Habitat

A chapter of the 2025 *State of the Columbia River Estuary Report*

Lower Columbia Estuary Partnership
Celebrating 30 years

The Lower Columbia Estuary Partnership is a National Estuary Program administered by the U.S. Environmental Protection Agency and supported by the States of Oregon and Washington and the U.S. Congress.

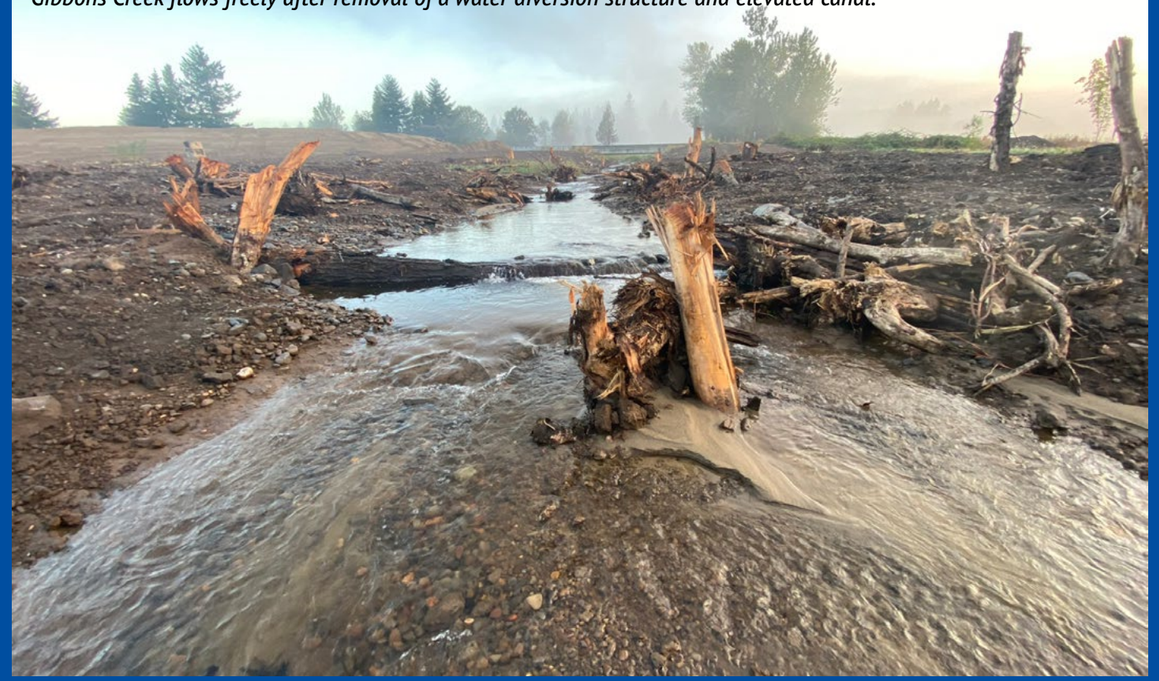
Summary of Habitat Along the Lower Columbia

From 2020 to 2025, restoration practitioners protected or restored 10,318 acres in the lower Columbia River and estuary. This is an increase of what was completed in the previous five-year period with one project representing close to 1,000 acres of reconnected floodplain wetlands.

Since 2000, restoration practitioners have protected or restored 38,928 acres of habitat in the lower Columbia River. Projects have included land acquisition, levee breaching or removal, removal of tide gates, replacement of culverts, large wood placement, riparian planting, and other techniques. Hundreds of stakeholders have been involved, working together to accomplish the common goal of ecosystem restoration and protection or recovery of species. Meeting landowner goals and objectives is always the most critical component for each project.

There is still much work to be done! The 38,928 acres is about a third of the 114,050 acres of habitat lost since 1870, including 70% of the lower Columbia River's vegetated tidal wetlands (a critical habitat type) and 55% of its forested uplands. Most of the lost habitat was converted to urban, industrial, or agricultural uses, and much of the associated widespread diking built to protect those uses still exists. This large-scale habitat loss has greatly reduced both the quantity and quality of habitat for the estuary's native species and has released carbon dioxide and other greenhouse gases into the atmosphere, contributing to shifting ecological conditions.

Gibbons Creek flows freely after removal of a water diversion structure and elevated canal.



Habitat Coverage Targets

Despite our significant investment in habitat restoration and protection, the number of imperiled species that use the lower Columbia continued to grow—from 24 species in 2004 to over 67 species in 2025. This indicates that we were not doing enough.

