

Tillamook Estuaries Partnership's Comprehensive Conservation and Management Plan



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August 20, 2019

Executive Summary



Tillamook Estuaries Partnership
A National Estuary Project

Tillamook Estuaries Partnership
613 Commercial Street
Garibaldi, OR 97118

Acknowledgements

TEP Staff

Kristi Foster, Executive Director
Lisa Phipps, Former Executive Director
Claudine Rehn, Deputy Director
Scott Bailey, Habitat Enhancement Team Leader
York Johnson, Water Resources Manager
David Harris, Habitat Enhancement Team Leader
Maysa Miller, Native Plant Nursery Coordinator
Alix Lee, Community Education & Engagement Coordinator
Debra Grace, Administrative Assistant

EPA Staff

Nancy Laurson
Peter Murchie
Joel Salter
Yvonne Vallette

TEP Board Members

Chris Knutsen, President
Liane Welch, Vice President
Nancy Hoffman, Secretary/Treasurer
Amy Bennett, Director
Kurt Heckerath, Director
Valerie Hendon, Director
David Johnson, Director
Pat Vining, Director

University of Oregon – Institute for Policy Research & Engagement

Michael Howard
Aniko Drlik-Muehleck
Stefan Golos
Rachel Hiller

Partner and Community Stakeholders

Tillamook Estuaries Partnership thanks the many stakeholders, technical advisors, and members of the community who participated in the development of this Comprehensive Conservation and Management Plan (CCMP). We are especially grateful to our former Board of Directors members who have helped guide our organization throughout the years. We thoroughly appreciate the time and effort of everybody who has contributed to Tillamook Estuaries Partnership's (TEP) mission to conserve and restore Tillamook County's estuaries and watersheds in their entirety.



Executive Summary

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Welcome to the Tillamook Estuary Partnership's (TEP) 2019 Comprehensive Conservation & Management Plan (CCMP)

The 2019 CCMP describes TEP's action agenda for the coming decade (2019-2029). Much has changed in the 20 years since the first CCMP was completed for the Tillamook Bay watershed. This update expands the geographic focus to include five additional estuaries and their watersheds. It also realigns priorities to reflect emerging challenges like climate change.

After a multi-year, in-depth revision process, we are pleased to share a refreshed CCMP—a blueprint for clean water, healthy habitats, abundant wildlife, and vibrant communities in Tillamook County.

The 2019 CCMP divides actions into three categories:



