to understand how much effect tidal wetland restoration might have on reducing storm- and extreme tide flooding in the Coos Bay area. Dr. Brand is currently working to quantify costs and benefits various scenarios for Coos Bay adaptation actions, including enhancement of levees, dredging, and dike removal scenarios. The PCW is acting as a local technical advisory group. During this reporting period South Slough and Dr. Brand's team hosted an in-person workshop for Coos estuary coastal managers (see below).

Nuisance Flooding in the Coos Estuary:

Dr. Matt Brand (Louisiana State University) is leading a second Effects of Sea Level Rise (ESLR) NOAA-funded project, building on his sea level rise hydrodynamic model for the Coos estuary, that enabled our community to understand how much effect tidal wetland restoration might have on reducing storm- and sea level rise-related flooding in the Coos Bay area (Brand et al 2024). Dr. Brand's current work is to quantify costs and benefits of green and gray infrastructure scenarios for Coos Bay adaptation actions, including enhancement of levees, dredging, managed retreat and dike removal scenarios. For example, the model can help answer questions like, if you build a bigger levee to protect land (e.g., in downtown Coos Bay), how does that increase flooding in another part of the estuary (e.g., agricultural regions)? The analysis looks to quantify both damages from cumulative exposure of storm and tide flooding as well as costs associated with restoration or infrastructure improvements. The analysis also includes cost assessments of co-benefits (e.g., carbon sequestration, improved water quality, fisheries and recreational tourism). In this reporting period, science staff continue to attend project team meetings.

National Synthesis of Tidal Marsh Response to Sea Level Rise:

This NSC-funded project, nicknamed "NAMASTE" is led by Chris Peter (Great Bay NERR, NH) in collaboration with team members across the Reserve system, including staff at SSNERR. This project is a national scale synthesis of marsh vegetation data, leveraging our Sentinel Site and SWMP programs. The synthesis is examining shifts in plant species ranges and patterns of diversity across latitudes and biogeographic regions and quantifying climate-induced shifts to marsh systems. While the grant has officially ended, project team members and SSNERR staff are finalizing a draft paper for publication.

Native Olympia Oyster Collaborative (NOOC):

This collaborative group, led by Elkhorn Slough NERR continues to serve as a networking group for Olympia oyster updates, collaborative research opportunities, and conferences. The NOOC Steering Committee met in March 2026 to plan and prioritize activities for the next five years, including future collaborative grant funded research projects. More information about oysters can be found at the [Olympia & Pacific Oyster Data Portal](#) and the [Native Olympia Oyster Collaborative](#).

Drone the NERRS:

Multiple NERRS have partnered on the NERRS Science Collaborative-funded grant to further the research from a previous catalyst grant: “Drone the SWMP,” which included using UAS to monitor wetlands in six reserves and the development of a tool comprised of three interrelated standardized protocols for equipment operation, image processing, and image analysis that even a novice UAS operator could utilize. The purpose of this project is to evaluate the efficacy of this tool in a wider range of biogeographic regions. This will be accomplished by: 1) each participating reserve utilizing the tool at their long-term wetland monitoring sites, 2) holding a mid-project meeting to compare tool efficacy and identify potential challenges or technical difficulties, 3) troubleshooting technical difficulties, and 4) improving or adjusting the tool as needed. If successful, this tool may be widely adopted by other Reserves and stakeholders outside of the NERR system as a low-cost method of coastal wetland monitoring. During this reporting period, SSNERR staff did final QA/QC checks of all datasets, compiled them, created metadata files, and submitted them to the Centralized Data Management Office for public use. The grant also closed out during this reporting period. The community of practice that was initiated during this grant continues with the NERR system having quarterly UAS working group meetings. A final webinar will be hosted online in the summer of 2026 summarizing the outcomes of this project.

Research Support**Eelgrass Population Genetics:**

In 2023, Reserve science staff Ali Helms began collaborating with an eelgrass genetics researcher, Bryan Briones Ortiz, at the University of Washington. He is studying eelgrass population genetics with sites from Washington and California as part of his dissertation research. With field collections and sample processing from eelgrass plants at Clam Island and Valino Island, he added two Oregon sites to his project with preliminary results from his genetic analyses showing genetically distinct populations between the two sites. Bryan is compiling and analyzing this data as part of his PhD research.