About a decade ago we developed ecologically-based habitat coverage targets based on the results of our previous comprehensive habitat change analysis. We compared historic habitat coverage, derived from late 1800's General Land Office Survey data, to 2009 land cover (see Marcoe and Pilson, 2017). Those habitats that suffered significant decreases in coverage (i.e., >25% loss in coverage) were deemed a priority for restoration and protection in order to recover historic native habitat diversity.

Our habitat coverage targets focus on maintaining the remaining native habitats and restoring priority habitats— those habitats that suffered the most loss. The targets are:

1. No net loss of native habitats from the 2009 baseline (the 2009 baseline represents 50% loss, or 114,050 acres, since 1870);
2. Recover 30% (10,382 acres) of the historic coverage of priority native habitats by 2030; and
3. Recover 40% (22,480 acres) of the historic coverage of priority native habitats by 2050.

Meeting these targets will bring us to an average of 60% native habitat coverage by 2050 (the range is 46-88%, depending on river reach). That means protecting existing habitat and restoring 3,300 acres every five years.

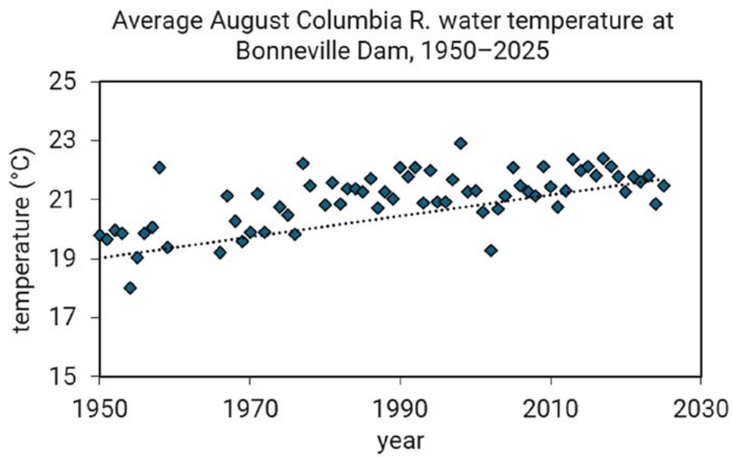
Protecting the best of what's left and recovering what we can of natural habitat diversity is an important ecological goal because native flora and fauna in the lower Columbia evolved under those conditions for thousands of years prior to large-scale development. As a result, protection and restoration to recover native habitat diversity should benefit native species, including supporting resiliency in the face of shifting ecological conditions.

We track the protection and restoration actions in the lower Columbia in a geodatabase, called our Restoration Inventory. This allows us to track progress in reaching these habitat coverage targets. We monitor conditions in the lower Columbia to see if our efforts are effective. We also monitor site conditions before and after we restore a site to see if our projects meet our objectives and are effective at protecting species.

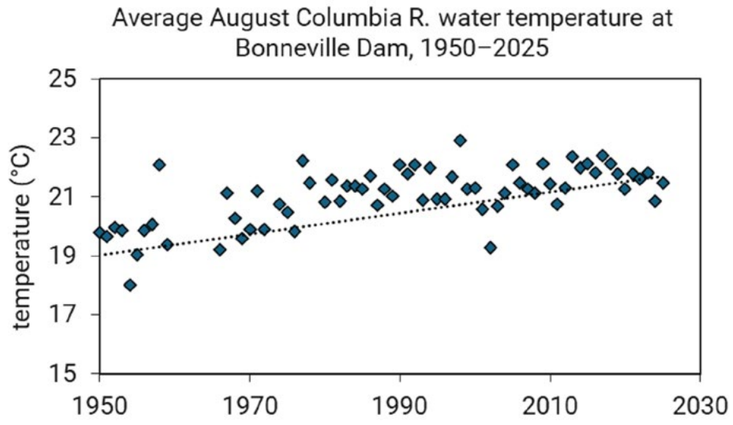
Cold-Water Refuge and Changing Ecological Patterns

Water temperature in the mainstem Columbia River and its tributaries has been rising for several decades and will continue to do so. This has significant implications for salmon and other native species that rely on cool, clean water for their survival. Water temperatures above 20-21°C are generally considered stressful to salmonids and can inhibit migration and have other effects. Water temperature throughout much of the summer now regularly exceeds this threshold. Temperatures above 23-25°C can be lethal. Daily high temperatures in the lower Columbia River throughout much of the summer are approaching this range, and it is frequently exceeded in smaller tributaries. In 2015, a particularly warm year that coincided with very low flows, resulting high temperatures in early summer resulted in a mass die-off of approximately 250,000 migrating Columbia River sockeye salmon.