Water Quality

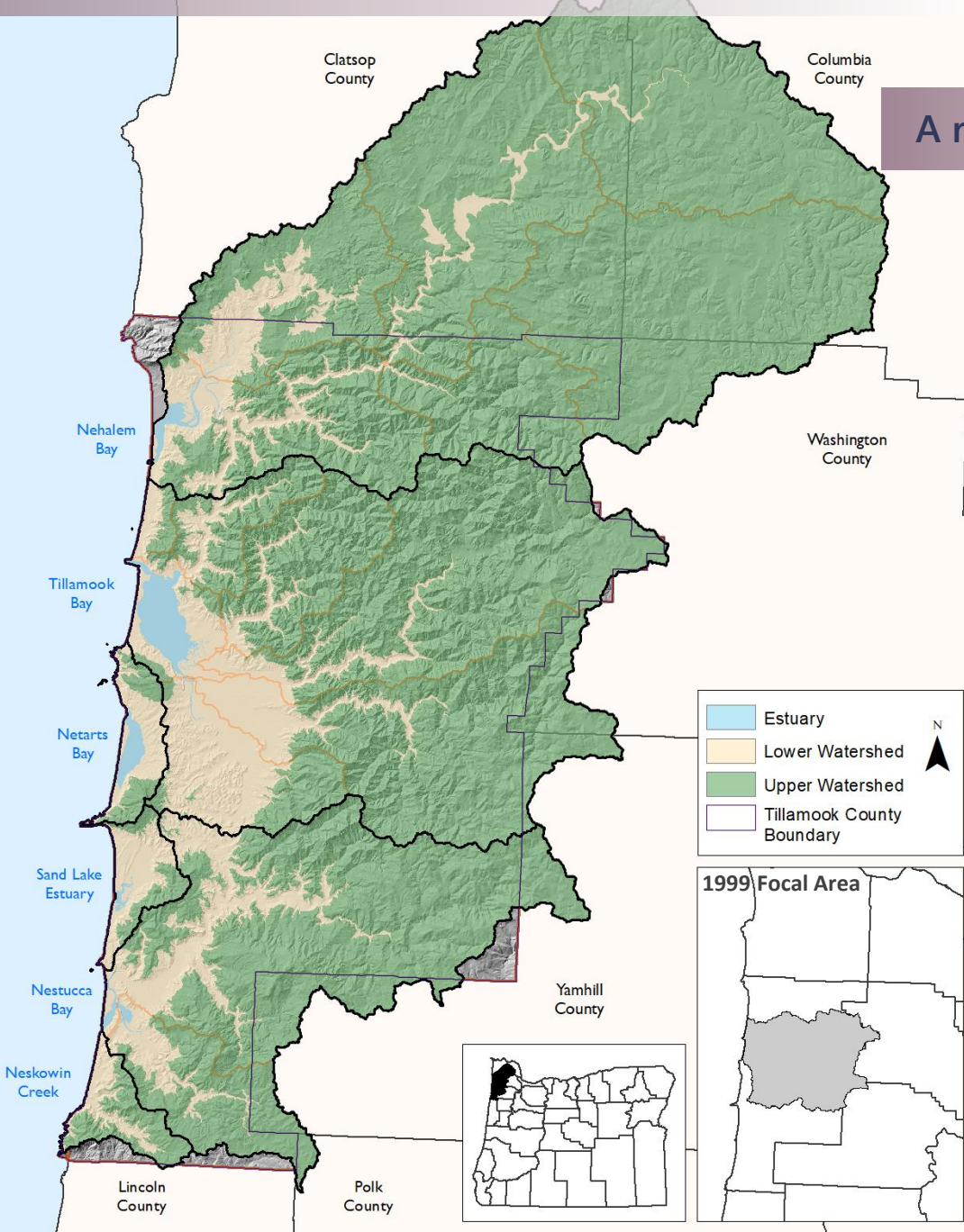


Habitat Restoration



**Community Education
& Engagement**

2019 CCMP Focal Area



A road map for the future

The CCMP action plans provide a road map and performance measures for progress on TEP's goals, but they do not exist in a vacuum. CCMP actions must constantly evolve and work in tandem with the goals, priorities, and actions of the other local, state, and federal groups that seek to improve conditions in Tillamook County.

The CCMP is a guide for how TEP and its partners will coordinate resources, strengthen commitments, and rededicate Tillamook County's resolve to conserve and restore its estuaries and watersheds.

Action Plans

How will we coordinate resources, strengthen commitments, and rededicate Tillamook County's resolve to conserve and restore its estuaries and watersheds?




The 2019 CCMP reorganizes, updates, and streamlines the actions included in the 1999 CCMP. Updated actions have been crafted with the input of TEP staff and partners from stakeholder groups.

Each action is accompanied by a wealth of resources that will help TEP and its partners with implementation.



Refer to the full 2019 CCMP document for complete action details. This executive summary lists the plan's 26 specific actions with only high-level details.

What's changed from 1999 to 2019?

1999 Action Plans

-  Water Quality
-  Key Habitat
-  Erosion & Sedimentation
-  Flooding
-  Citizen Involvement

2019 Action Plans

-  Water Quality
-  Habitat Restoration
-  Community Education & Engagement

New actions provide benefits & mitigation in three key areas:



