



Annual Report of the South Slough Reserve

Calendar Year 2024

OREGON DEPARTMENT OF STATE LANDS

MEET THE PROGRAM



3 Meet The Program

4 Program Services

5 Calendar Year In Numbers

6 Takeaways From This Report

- Wasson Creek Restoration Project: Phase I
- Managing Invasive Green Crab
- Resonating with the Community

10 Strategic Plan Check-In

11 The Future

14 Appendix A: Reserve Partners

LauraBeth Barton, a citizen of the Coquille Indian Tribe, at the opening ceremony for the Wasson Creek Restoration Project.

Storytelling by LauraBeth from the ceremony can be **viewed here on YouTube**.

At the time, LauraBeth was a representative on Tribal Council and serves on South Slough Reserve Management Commission.

MEET THE PROGRAM



The first of 30 National Estuarine Research Reserves around the nation, South Slough Reserve is a leader in improving understanding of estuaries and coastal watersheds. The Reserve manages and studies nearly 7,000 acres of natural area, including open water channels, tidal and freshwater wetlands, riparian areas, and forested lands.

Reserve lands and waters are used by visiting researchers, teachers and students, and other members of the public who come to the Reserve to hike or paddle, view wildlife, and participate in community classes. The Reserve Visitor Center offers interpretive exhibits as well as meeting spaces for the public.

The Reserve is located on state-owned land in the Coos estuary on Oregon's southern coast. Management is in partnership with Oregon Department of State Lands and National Oceanic and Atmospheric Administration. Co-stewardship of the land is in partnership with three local sovereign Tribal Nations:

- Confederated Tribes of Coos, Lower Umpqua and Siuslaw Indians
- Coquille Indian Tribe
- Confederated Tribes of Siletz Indians

This Annual Report of the South Slough Reserve for calendar year 2024 highlights critical environmental research, restoration, and community access.

PROGRAMS SERVICES AT THE RESERVE

APPENDIX A

COASTAL TRAINING

We provide training and technical assistance to decision-makers in coastal management and science fields.

[More information](#)

OUTREACH PROGRAMMING

We offer an array of programs for all ages to engage with estuary science, from mushroom identification to learning how to crab.

[More information](#)

CONDUCTING/FACILITATING RESEARCH

Staff conduct various research and monitoring efforts. The estuary is analyzed for local, regional, and national trends. They also mentor and facilitate visiting researchers.

[More information](#)

INTERNSHIPS

We host educational internships for high school and college students to provide opportunities for future scientists and science educators.

[More information](#)

STEWARDSHIP AND CULTURAL RESOURCES

We co-steward the lands and waterways together with three local sovereign Tribal Nations as they cared for these lands since time immemorial.

[More information](#)

PUBLIC RECREATION

The Reserve staff and volunteers maintain over four miles of hiking trails, including boardwalks bordered by skunk cabbage (see report cover), as well as paddle trails.

[More information](#)

EDUCATION OPPORTUNITIES

The Reserve provides education for toddler through high school age as well as Oregon teachers, providing tools to bring hands-on science into their classrooms.

[More information](#)

HABITAT AND SPECIES PROTECTION

We manage nearly 7,000 acres for habitat and species conservation to improve coastal science understanding and ecosystem health.

[More information](#)

CALENDAR YEAR 2024 IN NUMBERS

3,053 PEOPLE

*served by our
Visitor Center with more
enjoying our trails
365 days/year*

56 RESEARCH PROJECTS

*of research were conducted
by staff and visiting
scientists*

1,528 STUDENTS

*in Oregon K-12 participated
in field trips or
in-school learning*

214 DECISION MAKERS

*trained in workshops
to better inform their
understanding of coastal
data and ecology*

164 PROGRAMS

*for public education,
from interpretive classes to
science summer camp*

67 VOLUNTEERS

*removed invasive species
alongside staff and partners
during Saturday Stewards
events*

Education Coordinator Jaime Belanger demonstrating how to monitor salt in estuary waters with Seasonal Education Specialist Cherie Turner.

TAKEAWAYS FROM THIS REPORT

WASSON CREEK PHASE I

After receiving over \$3.5M from the Bipartisan Infrastructure Law, the Wasson Creek Restoration Project broke ground in 2024.