This plot showing average monthly August water temperature in the lower Columbia River illustrates how water temperature has been increasing over past several decades.



This plot showing the 10-year average daily water temperature in the lower Columbia River illustrates how often summertime water temperatures now exceed what is generally considered tolerable for salmonids (~20 °C).



To protect themselves when water temperatures rise, salmonids frequently seek out pockets of colder water. These features, often referred to as cold-water or thermal 'refuge,' are typically small but critically important areas that these fish depend on for survival during times of heat stress. They can result from a variety of different physical processes including inputs from groundwater, colder tributaries, and thermal stratification.

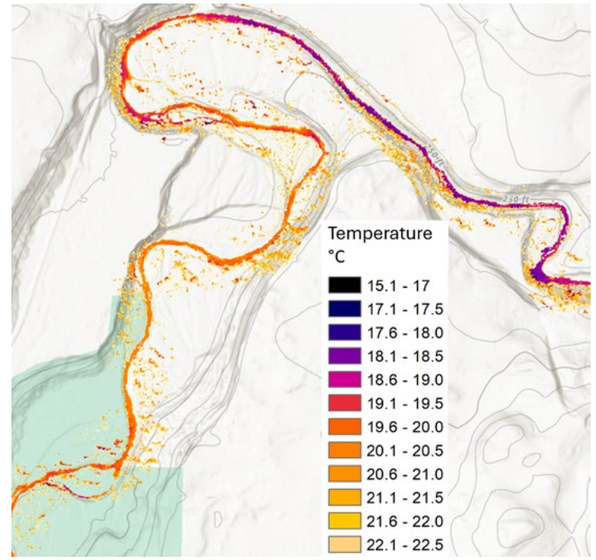
Juvenile coho salmon congregating at a location of cool tributary water on the East Fork Lewis River that provides thermal refuge during periods of warm summer temperatures.

The number of suitable thermal refuge locations in the mainstem Columbia River and its tributaries is limited, and there is concern that there may not be sufficient cool water to sustain summer-migrating salmon and steelhead populations. If measures are not implemented to increase cold-water availability, the threat to salmon will only increase as water temperatures continue to warm. We must find ways to protect, enhance, and potentially restore areas of thermal refuge.

Over the last five years, the Estuary Partnership has continued to build on its efforts to map thermal refuge locations and assess them for potential projects. Recently we have been focused on the East Fork of the Lewis River in Clark County, Washington. The East Fork has historically been an important river for salmon and steelhead but currently has significant temperature issues. We began mapping cold-water locations in 2020, and from that developed a suite of several potential project sites. Our East Fork Lewis River Reconnection Project, currently under construction (*see more on page 20*), is expected to increase thermal refuge

opportunity for salmonids over nearly 3 miles of river. We are also developing project designs at four more upstream locations that will provide additional thermal and habitat benefits.

Map of thermal imaging-derived water temperatures in the lower East Fork Lewis River in Clark County, WA, on August 8, 2020. This type of technology is effective for mapping stream temperatures over large distances where conventional techniques are impractical.



In the Columbia mainstem, we are continuing to evaluate thermal refuge potential at the mouth of Horsetail Creek. We believe this is an area that could provide a new and important thermal refuge opportunity along the migratory path of Upper Columbia and Snake River salmonid populations. We have completed preliminary designs for this site and are continuing to evaluate logistical project details. The project is consistent with the objectives outlined in EPA's Columbia River Cold Water Refuges Plan released in 2021.