Fish and Invertebrate Population Dynamics in Restored, Natural, and Mudflat Habitats:

The Reserve is providing technical assistance to Oregon State University PhD graduate student Olivia Boisen (Heppell lab, 2023-2027), who is researching ecosystem functions of restored eelgrass beds with two sites in the Coos estuary, North Bend Airport and Valino Island, South Slough. The project received funding from PMEP, Assessing

Seagrass Restoration Effectiveness on Fish Communities, OR (2025) with the Reserve as a project collaborator. Boisen is continuing field work at her two project sites through Fall 2026.

Eelgrass habitat mapping:

The Reserve is a partner on an Oregon Sea Grant project (Aoki, UO; Mueller, OSU; Yang, UCSC; Helms, Kirkland, Belanger, SSNERR, CIT, CTCLUSI) evaluating eelgrass status, ecological interactions, and ecosystem services in southern Oregon for 2026-2028. Eelgrass habitat mapping and field surveys will begin June – July 2026.

STEWARDSHIP

Wasson Restoration:

To date 595 people have contributed in some way to the Wasson Creek Restoration project, with 564 physically contributing on site. The Project Team has given 41 presentations on the project and hosted 38 hands-on events (such as practitioner training workshops, stewardship days and education programs). The grant has funded approximately 18,000 labor hours and has received over 69,000 hours from programs. Major contributions to the Wasson Creek Ridgetop-to-Estuary Restoration Project during this reporting period include:

Invasive Plant Management: In March, 15 volunteer stewards removed Scotch broom and cotoneaster from approximately 0.3 acres within the restoration project area. In addition, 24 co-stewardship participants and 31 high school students helped suppress invasive grasses by covering them with cardboard and a biochar mulch layer, preparing the Cultural Garden site for planting in November.

Cultural Garden preparation: Staff continue to work with Confederated Tribes of the Coos, Lower Umpqua and Siuslaw Indians (CTCLUSI) and Coquille Indian Tribe on the Cultural Garden. A draft plan has been completed and reviewed with feedback supplied by CTCLUSI. Site prep is underway with weed suppression using cardboard covered by mulch and biochar. Site prep conducted by staff, Swanson Ecological, Bandon High School students at a SOLVE Earth day event, and during a co-stewardship community event co-hosted with CTCLUSI (see Meaningful Co-stewardship section).

Upland implementation: Saturday Stewards planted 40 Port-Orford-cedar seedlings along the 1000 Rd in the Wasson upper watershed. Farm Unlimited procured sub-contractors to complete the final forest management stands (scheduled to start work in early June 2026).

Stewardship Collaboration Within the NERRS and Meaningful Co-stewardship and collaborations with Tribes:

The Reserve Stewardship Coordinator (SC), Alice Yeates, continues to co-lead the NERRS Upland Working Group. The group meets monthly to facilitate peer learning on

upland research and monitoring, as well as to develop collaborative research projects and funding proposals. This summer, Alice is training staff from six Reserves—ACE Basin, Connecticut Bay, Great Bay, Narragansett Bay, Waquoit Bay, and He'eia NERRs—in the upland monitoring protocols used at South Slough Reserve. Lessons learned from these trainings will be shared at the joint SC/RC in-person sector meeting in October, where participants will also discuss opportunities to standardize monitoring methods across the Reserve System. The SC also presented at the joint SC/RC virtual meeting on May 5th about the Upland monitoring work and how it intersects with the Ecotone Monitoring Working Group.

The Staff continue to work with THPO prior to new soil disturbance activities, minimizing the likelihood of damaging cultural resources in the Reserve. During this reporting period staff assisted two external researchers in soil disturbance requests, ensuring that research at the Reserve has minimal impact on these important features and artifacts. The Reserve hosted its second co-stewardship day at the Cultural Garden on April 18. This intergenerational event brought together 24 participants, including representatives from the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians (CTCLUSI), the Coquille Indian Tribe, Tribal citizens, and members of the public. The day began with storytelling by Laurabeth Barton, a citizen of the Coquille Indian Tribe, and a song performed by Ashley Russell, a citizen of CTCLUSI. The event concluded with a lunch funded through the Wasson Creek Restoration Grant.

Invasive Species:

The SSNERR Stewardship Coordinator continues to partner with the Friends of South Slough (FOSS) to co-lead the Saturday Stewards Program. Stewardship days in March and April focused on areas within the Wasson Creek Restoration Project area (see Wasson Restoration section for details). Saturday Stewards were cancelled in May so that staff and volunteers could support the Mayfly festival.