Fish & wildlife



Natural hazards

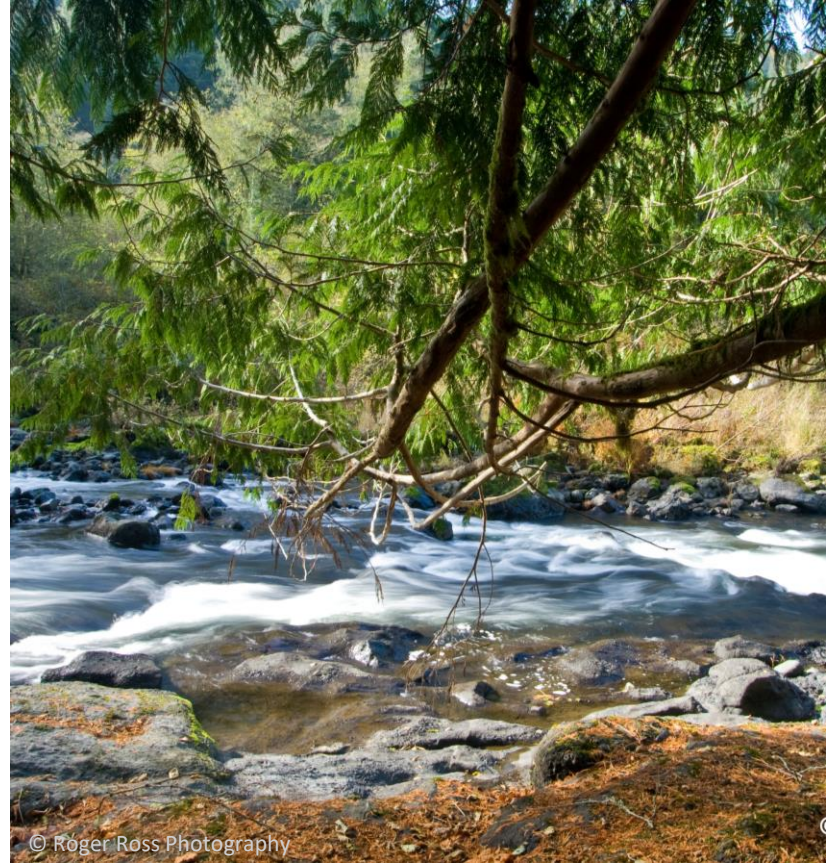


Climate change

Water Quality

The State of Oregon, TEP, and its partners have determined that the following pollutants are of primary concern in the watersheds of the TEP focal area: bacteria, dissolved oxygen, sediment, and temperature.

Toxics, nutrients, and the impacts of ocean acidification have also been identified as concerns. While TEP and its partners have made some progress on addressing bacteria pollution in the CCMP focal area, bacteria as well as all other pollutants remain at levels that negatively impact people and aquatic life.



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Maintain and improve the beneficial uses of estuaries and watersheds for humans and native aquatic and terrestrial species.

#	Action	Estuaries/ Watersheds						Ecological Region	Benefits/ Mitigates	Performance Measures
		Nehalem	Tillamook	Netarts	Sand-Lake	Nestucca	Neskowin			
WAQ-01	Improve farm management practices to address water quality									By 2028, TEP Volunteer Water Quality Monitoring Program (VWQMP) data will indicate that 50% of the monitoring sites are generally meeting water quality standards based on DEQ assessment methodology.
		X	X	X	X	X	X	Lower		
WAQ-02	Improve rural residential and urban infrastructure to address water quality							Upper		Creation of septic system inventory which focuses on properties adjacent to streams, rivers, sloughs, and bays and which may be used to prioritize water quality improvement projects, by 2028.
		X	X	X	X	X	X	Lower		
								Estuary		By 2028, TEP VWQMP data will indicate that 50% of the monitoring sites are generally meeting water quality standards based on DEQ assessment methodology.

#	Action	Estuaries/ Watersheds						Ecological Region	Benefits/ Mitigates	Performance Measures
		Nehalem	Tillamook	Netarts	Sand-Lake	Nestucca	Neskowin			
WAQ-03	Enhance riparian and in-stream areas throughout the watersheds to improve water quality							Upper		TEP will restore 15 miles of riparian areas by 2028. Partners will implement an additional 15 miles of riparian restoration projects within TEP's focal area by 2028.
		X	X	X	X	X	X	Lower		
								Estuary		
WAQ-04	Restore channel features and hillslope management to improve sediment storage and routing to address water quality							Upper		TEP will implement five (5) large woody debris (LWD) projects by 2028. Partners will implement an additional five (5) large woody debris (LWD) projects by 2028.
		X	X	X	X	X	X	Lower		
								Estuary		
WAQ-05	Identify status and trends and quantify changing environmental conditions in water quality to inform adaptive management strategies impacting TEP's priority areas							Upper		Maintain VWQMP and long-term temperature monitoring effort. Strategic monitoring plan developed for dissolved oxygen and nutrients by 2028. Complete status and trends analyses at appropriate frequency through 2028.
		X	X	X	X	X	X	Lower		
								Estuary		