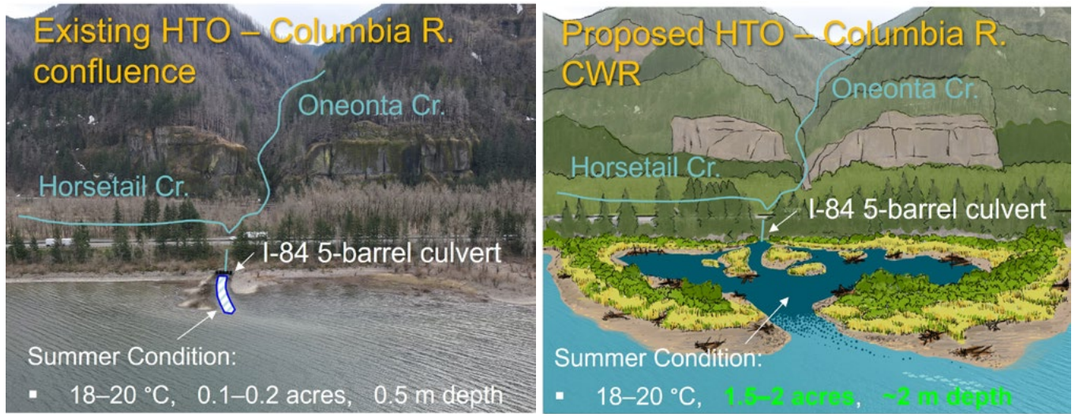
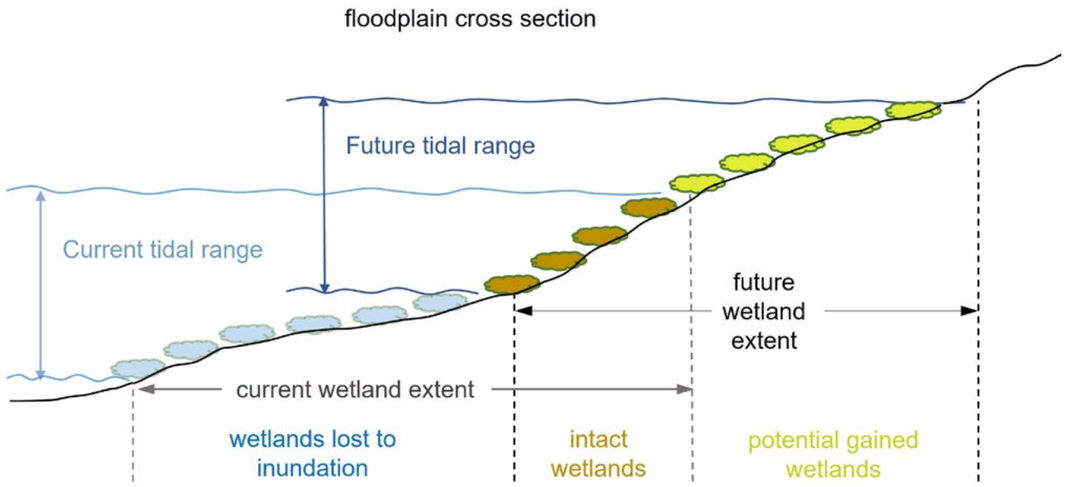


Photo of the Horsetail and Oneonta Creek (HTO) confluence with the lower Columbia River as it currently exists at left, accompanied by a conceptual illustration of the Estuary Partnership's proposed Cold Water Refuge (CWR) project that would create an enclosed embayment of cooler water from these tributaries that is accessible to migrating adult and juvenile salmonids in the Columbia.

Mapping Sea Level Rise Impacts on Lower Columbia Tidal Wetlands

How will sea level rise, which is already occurring and expected to accelerate in coming decades, affect the tidal wetlands of the lower Columbia River? As sea levels rise, a few things may happen. Low-elevation wetlands may be lost as they become permanently submerged. Mid-elevation wetlands may remain intact. Higher-elevation non-wetland areas may become partially inundated and transition to wetland areas. The situation becomes more complicated when areas behind levees are considered. Some levees will be at risk of overtopping from sea level rise, flooding areas behind them. But to what extent this flooding will occur, and how the flooded lands will respond, is difficult to predict.



Conceptual illustration of potential impacts to tidal wetlands due to increased inundation from sea level rise.

In 2018 the Estuary Partnership developed a GIS model to quantify possible impacts on wetlands for three sea level rise scenarios: 0.5, 1 and 1.5 meters. We found that rising sea levels are likely to overtop portions of the widespread network of existing levees, particularly in the furthest downriver areas of the lower Columbia. We evaluated a range of potential impacts for these areas, based on how much overtopping we observed in our model.

Results suggest that for areas of existing tidal wetland where no levees are present, we could lose 5% of existing wetland with 0.5 meters of sea level rise, 13% with 1 meter of rise, and 25% with 1.5 meters of rise. When levees are factored in, the range of uncertainty increases. For the 1-meter scenario, for example, we could see anywhere from an 8% loss to a 21% gain of wetlands, depending on how the leveed areas respond to flooding. More research on this is needed to improve these estimates.

Regional Sea Level Rise Projections
WA Coastal Resiliency Project (Miller et al. 2018)

Columbia River entrance

PROJECTED ABSOLUTE SEA LEVEL CHANGE
(feet, averaged over each 19-year time period)

Time Period	Greenhouse Gas Scenario	Central Estimate (50%)	Likely[5] Range (83-17%)	Higher magnitude, but lower likelihood possibilities		
				10% probability of exceedance	1% probability of exceedance	0.1% probability of exceedance
2050 (2040-2059)	Low	0.6	0.4 - 0.8	0-15 cm		
	High	0.7	0.5 - 0.9			
2100 (2090-2109)	Low	1.6	1.0 – 2.2	20-60 cm		
	High	2.0	1.4 - 2.8			
2150 (2140-2159)	Low	2.5	1.5 - 3.8	40-110 cm		
	High	3.4	2.3 - 4.9			

2018 sea level rise projections from the Washington Coastal Resiliency Project, for the mouth of the Columbia River.