The Invasive Species Action Plan is submitted to the commission with these updates for review and comment. The Plan will be reviewed by the Commission, invasive species experts, Reserve staff and interested Tribes prior to submission for approval at the next Commission meeting.

The Reserve continues to assist invasive species managers through groups such as Gorse Actions Group (GAG) and South Coast CWMA, as well as partnerships with Oregon Dept. of Agriculture ODA and CoosWA. During the reporting period Reserve staff assisted ODA in invasive *Spartina densiflora* surveys in the Coos estuary and participated in a GAG discussion with Coquille Indian Tribe THPO on cultural resource protection and enhancement of culturally significant species.

INTERNSHIPS

Eric Sydnes (Southwestern Oregon Community College, Agroecology) and Izzy McCabe (SWOCC, Marine Biology) are interns working with Shon Schooler to monitor crab

abundance and develop potential commercial uses of 5-spine crabs as a management method. Their internships will run to August 30, 2026.

Lea Hinsley (University of Tampa) is a Ernest F. Hollings Undergraduate scholar (May-July 2026) working with Ali Helms and Adam DeMarzo on an eelgrass restoration study to evaluate donor site performance in a riverine area, Sengstacken Arm, South Slough estuary.

Natalie Rosenthal (University of Maryland) is a Ernest F. Hollings Undergraduate scholar (May-July 2026) working with Alice Yeates on forest monitoring to examine early effects of variable density thinning in the Wasson Creek watershed.

COMMITTEES AND WORKGROUPS

Local (Oregon)

Coastal Native Seed Partnership Committee:

Alice Yeates is on the Coastal Native Seed Partnership Science Program steering committee, which is working to increase support for local restoration projects by increasing native seed availability. The Reserve supports sustainable harvest for restoration projects.

Coos Basin Coho Partnership Committee:

Shon Schooler and Alice Yeates provided expertise to this committee. This group oversees a suite of Oregon Watershed Enhancement Board (OWEB) funded restoration projects in the Coos Basin. Shon and Jenni Schmitt are also on the Monitoring subcommittee and Alice is on the Communications subcommittee for this group.

Coos Bay Estuary Management Plan (CBEMP) Technical Advisory Committee:

Shon serves on the CBEMP Technical Advisory Committee (TAC) which provides scientific, regulatory, and professional expertise to support land use planning and policy updates. Its role is to review technical studies, data, and regulatory requirements, and to advise decision-makers on whether proposed plans and updates are consistent with environmental standards, best practices, and legal mandates.

Coos Head Co-Op Green Team

Alice Yeates participates in the Coos Head Food Co-Op Green Team, whose mission is to promote good stewardship and green actions in Coos County. This group is developing materials for local events (e.g., Earth Day Coos Bay and Mayfly festival) centered around “green” shopping practices.

Coos Watershed Association Technical Advisory Committee:

Jenni Schmitt, Alice Yeates, Shon Schooler, and Ali Helms participate on this committee to provide technical feedback on a variety of restoration and monitoring projects.

Gorse Action Group (GAG)

Alice Yeates participates in the Gorse Action Group (GAG), which is a coalition of dedicated partners working to minimize the economic and environmental impacts of gorse across a regional scale. The Gorse Action Group's highest priority is to stop the spread of gorse with specific objectives to prevent new infestations, control source populations, and build capacity for coordinated efforts.

Oregon Coast Artisan Trade Education Collective (OCATEC):

Shon Schooler is on the board of OCATEC. This organization develops training around trade skills, including aquaculture, with a focus on sustainability, community resilience, and circular economic principles.

Oregon 5-spine Crab Management Plan Steering Committee:

Shon Schooler is assisting on this committee which is overseeing the development of Oregon's green crab management plan. The committee is led by Dr. Catherine de Rivera (PSU).

Oregon Ocean Monitoring Group (OOMG)

Ali Helms participates in the Oregon Ocean Monitoring Group led by ODFW, which meets quarterly.

Oregon Watershed Enhancement Board (OWEB) Focused Investment Partnership (FIP) Technical Review Team: Jenni Schmitt serves on this oversight team to evaluate and review restoration, monitoring, stakeholder engagement, and technical assistance grants submitted through the Coos Basin FIP to OWEB.