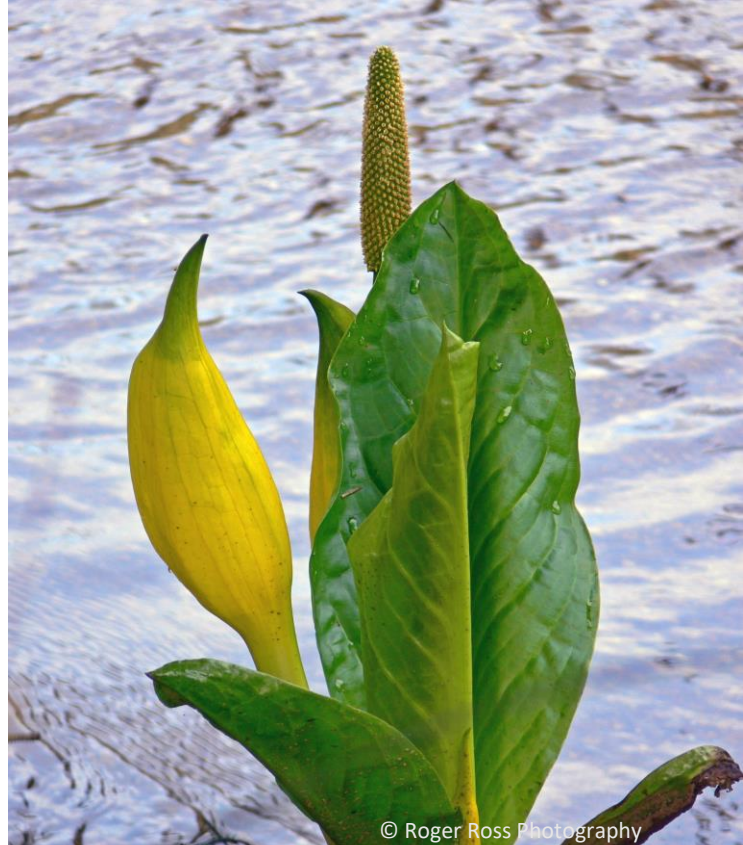


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Habitat Restoration

Habitat alteration causes both direct and indirect consequences for the health of our watersheds. Loss and degradation of key habitat features and underlying ecological processes have contributed to declines in salmonids and other species.

Many of these species are important economically or support those that are. The habitat restoration actions direct TEP and its partners to enhance or restore vital areas of our watersheds to support Tillamook County's natural economy and cultural identity.