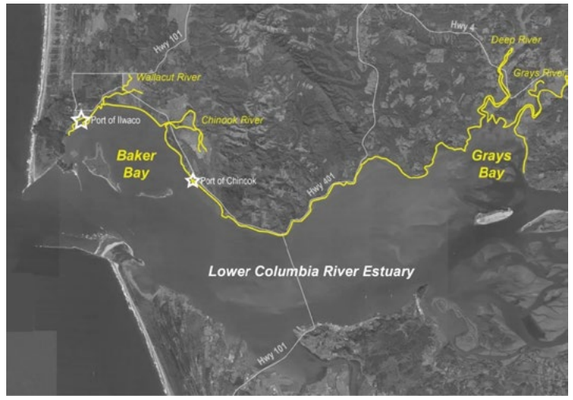
We have not done any further analysis over the past five years, however during this time other studies that have re-evaluated current sea level are finding that future sea level projections are potentially being underestimated. If true, this could have implications for lower Columbia River wetlands, and coastal communities, beyond what we have already predicted.

This sea level rise assessment offers planners and restoration practitioners a tool to help identify measures that can be taken to mitigate the effects of sea level rise, both for flood protection and wetlands protection and restoration. Knowledge of what areas will be most prone to flooding in the future can help us identify where and how restoration measures can be implemented today that will provide benefits to communities as well as native plant, fish and wildlife species. Knowledge of how existing habitat is expected to be affected can help inform how habitat restoration goals will need to be adjusted to compensate for future changes in order ensure that we will be protecting enough habitat for these species.

More information about our Sea Level Rise Impacts Study is available on our sea level rise web page, and in the fully functional sea level rise impacts interactive map application.

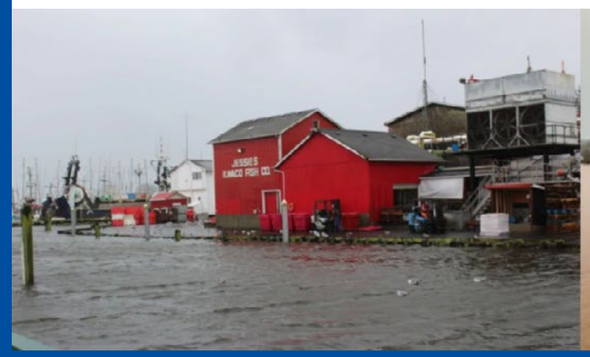
Community-Based Coastal Resilience Action: Baker Bay and Grays Bay

In 2021, the Estuary Partnership partnered with Washington Sea Grant and the Pacific Conservation District to identify actions that can build resilience to long-term water level change in lower Columbia River communities, while also addressing today's priorities and helping local stakeholders to take next steps. The Baker Bay and Grays Bay Community-Based Coastal Resilience Action project was a three-year initiative run from 2021-2024 that sought to assist locally-led efforts to reduce impacts of rising water levels on the people and habitats of Baker and Grays Bay, located in the Lower Columbia River Estuary. This project focused on the Washington side of the lower Columbia, looking at current flooding and potential future sea level rise impacts, how they relate to existing issues, and how to best respond to address present and future issues simultaneously in accordance with community visions and scientific information, to build a resilient system.



The project was implemented through a series of workshops with community members and other city, county, state, federal, and Tribal stakeholders. Workshop participants shared ideas and concerns, developed actionable and fundable steps for addressing complex issues, and built relationships between interested parties. The project team provided technical assistance such as project scoping, engineering support, grant writing, and meeting facilitation.

Flood impacts in the lower Columbia River communities of Baker Bay (left, credit Guy Glenn, Jr.), and Grays Bay (right, credit Mark Letham). Both of these communities are extremely vulnerable to sea level rise impacts.



The outcome of this 3-year effort was the Baker Bay and Grays Bay 2024 Sea Rise Resilience Strategy. The document describes our process, shares participant's insights, suggests next steps for locally prioritized activities to assist competitive funding proposals, and provides recommendations for cross-organizational resilience collaborations. Overall, the project was highly successful and serves as a template for how stakeholders with varying concerns and interests can be brought together to solve complex problems and develop resilience in other communities that are vulnerable to coastal sea level rise and other natural hazards.