South Coast Cooperative Weed Management Area (CWMA)

Alice Yeates participated in the South Coast CWMA meetings. The mission of the South Coast CWMA is to reduce the negative impact of invasive plant species on the economy, environment, and human health by collaborating with the community through education, information exchange and coordinating regional efforts for control. The Reserve just signed a collective MOU.

Southern Oregon Coast GIS User Group (SCUG):

Jennifer Kirkland is leading the SCUG sub-chapter of the Oregon chapter of Geospatial Professional Network- Pacific Northwest Chapter (GPN-PNW). The chapter serves as a forum for professionals and students to meet, share ideas, and discuss issues related to geographic information science (GIS). An event was co-hosted with the Roseburg based UBUG sub-chapter for international GIS day with a hybrid meeting focusing on Ocean Mapping. They have a tentative virtual spring meeting focused on GIS and AI.

Southwestern Oregon Community College Advisory Committee, Forestry and Natural Resources Department:

Alice Yeates participates in Southwestern Oregon Community College Forestry and Natural Resources Department Advisory Committee. This group guides program development and assists with improving student education.

Wild Rivers Land Trust Conservation Committee:

Alice Yeates participates in the Wild River Conservation Committee. The mission of the Wild Rivers Land Trust is to conserve and sustain the natural, scenic, and working lands of Southern Oregon through active collaboration with communities and landowners.

Local (SSNERR)**SSNERR Diversity, Equity, Inclusion Committee:**

There is one science or stewardship staff representative on the Reserve's DEI Committee. This committee is assessing and identifying ways to improve diversity, equity and inclusion in all areas of the Reserve. The committee's goals focus on dismantling systemic racism and increasing the inclusion of underrepresented and marginalized communities. In October 2025, the committee submitted a Letter of Intent to Oregon Parks and Recreation Department, which was accepted for developing a proposal for Advancing South Slough Reserve Trail Improvement.

SSNERR Uncrewed Aircraft System (UAS) Program Development:

Reserve staff have identified projects that could utilize a UAS (aka drone) for future research needs. Jennifer Kirkland has reached out to other Oregon agencies and NERR staff to gather information for developing a UAS program for SSNERR and DSL. She serves as the agency representative on a statewide UAS group lead by Oregon Department of Aviation and national NERRS UAS working team.

Regional**Pacific Estuarine Research Society (PERS):**

Jenni Schmitt is the Oregon at-large representative for PERS. The PERS board meets regularly to plan the annual PERS conference. During this reporting period, PERS held a successful two-day conference in Newport, Oregon.

Pacific Marine and Estuarine Fish Habitat Partnership (PMEP) Data and Science Committee:

Ali Helms joined this regional workgroup for providing technical input and expertise from an Oregon perspective related to eelgrass habitats. Staff virtually attended the Data and Science committee meeting September 4, 2025 and the annual meeting September 10 and 11, 2025, hosted in Bellingham, WA. PMEP hosted a Data Tools training with the Tijuana River NERR on November 4 and 5, 2025.

Western Lily Working Group

Alice Yeates and Jenni Schmitt are founding members of the Western Lily Working Group that convened for the first time on February 25th 2026. The working group is led by USFWS and consists of federal and state agencies, Tribal Nations, non-profit groups, universities and retired professionals. The group will support stewardship planning and implementation, as well as research and monitoring, to promote recovery of the endangered western lily (*Lilium occidentale*).

National

NERRS Wetlands and Water Levels (WWL) Oversight Committee:

Jenni Schmitt and Ali Helms are on this NERRS committee, which was formed to develop Wetlands and Water Level (WWL) program (formerly Sentinel Site Program) outreach strategies, review outreach products from the Marsh Resilience (MARS) report card, integrate remote sensing/habitat mapping into WWL sites, review WWL plans, develop Centralized Data Management Office (CDMO) data templates for vegetation and sediment data, and manage inventory of WWL equipment, capacity building and data acquisition. The group meets monthly and focuses on developing a national funding strategy for the WWL Program, including articulating expectations for minimum monitoring protocols to standardize datasets across sites, regional and national synthesis, and justifying the need to financially support on-site monitoring, data analysis, and data maintenance and dissemination through the CDMO.