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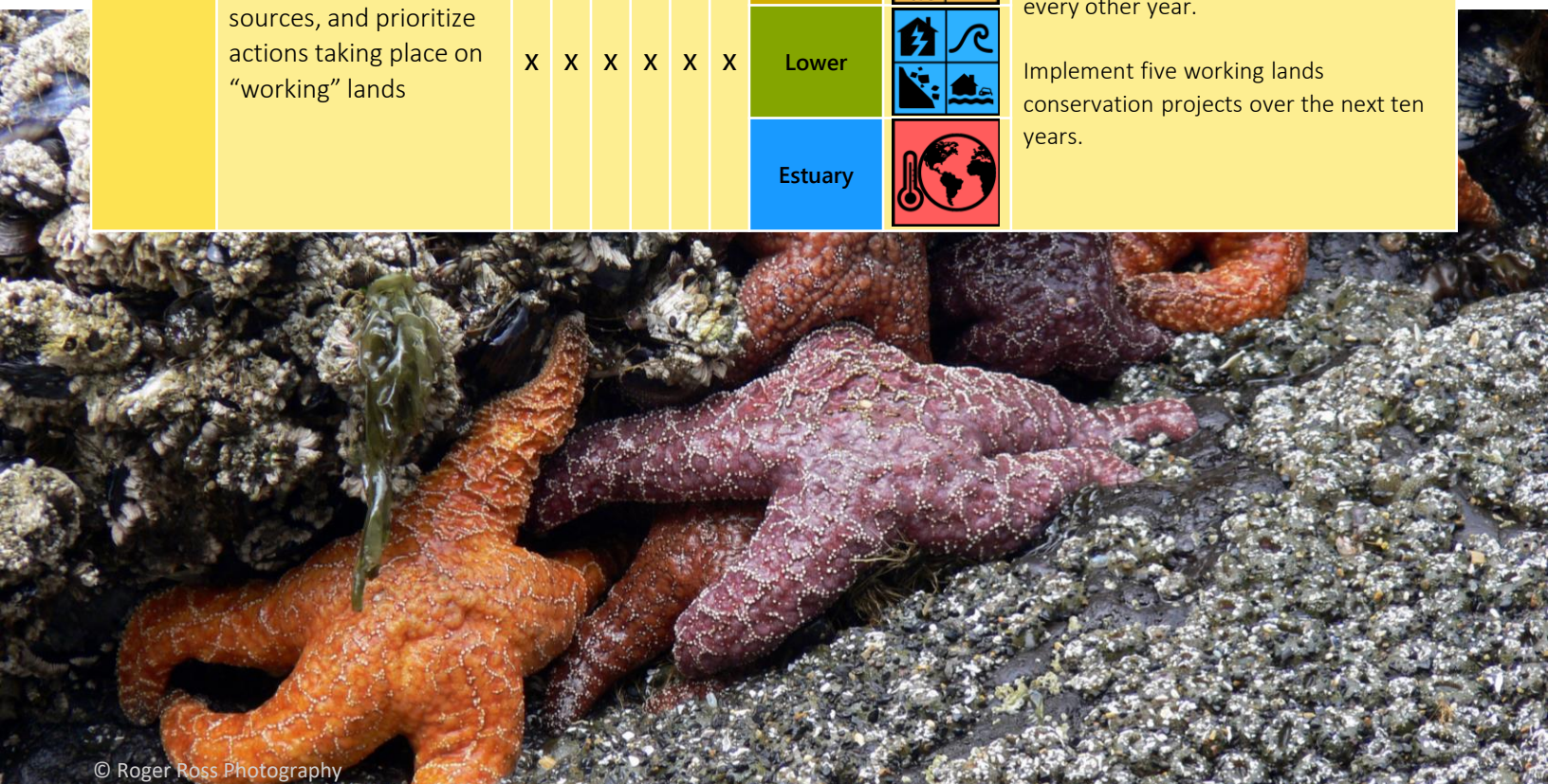
Conserve and restore ecological functions of Tillamook County's estuaries and watersheds to benefit native species and the communities that depend on them.

#	Action	Estuaries/ Watersheds						Ecological Region	Benefits/ Mitigates	Performance Measures
		Nehalem	Tillamook	Netarts	Sand-Lake	Nestucca	Neskowin			
Assessment & Prioritization										
HAB-01	Assess and prioritize estuarine habitats									Complete or update estuarine assessments for the Nehalem, Tillamook, Netarts, Sand Lake, and Nestucca estuaries over the next ten years.
		X	X	X	X	X				
								Estuary		
HAB-02	Assess and prioritize non-estuarine wetland habitats							Lower		Assess and prioritize conservation actions in non-estuarine wetlands for all five estuarine watersheds in TEP's focal area over the next ten years.
		X	X	X	X	X	X			