RESONATING WITH COMMUNITY

South Slough celebrated 50 years as the first National Estuarine Research Reserve in the nation by **connecting with community**.

MANAGING INVASIVE GREEN CRAB

The Reserve is researching the invasive 5-spine green crab (aka European green crab), a voracious predator that disrupts marine ecosystems and is now found in Oregon estuaries.

WASSON CREEK PHASE I

After receiving over \$3.5M from the Bipartisan Infrastructure Law, the Wasson Creek Restoration Project broke ground in 2024 with earth moving and native planting efforts. The valley floor was re-graded, which removed invasive species, returned stream flow, and created valley elevations for native wetland habitat.

The Reserve was grateful to work with local sovereign Tribal Nations cultural resource monitors to navigate inadvertent discoveries on the project.

525

*acres included
in the restoration*

9,897

*fish and amphibians
relocated*

7,900+

native species planted

\$250,000

*contributed to
the local economy*



CHALLENGE

The location of the Wasson valley poised a challenge for hiring contractors capable of working on such a remote job site. In addition, contractors had to factor in security concerns due to a history of equipment vandalization on-site.

Another challenge has been ensuring accessibility. It's important for people of different mobilities to experience the estuary, but the steep forested terrain and ever-changing wetlands are obstacles. How can we help people reach the estuary edge?

NEXT STEPS

A new project manager for the Reserve, Juliana Ruble, is assisting with the Wasson Creek Restoration Project.

To make the estuary accessible, a boardwalk is being designed with consideration to sedimentation rates, sea level rise, and earthquake vulnerability. Work on the boardwalk is anticipated to be completed by Winter 2025/6.

Contractors will also be on-site Summer 2025 to execute the project's forestry health plan to protect old stands, help young trees prosper, and improve resilience against severe wildfires.

In addition to broader work, Stewardship Coordinator Dr. Alice Yeates, continues to ensure ongoing co-stewardship with local sovereign Tribal Nations throughout the process.



*Pulling Together:
Coordinated effort by
paddlers towards a
shared goal.*

Reps from federal, state, and local sovereign Tribal Nations receive etched paddles at the opening ceremony for the Wasson Creek Restoration Project.

MANAGING INVASIVE GREEN CRAB

The Reserve is researching the 5-spine invasive green crab (aka European green crab), a voracious predator that disrupts local marine ecosystems and is now found in Oregon estuaries.

This species is detrimental to economically important species such as Dungeness crabs and shellfish, including oysters. Green crabs also destroy eelgrass beds which are important nursery habitat for numerous fish species.

22 YEARS

of data studying crab abundance in Coos Bay

221 TRAPS

set at 11 sites to capture green crabs

35 CRABS

allowed for recreational take by ODFW

1,506

green crabs captured from all sites

CHALLENGE

After tracking other approaches, Reserve staff determined *management* rather than *eradication* was more practical for protecting the estuary from the negative impacts of green crab. There are studies quantifying the destruction of fishing industries by invasive green crab on the East Coast, but little advanced understanding of green crab in Oregon.

Harvesting of green crab currently lacks a business case. No commercial take is currently allowed, due to misidentification as well as lack of market demand. Color being unreliable, the most useful identification trait are the 5-spines on either side of the eyes.

NEXT STEPS

Reserve staff will continue to work on building a business case for market demand and work with local businesses to understand the species' impact on oyster aquaculture.

The Reserve is partnering with Southwestern Oregon Community College to purchase a meat extractor to efficiently harvest meat for food and process shells for a beneficial garden amendment. The potential for these two new commercial markets is promising, especially since blind taste tests prefer green crabs over Dungeness.

South Slough's Margaret A. Davidson fellow, Lizzie Diel, is researching what green crabs eat by analyzing fatty acid profiles to understand how green crabs impact native clams, Pacific oysters, and Dungeness crabs in the South Slough and Coos Bay estuary. Research by Lizzie Diel will assist in making the case for increasing green crab harvest limits.