NERRS WWL Biomonitoring Workgroup:

Jenni Schmitt is part of this workgroup, which develops and oversees implementation of national marsh vegetation monitoring protocols and reviews vegetation monitoring datasets submitted to the CDMO. This workgroup meets approximately quarterly.

NERRS WWL Elevation Subcommittee

Jenni Schmitt serves on this subcommittee that meets approximately monthly to provide recommendations and solutions for national vertical control-related protocols including high precision GPS and elevation, surface elevation table, and water level data collection.

NERRS Estuaries and Sovereignty Working Group:

Alice Yeates is on the Estuaries and Sovereignty workgroup. This team works to center, engage, and learn from tribes and local communities to facilitate meaningful co-management and co-stewardship of coastal lands and waters.

NERRS Restoration Monitoring Team

Alice Yeates, Jenni Schmitt, and Ali Helms participate in this workgroup that meets monthly, led by Becky Swerida (Chesapeake Bay, MD) to share information about restoration monitoring protocols, restoration projects implemented across the Reserve system, and plan for funding opportunities.

NERRS System-Wide Monitoring Program Guidance Committee:

Ali Helms serves on the SWMP Guidance Committee (current members: Chris Kinkade, Suzanne Shull, Jennifer Harper, Joan Muller, Matt Ferner, Ali Helms, and Steve Baird) formed in 2010 to provide strategic planning and oversight of the SWMP program.

NERRS SWMP Oversight Committee:

Shon Schooler continues to serve on the SWMP Oversight Committee. This committee provides oversight of SWMP plans and can intervene if SWMP protocols are not being met by individual Reserves.

NERRS Submerged Aquatic Vegetation (SAV) Biomonitoring and Mapping Workgroup:

Ali Helms joined this workgroup to develop and provide input on protocols for implementing national vegetation, mapping, and mudflat sediment dynamic monitoring in SAV (i.e., eelgrass) habitats, with monthly meetings. The workgroup is working on advancing SSAM SAV at the system level. The Workgroup received funding for a NERRS Science Collaborative Catalyst proposal to develop national monitoring protocols for SAV and pilot data syntheses in August 2025; however, the funding was rescinded. The workgroup meets monthly to strategize plans to move forward with advancing SAV through other avenues until additional funding opportunities become available.

NERRS Upland Stewardship and Monitoring Working Group:

Alice Yeates co-leads the NERRS uplands working group which aims to enhance communication between Reserves and to share information and develop collaborations on upland monitoring, management, research, and outreach. During the SC Sector Meeting in October this group met and shared upland monitoring protocols and challenges. This will inform NERR wide upland monitoring protocols.

Research Papers

Yusuf D. T. and M.W. Brand, S. M. Zapp, **J. Schmitt**, D. Anderson, H. Diefenderfer, P. Bacopoulos, C. N. Janousek, M. McKeon, C. Cornu. A Coupled Hydrodynamic and Harmonic Modeling Framework for Quantifying Estuarine Nuisance Flooding Under Sea-Level Rise and Storm-Surge Forcings. Submitted to *Earth's Future*, undergoing revisions.

Reinl, KL, Dunn, R.P., Cressman, KA, Collins, T, DeBose, JL, Friedrichs, CT, **Helms, AR**, Kinkade, C., Krask, JL Parrish, DB, Nicklay, HN, Justin T. Ridge, JT, Sanger, DM, Jacob A. Cianci-Gaskill, JA, Dix, NG, Grothues, TM, McMurray, SE, and C. Peter. 2026. In Situ Observations Reveal Continental-Scale Warming, Oxygen Decline, and Eutrophication in U.S. Estuaries. *Communications Earth & Environment*, (in review, submitted May 2026).

Presentations

Helms, A. *System-Wide Monitoring Program at South Slough NERR*. Science Sharing Day. April 17th, 2026.

Kirkland, J. *Drone over troubled waters: Monitoring stage zero with UAS*, Oregon Society of American Foresters, Coos Bay, Oregon. May 7, 2026.

Schmitt, J. *Integrated Monitoring of Stage-0 Wetland Restoration: Hydrology, Vegetation and Faunal Response*, Pacific Estuarine Research Society conference, April 24, 2026.

Schooler, S. *Ecology and Management of the 5-spine green crab in the PNW*. Oregon Institute of Marine Biology Coastal Practitioners Seminar Series, Charleston, OR. March 10, 2026.