#	Action	Estuaries/ Watersheds						Ecological Region	Benefits/ Mitigates	Performance Measures
		Nehalem	Tillamook	Netarts	Sand-Lake	Nestucca	Neskowin			
Assessment & Prioritization										
HAB-03	Assess and prioritize in-stream habitats							Upper		Assess 100 stream miles in priority reaches in the next ten years.
		X	X	X	X	X	X	Lower		
HAB-04	Assess and prioritize riparian habitats							Upper		Assess 100 miles of habitat and structural characteristics (e.g., LWD, substrate, pool/riffle ratio) in each of the five focal estuaries in the next ten years.
		X	X	X	X	X	X	Lower		
								Estuary		
HAB-05	Assess and prioritize upland habitats							Upper		Carry out assessments and prioritizations for upland habitat in each of the five focal estuaries over the next ten years.
		X	X	X	X	X	X			
Conservation & Restoration										
HAB-06	Conserve and restore key habitats in the estuary									Conserve 200 acres of healthy estuarine habitat over next ten years. Restore 300 acres of degraded estuarine habitat over the next ten years.
		X	X	X	X	X	X			
								Estuary		
HAB-07	Conserve and restore key habitats in the lower watershed							Lower		Conserve and restore 200 acres of lowland habitat over the next ten years.
		X	X	X	X	X	X			

#	Action	Estuaries/ Watersheds						Ecological Region	Benefits/ Mitigates	Performance Measures
		Nehalem	Tillamook	Netarts	Sand-Lake	Nestucca	Neskowin			
Conservation & Restoration										
HAB-08	Conserve and restore key habitats in the upper watershed							Upper		Restore 200 acres of critical habitat in the upper watershed over the next ten years.
		X	X	X	X	X	X			
HAB-09	Maximize ecosystem connectivity to ensure a landscape array of ecosystem processes and ease of species movement							Upper		<p>Implement ten aquatic organism passage projects over the next ten years.</p> <p>Identify 100 acres of critical corridor habitat to be protected over the next ten years.</p>
		X	X	X	X	X	X	Lower		
								Estuary		
HAB-10	Provide genetically appropriate native vegetation and promote its use among habitat restoration and enhancement partners							Upper		<p>Supply at least 75,000 native plants to restoration partners annually.</p> <p>Mentor 40 youth annually in the conservation sciences and career field.</p>
		X	X	X	X	X	X	Lower		
								Estuary		
Species Focus										
HAB-11	Assess, prioritize, and enhance key native species populations, emphasizing contribution to ecological function							Upper		Initiate ten special status species recovery projects over the next ten years.
		X	X	X	X	X	X	Lower		
								Estuary		
HAB-12	Assess, prioritize, and manage non-native species emphasizing those that have or are likely to have disproportionate negative effects							Upper		Develop a strategic plan for invasive species management for each of the five focal estuaries over the next ten years.
		X	X	X	X	X	X	Lower		
								Estuary		

#	Action	Estuaries/ Watersheds						Ecological Region	Benefits/ Mitigates	Performance Measures
		Nehalem	Tillamook	Netarts	Sand-Lake	Nestucca	Neskowin			
Land Use & Best Management Practices (BMPs)										
HAB-13	Assess and implement best management practices for key habitat conservation							Upper		Assess the state of BMPs utilized by each major industry in the focal area over the next ten years. Implement at least one BMP associated project annually.
		X	X	X	X	X	X	Lower		
								Estuary		
HAB-14	Encourage the adoption and implementation of policies, ordinances, regulations, and laws that ensure sustainable use and stewardship of natural resources and key habitats							Upper		Facilitate one educational workshop on environmental policies and regulations in the next 10 years. Comment on federal, state, and local rulemaking efforts as opportunities arise.
		X	X	X	X	X	X	Lower		
								Estuary		
HAB-15	Facilitate the development of pathways, funding sources, and prioritize actions taking place on "working" lands							Upper		Convene one workshop for key stakeholders on the state and progress of conservation actions on working lands every other year. Implement five working lands conservation projects over the next ten years.
		X	X	X	X	X	X	Lower		
								Estuary		



Community Education & Engagement




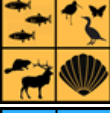








Education in the STEM (science, technology, engineering, and math) fields helps raise environmental awareness and gives residents effective tools to make decisions about watershed stewardship. In rural Tillamook County, however, community members often have limited access to STEM educational resources.