“ We grow most of our oysters in Joe Ney Slough and some in South Slough. There are hundreds of thousands of them [green crabs] up there. They are a really big problem for us. They get in and they eat the oysters. We watch the numbers just spike, and spike, and spike. ”

- Gavin Augustin, owner Qualman Oysters Farms

RESONATING WITH COMMUNITY

South Slough celebrated 50 years as the first National Estuarine Research Reserve (NERRS) in the nation by connecting with community.

From showcasing our new exhibits at the Visitor Center to partnering with Tillamook Estuary Partnership and Sea Grant in providing teacher training, the Reserve worked with partners throughout the Oregon Coast to increase access to science programming.

33 TEACHERS

*from K-12 schools
throughout Oregon
trained*

3,053 PEOPLE

*served at the
Visitor Center*

\$275,502

*in grants from NOAA
for new exhibits*

700 SQFT

*of exhibit hall
renovated at the
Visitor Center*

164

*public education
programs*

CHALLENGE

The Reserve works to resonate with many different types of people. Providing Oregon schoolteachers with the tools to teach biodiversity and climate resiliency in their classrooms. Helping shellfish harvesters understand the impact of climate change on estuary systems. Getting the word out to Spanish-speaking parents that the Reserve has summer science camps.

There are three known challenges the Reserve faces in resonating with the community:

1. Remote physical location of the Reserve in a rural area
2. Capacity required for highly collaborative projects
3. Translation of complex information for disparate audiences

NEXT STEPS

The Reserve is working to make the physical site as well as programming more accessible, which will aid in resonating with the community.

New exhibits in the Visitor Center, completed in June 2025, will integrate Miluk Coos heritage and science learning with plain language as well as hands-on, interactive components. A new front entrance project, anticipated to be complete by Summer 2026, will make it possible for more school children to visit the Reserve as buses will have increased access.



The State Land Board joins federal partners and local sovereign Tribal Nations to cut the ribbon on new exhibits at the Visitor Center in August 2024.

STRATEGIC PLAN CHECK-IN

The South Slough Reserve has been working towards completion of **Strategic Plan** projects.

Some examples of measurable objectives tracked by the plan include:

- Creating in-class learning activities and hands-on field trip experiences to teach students about estuarine and coastal systems.
- Improve forest health and reduce wildfire risk on DSL-managed and surrounding forest lands.
- Provide professional development opportunities for teachers

8

number of program projects

10%

program percent of total Strategic Plan projects

100%

percent of projects continuous

THE FUTURE

A group of children are standing outdoors in a wooded area. In the foreground, a boy in a black jacket is looking down at a green booklet he is holding. Behind him, a girl with long brown hair is also looking at a similar booklet. To the left, another child is partially visible, wearing a black cap and a grey hoodie. The background is filled with green foliage and trees.

Currently, the National Oceanic and Atmospheric Administration provides roughly 50% of Reserve operating costs with approximately 90% of that funding dedicated to personnel.

As we navigate through the current uncertainty of funding from our federal partner, we are struggling to understand the impacts to continued scientific studies, education, and outreach.


What will happen if we have to stop 30-year-old water quality monitoring?

Will a generation of school children miss the opportunity to learn hands-on science about the ecosystem in their own backyard?

How will the local fishery industry respond to invasive species without this critical data?

And how will coastal decision makers make informed choices about the future without data?

These are the questions that we will be facing in the future.



Looking towards the future, the Reserve has identified three actions to enhance accessibility to the Reserve and continue landmark restoration of the Wasson Valley.

APPENDIX A

Local contractor Rogue Detection works in the Wasson Valley of the Reserve to find animal scat. The material is analyzed by Oregon State University genetics lab to help the restoration scientists understand what wildlife are using the site pre-restoration.

1

FRONT ENTRANCE PROJECT

Scheduled for completion by 2026, work will be underway in 2025 for a new Reserve entrance which will provide better access for school buses, more visitor parking, reliable internet to the Visitor Center, and safer routes for drivers and pedestrians.

2

WASSON LOOP TRAIL AND BOARDWALK

The trail is anticipated to be completed by Winter 2025/26 and utilizes best practices in accessibility (relatively smooth surfaces, gentle slopes, and wider paths) to allow visitors of different mobility levels the opportunity to experience the estuary edge.