Yeates, A. *Early monitoring results from the Wasson Creek Restoration Project*. Coos Basin Coho Partnership meeting, Coos Bay, OR. March 4, 2026.

Yeates, A. *Implementing stage-0 wetland-stream restoration: Ecological, community and cultural benefits beyond the watershed*. Pacific Estuarine Research Society Conference, Newport, OR. April 24, 2026.

Yeates, A. *Implementing process-based restoration: lessons learned from the Wasson Creek Restoration Project*. Pacific Marine and Estuarine Fish Habitat Partnership, virtual. May 21, 2026.

32007 SSNER O/F		Report for May-2026					Biennium Remaining: 54.17%			
		Biennium To February	March	April	May	Biennium To Date	Budget	Adjustments	Remaining Balance	% of Budget Remaining
3110	CLASS/UNCLASS SALARY & PER DI	747,674	96,301	103,082	86,441	1,033,498	1,973,745	110,528	1,050,775	50.41%
3160	TEMPORARY APPOINTMENTS	0	0	0	0	0	7,651	0	7,651	100.00%
3170	OVERTIME PAYMENTS	417	0	0	0	417	0	0	-417	NA
3180	SHIFT DIFFERENTIAL	1,557	153	179	116	2,004	0	0	-2,004	NA
3190	ALL OTHER DIFFERENTIAL	8,732	3,876	1,623	1,607	15,838	9,794	0	-6,044	-61.71%
3210	ERB ASSESSMENT	285	37	34	31	386	787	0	401	50.91%
3220	PUBLIC EMPLOYES' RETIREMENT S	167,478	22,144	23,149	18,146	230,916	424,963	0	194,047	45.66%
3221	PENSION BOND CONTRIBUTION	33,255	4,013	4,195	3,284	44,748	75,217	225	30,694	40.69%
3230	SOCIAL SECURITY TAX	57,527	7,605	7,951	6,208	79,291	155,102	0	75,811	48.88%
3240	UNEMPLOYMENT ASSESSMENT	0	0	0	0	0	7,139	0	7,139	100.00%
3241	PAID FAMILY MEDICAL LEAVE INSU	3,008	398	416	325	4,146	8,081	0	3,935	48.69%
3250	WORKERS' COMPENSATION ASSES	125	16	17	16	174	458	0	284	62.00%
3260	MASS TRANSIT	0	0	0	0	0	11,433	0	11,433	100.00%
3270	FLEXIBLE BENEFITS	160,421	20,139	18,494	18,601	217,655	463,591	17,206	263,142	54.73%
Total:	PERSONAL SERVICES	1,180,479	154,680	159,140	134,774	1,629,073	3,137,961	127,959	1,636,847	50.12%
4100	INSTATE TRAVEL	18,284	2,393	270	7,893	28,841	27,410	0	-1,431	-5.22%
4125	OUT-OF-STATE TRAVEL	364	0	0	0	364	9,031	0	8,667	95.97%
4150	EMPLOYEE TRAINING	2,752	122	0	807	3,680	24,210	0	20,530	84.80%
4175	OFFICE EXPENSES	5,693	1,293	1,599	845	9,429	28,371	0	18,942	66.76%
4200	TELECOMM/TECH SVC AND SUPPLI	16,968	2,634	2,596	992	23,190	19,531	0	-3,659	-18.74%
4250	DATA PROCESSING	0	0	0	0	0	661	0	661	100.00%
4275	PUBLICITY & PUBLICATIONS	0	0	0	0	0	614	0	614	100.00%
4300	PROFESSIONAL SERVICES	408	0	0	0	408	531,208	0	530,800	99.92%
4315	IT PROFESSIONAL SERVICES	0	0	0	0	0	5,000	0	5,000	100.00%
4325	ATTORNEY GENERAL LEGAL FEES	10,314	0	7,357	0	17,670	10,460	0	-7,210	-68.93%
4375	EMPLOYEE RECRUITMENT AND DE	729	0	0	0	729	3,057	0	2,328	76.14%
4400	DUES AND SUBSCRIPTIONS	652	111	15	150	928	15	0	-913	-6086.13%
4425	LEASE PAYMENTS & TAXES	0	0	0	0	0	57	0	57	100.00%
4450	FUELS AND UTILITIES	8,560	1,088	1,183	766	11,597	10,231	0	-1,366	-13.35%
4475	FACILITIES MAINTENANCE	9,731	114	0	112	9,956	33,839	0	23,883	70.58%
4650	OTHER SERVICES AND SUPPLIES	41,041	5,485	12,084	15,123	73,733	66,120	0	-7,613	-11.51%
4700	EXPENDABLE PROPERTY \$250-\$100	19,399	4,160	22,975	16,300	62,833	4,248	0	-58,585	-1379.13%
4715	IT EXPENDABLE PROPERTY	6,532	0	20	364	6,915	58,097	0	51,182	88.10%
Total:	SERVICES AND SUPPLIES	141,427	17,398	48,099	43,351	250,275	832,160	0	581,885	69.92%
5200	TECHNICAL EQUIPMENT	0	0	0	0	0	48,801	0	48,801	100.00%
5600	DATA PROCESSING HARDWARE	0	0	0	0	0	20,407	0	20,407	100.00%
Total:	CAPITAL OUTLAY	0	0	0	0	0	69,208	0	69,208	100.00%