Education, outreach, and engagement programs for people of all ages must be strengthened in order to create successive generations of environmentally-literate residents who will care for the future vitality of Tillamook’s estuaries and watersheds. Community education and engagement actions aim to strengthen access to environmental education and also promote the goals and objectives for water quality and habitat restoration.



Foster awareness of Tillamook County’s estuaries and watersheds, engage in problem solving, and take action to conserve and enhance our natural resources.

#	Action	Estuaries/ Watersheds						Ecological Region	Benefits/ Mitigates	Performance Measures
		Nehalem	Tillamook	Netarts	Sand-Lake	Nestucca	Neskowin			
CEE-01	Strengthen STEM literacy for K-12							Upper		600 students attend TEP’s Landmark Outdoor Learning Experiences (LOLEs) for third and fourth graders annually. 3,000 hours of science instruction provided to K-12 students annually.
		X	X	X	X	X	X	Lower		
								Estuary		

#	Action	Estuaries/ Watersheds						Ecological Region	Benefits/ Mitigates	Performance Measures
		Nehalem	Tillamook	Netarts	Sand-Lake	Nestucca	Neskowin			
CEE-02	Advance STEM-related career opportunities							Upper		Grade 11-14 summer intern program established by 2024. Undergraduate for-credit course offered at Tillamook Bay Community College (TBCC) by 2024.
		X	X	X	X	X	X	Lower		
								Estuary		
CEE-03	Foster lifelong learning and environmental awareness							Upper		30% increase in social media followers, website viewers, and newsletter subscribers between 2019 and 2024. 750 people engaged in education through recreation activities annually. Lifelong learning programs developed and offered to seniors by 2027. Feasibility study for estuary education center completed by 2022.
		X	X	X	X	X	X	Lower		
								Estuary		
CEE-04	Cultivate community environmental stewardship							Upper		150 volunteers engaged annually. 2,800 volunteer service hours annually.
		X	X	X	X	X	X	Lower		
								Estuary		
CEE-05	Build capacity for partner organizations							Upper		200 hours building capacity for partner organizations, enabling additional restoration in Tillamook County estuaries and watersheds annually.
		X	X	X	X	X	X	Lower		
								Estuary		



Implementation

How will we pursue the activities included in the CCMP?

How will we fund these activities?

While the Tillamook Estuaries Partnership (TEP) oversees the implementation of the 2019 CCMP, TEP relies on the contributions of many partner organizations to make progress on the CCMP action plans. Each action designates leads and partners to clarify responsibility and lists performance measures to assess progress.

Lead(s) are the organization or organizations that will take primary responsibility for completing each action's activities.

Partners are the complementary organizations whose activities support progress on each action.

Performance Measures are quantitative indicators that help track progress and determine if the action has been successfully implemented.



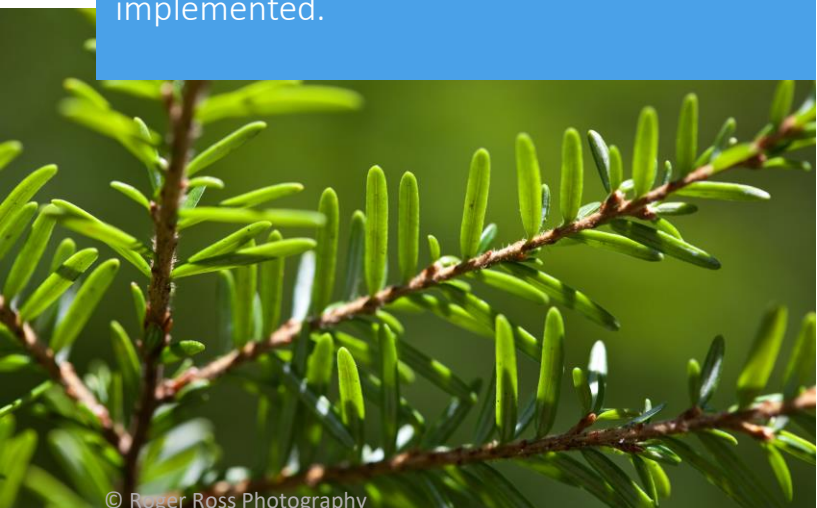
Funding

Many of the CCMP actions require significant financial investment to complete, both in terms of staff time and infrastructure or materials investments.