Projects and recommended next steps identified by stakeholders are outlined below. Projects that resulted in funding requets or other tangible next steps are marked with a star.

Activity	Suggested next steps
Baker Bay	
1. Ilwaco shoreline flood protection	Identify a competitive funding strategy to assess alternatives, incorporate public input, and design and implement this project.
2. Ilwaco distributed stormwater management ⭐	Secure funds to analyze existing conditions, assess alternatives in coordination with community members, and develop resulting projects, plans, and incentives.
3. Lower Wallacut River water management and flood adaptation	Secure funds to analyze existing conditions, assess alternatives in coordination with community members, design relevant synergistic project components, and implement preferred project components.
4. Chinook Hatchery and Houchen Street flood impacts reduction	Secure funds to coordinate with adjacent landowners and regulators, analyze hydrology and habitats, assess alternatives, and develop project design(s).
5. Chinook shoreline erosion reduction and habitat enhancement ⭐	Secure funds to analyze existing conditions, coordinate with community members and landowners to identify goals and concerns, assess potential alternatives, and develop initial design to inform permitting discussions
6. Ilwaco and Chinook (Pacific County) upland housing planning and development	Develop a working group to - among other tasks - conduct local, state, and federal outreach; identify potential pathways to acquiring and developing uplands for housing; and create a work plan and feasibility assessment with a dedicated lead.
Grays Bay	
1. Grays River dredging to reduce flood impacts ⭐	Work with US Army Corps and others to conduct relevant studies and economic assessments to determine feasibility of dredging
2. Grays River: coordinated flood impacts reduction projects across watershed ⭐	Convene active parties to better understand local watershed processes and how other communities have dealt with similar issues (see Wahkiakum County Marine Resource Committee's coastal resilience outreach activities).
3. Grays River gages ⭐	Prioritize gages/locations and identify funding. Continue ongoing conversations and update interested parties about gage-related developments/needs.
4. Grays River modeling ⭐	Continue PNNL's modeling with multiple opportunities for community input.
5. Deep River navigation channel dredging ⭐	Work with US Army Corps and others to conduct relevant studies and economic assessments to determine feasibility of dredging
6. Deep River: coordinated flood impacts reduction projects across watershed	Continue collaboration with CREST and others to reduce flood impacts while improving habitat (see Wahkiakum County Marine Resource Committee's coastal resilience outreach activities).

Protecting and Restoring Important Fish and Wildlife Habitat in the Lower Columbia River

The last 5 years have been an active period for restoration in the lower Columbia River. From 2021 to 2025, 10,318.5 acres were protected or restored by local restoration practitioners. This is a significant 33% increase from the most recent reporting period from 2016-2020, when 7,751 acres of habitat was restored.