32007	SSNER O/F	Report for May-2026					Biennium Remaining: 54.17%			
		Biennium To February	March	April	May	Biennium To Date	Budget	Adjustments	Remaining Balance	% of Budget Remaining
Grand Total: Expense		1,321,905	172,078	207,239	178,126	1,879,348	4,039,329	127,959	2,287,940	54.90%

62007 SSNER F/F		Report for May-2026					Biennium Remaining: 54.17%			
		Biennium To February	March	April	May	Biennium To Date	Budget	Adjustments	Remaining Balance	% of Budget Remaining
3110	CLASS/UNCLASS SALARY & PER DI	501,794	55,579	49,892	49,051	656,316	1,389,874	88,691	822,249	55.61%
3160	TEMPORARY APPOINTMENTS	22,963	5,800	6,561	2,171	37,495	88,505	0	51,010	57.64%
3170	OVERTIME PAYMENTS	595	1,556	0	0	2,150	3,811	0	1,661	43.58%
3180	SHIFT DIFFERENTIAL	780	110	80	99	1,068	8	0	-1,060	-13250.13%
3190	ALL OTHER DIFFERENTIAL	7,006	1,276	1,253	1,250	10,784	0	0	-10,784	NA
3210	ERB ASSESSMENT	221	28	24	20	292	638	0	346	54.16%
3220	PUBLIC EMPLOYES' RETIREMENT S	110,044	12,318	11,277	11,571	145,211	309,015	0	163,804	53.01%
3221	PENSION BOND CONTRIBUTION	22,462	2,241	2,049	2,103	28,855	56,137	1,117	28,399	49.60%
3230	SOCIAL SECURITY TAX	40,125	4,871	4,378	3,979	53,352	119,128	0	65,776	55.21%
3241	PAID FAMILY MEDICAL LEAVE INSU	2,099	255	229	208	2,791	5,874	0	3,083	52.49%
3250	WORKERS' COMPENSATION ASSES	552	11	11	10	585	373	0	-212	-56.90%
3270	FLEXIBLE BENEFITS	108,097	15,861	12,510	11,903	148,371	375,734	13,946	241,309	61.92%
Total:	PERSONAL SERVICES	816,739	99,904	88,262	82,366	1,087,271	2,349,097	103,754	1,365,580	55.67%
4100	INSTATE TRAVEL	4,361	513	138	1,788	6,800	25,759	0	18,959	73.60%
4125	OUT-OF-STATE TRAVEL	3,950	0	0	0	3,950	15,913	0	11,963	75.17%
4150	EMPLOYEE TRAINING	9,311	4,255	1,394	0	14,960	60,000	0	45,040	75.07%
4175	OFFICE EXPENSES	91	130	33	73	327	24,141	0	23,814	98.65%
4200	TELECOMM/TECH SVC AND SUPPLI	0	318	317	317	953	10,954	0	10,002	91.30%
4250	DATA PROCESSING	0	0	0	0	0	12,441	0	12,441	100.00%
4275	PUBLICITY & PUBLICATIONS	927	0	0	645	1,572	1,818	0	246	13.55%
4300	PROFESSIONAL SERVICES	134,923	83,367	2,649	16,371	237,310	1,684,728	292,930	1,740,348	88.00%
4315	IT PROFESSIONAL SERVICES	0	0	0	0	0	5,000	0	5,000	100.00%
4325	ATTORNEY GENERAL LEGAL FEES	13,376	0	5,315	0	18,691	0	0	-18,691	NA
4375	EMPLOYEE RECRUITMENT AND DE	24	0	0	0	24	7,204	0	7,180	99.67%
4400	DUES AND SUBSCRIPTIONS	8,136	15	15	0	8,166	1,017	0	-7,149	-702.92%
4450	FUELS AND UTILITIES	0	0	0	0	0	31,147	0	31,147	100.00%
4475	FACILITIES MAINTENANCE	10,952	0	0	0	10,952	37,139	0	26,187	70.51%
4575	AGENCY PROGRAM RELATED SVCS	4,696	0	640	0	5,335	6,658	0	1,323	19.87%
4650	OTHER SERVICES AND SUPPLIES	72,188	11,732	11,065	3,630	98,615	13,624	0	-84,991	-623.83%
4700	EXPENDABLE PROPERTY \$250-\$100	26,429	633	901	0	27,964	26,195	0	-1,769	-6.75%
4715	IT EXPENDABLE PROPERTY	5,271	0	0	48	5,319	1,785	0	-3,534	-197.96%
Total:	SERVICES AND SUPPLIES	294,634	100,964	22,467	22,872	440,937	1,965,523	292,930	1,817,516	80.48%
5200	TECHNICAL EQUIPMENT	0	0	0	0	0	11,353	0	11,353	100.00%
5650	LAND IMPROVEMENTS	540,944	168,850	163,885	388,858	1,262,537	0	0	-1,262,537	NA
5900	OTHER CAPITAL OUTLAY	-881	0	0	0	-881	0	1,709,870	1,710,751	100.05%
Total:	CAPITAL OUTLAY	540,062	168,850	163,885	388,858	1,261,655	11,353	1,709,870	459,568	26.70%