TEP manages the process of securing and maintaining funding for these activities. There are two main types of funding for the CCMP at the federal, state, and local levels as well as private and nonprofit sources:

Dedicated Funding

Variable Funding



Dedicated Funding

Dedicated funding sources to support the implementation of the CCMP include:

Clean Water Act Section 320 Funds

The EPA provides financial assistance through the National Estuaries Program (CWA Section 320 funds) that can be used to implement the measures described in this CCMP. These funds provide a stable base for the organization and allow TEP to engage with partners in meaningful ways.

Funding restricted to certain activities in accordance with federal guidelines.

Individual Donor Funds

TEP hosts an annual fundraiser to generate unrestricted funds that provide administrative and programmatic support.

Applicable for expenses which cannot use federal money.

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Variable Funding

TEP partners with federal, state, and local agencies to pursue external grants. TEP also participates in assistance agreements and cooperative agreements with partners to share resources around specific projects. These external funding streams come from a variety of sources and vary by project type.





Funding Sources

- Federal
- State
- Local
- Private Foundation

Project Types

- Habitat Restoration
- Water Quality Improvement
- Community Engagement
- Natural Hazards

Examples of Variable Funding Sources by Project Type

	Federal	State	Local	Private Foundation
Habitat Restoration 	<ul style="list-style-type: none"> ▶ EPA Section 320 ▶ USFWS Habitat Restoration Program ▶ USFWS National Coastal Wetlands Grants Program ▶ NOAA Coastal and Marine Habitat Restoration Project Grants ▶ NOAA Broad Agency Announcement ▶ NOAA Coastal Resilience Grants ▶ US BLM Cooperative Agreements ▶ USFS Stewardship funding 	<ul style="list-style-type: none"> ▶ Oregon Watershed Enhancement Board ▶ Oregon Department of Agriculture ▶ Oregon Department of Environmental Quality (Section 319, internal funding streams to provide in-kind assistance) ▶ Oregon Department of Fish and Wildlife (Restoration and Enhancement Fund and Fish Screening and Passage grants) 	<ul style="list-style-type: none"> ▶ Tillamook County Soil and Water Conservation District ▶ Salmon SuperHwy (a collaborative of local, state, federal, and non-profit organizations) 	<ul style="list-style-type: none"> ▶ Meyer Memorial Trust ▶ National Fish and Wildlife Foundation ▶ Oregon Community Foundation ▶ Private foundations (supporting education, restoration, and capacity building)
Water Quality Improvement 	<ul style="list-style-type: none"> ▶ EPA Section 320 	<ul style="list-style-type: none"> ▶ Oregon Watershed Enhancement Board ▶ Oregon Department of Environmental Quality (Section 319, internal funding streams to provide in-kind assistance) ▶ Oregon Department of Agriculture 	<ul style="list-style-type: none"> ▶ Local municipalities ▶ Special districts 	N/A
Community Engagement 	<ul style="list-style-type: none"> ▶ EPA Section 320 ▶ EPA Environmental Education Grants ▶ National Parks Service 	<ul style="list-style-type: none"> ▶ Oregon State Parks Recreational Trails Program ▶ Oregon Travel Commission (also known as Travel Oregon) 	<ul style="list-style-type: none"> ▶ Visit Tillamook Coast (Tillamook County Transient Lodging Tax) ▶ Watershed councils ▶ Local school districts 	<ul style="list-style-type: none"> ▶ Oregon Community Foundation ▶ National Fish and Wildlife Foundation ▶ Meyer Memorial Trust ▶ Gray Family Foundation
Natural Hazards 	<ul style="list-style-type: none"> ▶ EPA Section 320, NOAA ▶ FEMA (hazard mitigation assistance) ▶ Federal Highway Administration grants (in partnership with local government) 	<ul style="list-style-type: none"> ▶ Oregon Watershed Enhancement Board ▶ Oregon Emergency Management ▶ Oregon Department of Land Conservation and Development ▶ Oregon Department of Transportation 	<ul style="list-style-type: none"> ▶ Local governments 	N/A



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