3

WASSON CREEK - PHASE II

Increasing forest health, planting native species, building stream complexity, and collaborating with local sovereign Tribal Nations and other local partners are slated for 2025 in the valley.

Tribal Partners

- Confederated Tribes of Coos, Lower Umpqua and Siuslaw Indians
- Coquille Indian Tribe
- Confederated Tribes of Siletz Indians

Local Businesses

- 7 Devils Brewing Company
- Blue Ridge Timber Cutting INC.
- Coos Head Food Coop
- Habitat Contracting LLC
- HGE Architects
- John Goodwin
- BiCoastal Media KWRO
- PAC Creative Agency LLC
- Swanson Ecological
- West Coast Purple Martin Wildlife
- Wilson Biochar

City and County Partners

- Coos Forest Protective Association
- Coos Basin Coho Partnership
- Coos Bay Planning Department
- Coos County Commissioners
- Coos County Forestry Department
- Coos County Planning Department
- Coos County Roads Department
- North Bend Planning Department
- Oregon International Port of Coos Bay
- Rogue Valley Council of Government
- Coos Bay Downtown Association

State Partners

- Oregon Department of State Lands
- Oregon Department of Fish and Wildlife
- Oregon Department of Land Conservation and Development
- Oregon Department of Forestry

- Oregon Department of Transportation
- Oregon Coast STEM Hub
- Oregon Sea Grant
- Oregon Department of Agriculture
- Oregon Natural Resources Education Program
- Oregon Parks and Recreation Department
- Oregon Watershed Enhancement Board
- Washington State Department of Natural Resources

Federal Partners

- National Oceanic and Atmospheric Administration
- National Estuarine Research Reserve System
- U.S. Forest Service
- Bureau of Land Management
- U.S. Fish and Wildlife Service
- U.S. Coast Guard
- U.S. State Department
- U.S. National Parks Service
- Integrated Ocean Observing System
- United Communities AmeriCorps

School and University Partners

- University of Oregon
- Oregon State University
- Portland State University
- Southern Oregon University
- University of California, Davis
- Louisiana State University
- Sacred Heart University, CT
- The College of Idaho
- University of New Hampshire
- University of Washington
- Woods Hole Oceanographic Institution
- Eddyville Charter School
- Marshfield High School
- Hillcrest Elementary School
- North Bay Elementary School
- Bandon High School

Additional Partners

- Friends of South Slough, Inc.
- Oregon Ocean Science Trust
- Partnership for Coastal Watersheds
- Coos Watershed Association
- Wetlands Conservancy
- The PEW Charitable Trusts
- Tenmile Lakes Basin Partnership
- Wild Rivers Land Trust
- Pacific Marine and Estuarine Fish Habitat Partnership
- Trailkeepers of Oregon
- National Science Foundation
- Parks Canada
- George Wright Society
- Pacific Lamprey Conservation Initiative
- South Coast Food Co-op
- The Egyptian Theater
- American Fisheries Society
- Tillamook Estuary Partnership
- Bandon Dunes Charitable Foundation
- Bay Area Hospital
- CatBird Stats
- Charleston Food Bank
- Coos Bay Downtown Farmers Market
- Coos Bay Garden Club
- Coos Bay Surfrider
- Coos Head Garden Club
- Coos Hispanic Allies
- Coos Soil and Water Conservation District
- Coquille Watershed Association
- Curry Soil and Water Conservation District
- Drew's Native Plants
- Farm Unlimited LLC
- Friends of Shore Acres
- Institute for Applied Ecology
- Leadership Coos
- League of Women Voters
- Lone Rock Timber
- Ko-Kwel Casino Hotel
- Natural Resources Conservation Service
- NW Watershed Association
- Oregon Museum of Science and Industry
- Pacific Birds Habitat Joint Venture
- PNW Blue Carbon Working group
- Roca Communications
- Rogue Climate
- Rogue Detection Teams LLC
- Smithsonian
- Southwestern Oregon Workforce Investment Board
- The Nature Conservancy
- The Understory Initiative
- Western Invasives Network
- Xerces Society
- Oregon Natural Resources Education Program