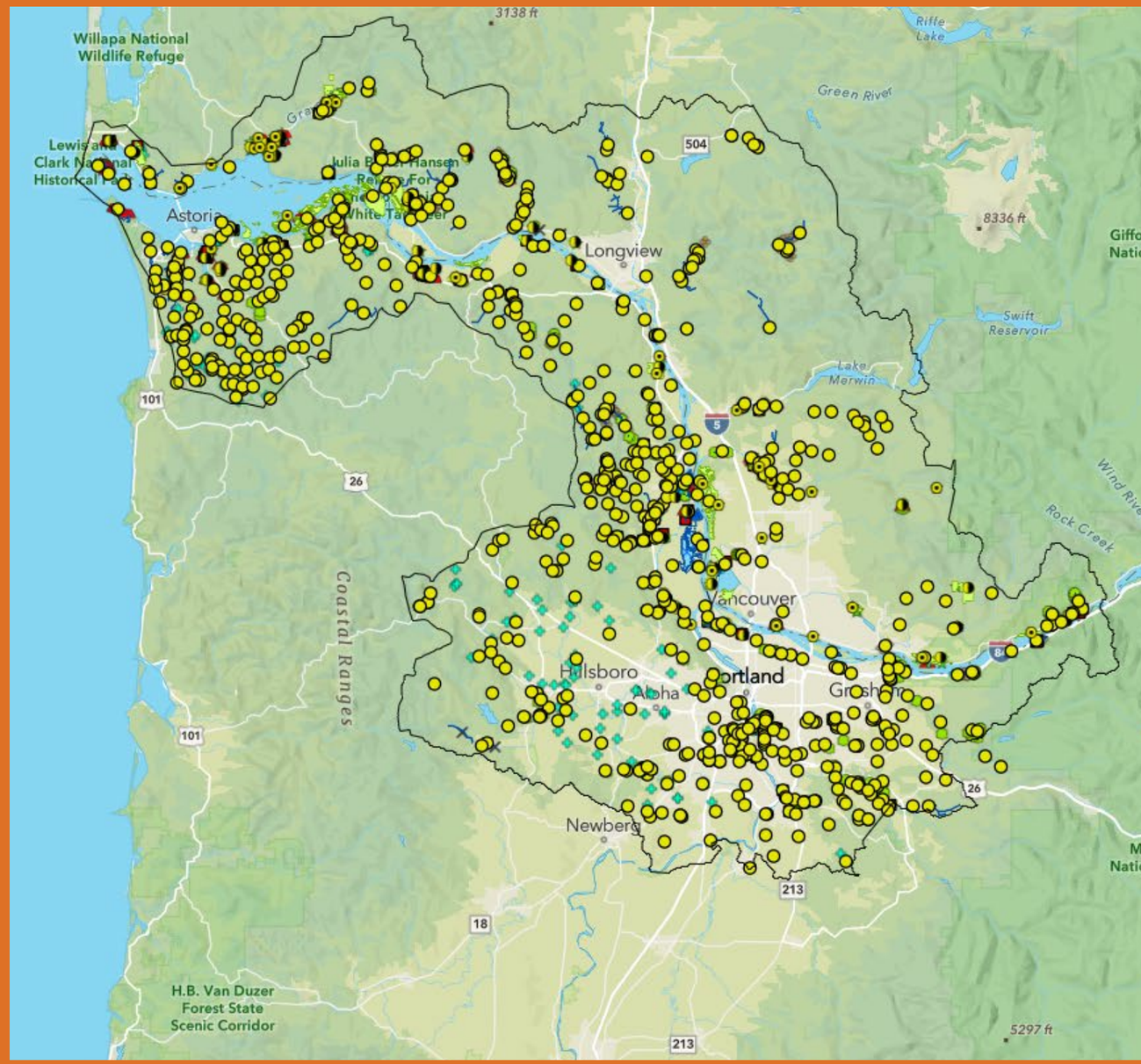
Despite our region's significant investment in habitat restoration and protection, the number of imperiled species throughout the region continues to grow. There are many reasons for this, including:

- The habitat that has been restored and protected is still only a small fraction of the 114,000 acres that were lost historically, which means that the amount of habitat available to fish and wildlife is nowhere near what it used to be.
- In addition to habitat quantity, habitat quality has been reduced due to direct human impacts on the landscape as well as external factors such as upstream hydropower regulation and shifting ecological conditions.
- Finally, restoration takes time. Depending on the type of action, project benefits could take weeks to years to be realized. Levee breaches that open tidal habitat to fish may offer immediate benefits, whereas trees planted to shade streams or provide habitat for birds and other species could take years to become established.

We do know that our habitat restoration and protection work is benefiting many species. We see this in the monitoring that we do. For this reason, restoration in the lower Columbia River will continue to move forward, and there is much work that is yet to be done. Future phases will face some of the same challenges as before and some new ones, such as more severe and frequent storms and longer, drier, hotter summers. In response, we are beginning to try to implement some innovative approaches that integrate shifting ecosystem conditions into our restoration program.

East Fork Lewis River Reconnection Project mid-construction, showing a newly constructed channel and several large wood structures anchored in the floodplain.

Habitat Restoration Projects in the lower Columbia River



Click the map to see the detailed restoration inventory

Project Highlights

The new connections between the Columbia River and Gibbons Creek during the spring freshet.

Steigerwald Reconnection Project

Lower Columbia Estuary Partnership • U.S. Fish & Wildlife Service • Port of Washougal

The largest restoration project so far along the lower Columbia River, the Steigerwald Reconnection Project reconnected 965 acres of Columbia River floodplain, reduced flood risk from Gibbons Creek, improved habitat for fish and wildlife, and created new recreational trails.

Steigerwald Lake National Wildlife Refuge is located along the banks of the Columbia River in Washougal, Washington. As an urban wildlife refuge, it gets more than 100,000 visitors each year to enjoy hiking, biking, nature, and birdwatching. But the refuge had several serious problems. In the 1960s, before the land was protected as a refuge, a 5.5 mile levee was constructed to protect against floods from the Columbia River, separating this valuable floodplain from the Columbia River for the next six decades. Additionally, Gibbons Creek, which flows through the refuge, was routed through a concrete diversion structure and constrained to a single, elevated channel, ending with a fish ladder connecting to the Columbia River. This channelization cut the creek off from its own floodplain, degrading habitat and exacerbating flooding. Rather than protecting against flooding, even moderate rainfall events could cause Gibbons Creek to flood, often spilling over into the neighboring Port of Camas-Washougal and other nearby properties. This internal flooding required the Port to maintain a costly pumping system.