62007	SSNER F/F	Report for May-2026					Biennium Remaining: 54.17%			
		Biennium To February	March	April	May	Biennium To Date	Budget	Adjustments	Remaining Balance	% of Budget Remaining
Grand Total: Expense		1,651,435	369,717	274,614	494,096	2,789,863	4,325,973	2,106,554	3,642,664	56.63%

Friends of South Slough Reserve, Inc.

P. O. Box 5446, Charleston, Oregon 97420

Date: June 22, 2026
From: Board of Directors, Friends of South Slough Reserve, Inc. (FOSS)
To: South Slough Management Commission
Re: Activities Report to Commission and Interested Public

FOSS, founded in 1988, supports and enhances the mission of the Reserve. Our work continues with financial and in-kind support for programs. The following summarizes selected activities since our report to the Commission in March 2026.

ENTRANCE REDESIGN WORK: COMPLETION

FOSS was integral in the entrance redesign from providing funding for land purchases, contracting the redesign of the entrance, providing matching grant funds and financially supporting the project manager to complete the work on the ground. We are now excited and proud to be part of the celebration of the new entrance to the Visitor Center. This project exemplifies the benefits of the partnership of FOSS and the Reserve. In addition to hard wired internet service at the visitor's center, the improved access and parking, as well as safety upgrades and enhancements prepare the Reserve for the next 50 years. Our Board of Directors appreciates the efforts required to bring this project to fruition. Special thanks to Reserve Managers Patricia Fox and Rebecca Muse, Project Manager Juliana Ruble and numerous others who worked to ensure this project's success. We also appreciate the contractor - Morello Construction - for their work, courtesy and timeliness. The efforts of so many will make the Visitor Center safer, more convenient and more accessible for all who visit. This project will welcome visitors, increasing the opportunity for sharing the history of the Reserve, region and the estuary science that is critically important to all of us.

SATURDAY STEWARDS

FOSS continues to partner with Reserve staff on the Saturday Stewards program. The Spruce Tip harvest on May 2 netted 40 pounds of spruce buds for a partnership with 7Devils Brewery, who brew a special South Slough Spruce Tip Ale and contribute a portion of all sales to FOSS for South Slough programs. The next scheduled Stewards activity is planned for July 18, and Jeanne will lead the Stewards and Native Plant Society to two sites to improve habitat for carnivorous California pitcher plants and sundews.

BOOKSTORE AND CAPACITY DEVELOPMENT

Our Board is hiring a part time staffer to provide regular Bookstore hours for the public and work to increase the collaborative capacity between FOSS and Reserve Staff in future projects.