There was clearly a need to address these issues, and the Estuary Partnership saw an opportunity to restore habitat while achieving other benefits for the community. In partnership with the U.S. Fish and Wildlife Service and the Port of Camas-Washougal, we led a multi-year project to improve habitat while also addressing flooding issues through natural infrastructure.

Project construction took place from 2020 through 2022. Crews first built setback levees to protect the Port and other landowners, before removing more than two miles of the existing levee and building four direct connections with the Columbia River to allow for unfettered fish access and seasonal flooding. State Highway 14 was also raised to the Columbia River's 500 year flood stage as it runs along the refuge to protect this important infrastructure. Crews also recreated a more natural, meandering channel for Gibbons Creek before deconstructing water diversion structure, fish ladder, and the existing canal. The area was replanted with more than half a million native trees and shrubs, as well as culturally important wapato, a First Food for local Tribes.

The project also expanded the refuge parking lot and added an additional mile of trail to its trail system. Read more about the project.

Gibbons Creek at its new confluence with the Columbia River with large wood habitat structures.

The project team made many efforts to replant and cultivate wapato, a culturally important First Food that was once ubiquitous along Columbia River wetlands, throughout the Refuge.

Many partners and funders worked together to make the project possible: U.S. Fish and Wildlife Service, Port of Camas-Washougal, BNSF Railway, Washington Department of Transportation, City of Washougal, Friends of the Columbia Gorge, Bonneville Power Administration, Floodplains by Design, Bonneville Environmental Foundation, Washington Department of Ecology, and the National Fish & Wildlife Foundation.

Campen Creek Reconnection Project

Lower Columbia Estuary Partnership • City of Washougal

After the success of the Steigerwald Reconnection Project, the Estuary Partnership looked upstream. Campen Creek is the most urban tributary of Gibbons Creek, flowing through the City of Washougal.

The Campen Creek Reconnection Project took place on 9 acres along the creek within Mable Kerr Park. The creek was incised from erosion and disconnected from its floodplain, and its banks were dominated by invasive species including reed canarygrass and Himalayan blackberry.

Constructed in 2025, the project recontoured the artificial, degraded Campen Creek channel, created new wetlands, and re-established the creek's connection with its floodplain. The trail was relocated to accommodate the newly meandered channel, and a new, larger footbridge now allows the creek to slow and expand into its floodplain. An additional trail spur with an overlook provides new wildlife observation opportunities for visitors. Additionally, dead and dying hazard trees within the park were felled to protect the community, and were repurposed as habitat structures within the floodplain.

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Wildboy Creek post-removal and restoration. Credit Columbia Land Trust.

Kwoneesum Dam removal on Wildboy Creek

Cowlitz Indian Tribe • Columbia Land Trust

In 2024, the Cowlitz Indian Tribe and Columbia Land Trust realized a long-desired goal: removing the Kwoneesum Dam on Wildboy Creek in the Washougal River watershed. The dam was constructed in 1965 to create a recreational lake for a new Camp Fire girls camp. The camp closed in the 1980s, but the dam was left and continued to block coho salmon and steelhead from miles of valuable upstream habitat for decades. The shallow reservoir behind the dam raised temperature throughout the Washougal River system, and the dam blocked valuable sediment from moving downstream.

In 2020, Columbia Land Trust conserved 1,300 acres of forest around the dam, with the intention of partnering with the Cowlitz Indian Tribe for the dam's removal. In 2024, the Tribe led the 5-month deconstruction of the 425-foot-long, 55-foot-tall dam. Crews also created three new channels in the footprint of the former reservoir, and placed large wood, boulders, and gravel to re-create natural conditions.

The Cowlitz Indian Tribe also completed extensive restoration work downstream from the former dam. Since the dam had blocked all sediment and wood, the channel was scoured down to bedrock, which is unsuitable habitat for fish. The river channel was rebuilt with logjams and gravel to create habitat complexity with multiple pools and areas for fish to rest, feed, and rear. Crews also revegetated the area with more than 40,000 native trees and shrubs.

The dam's removal opened 6.5 miles of spawning and rearing habitat for salmonids, and directly restored 1.3 miles of the stream. Steelhead redds have been observed above the dam, and partners hope coho will be seen soon.

An area of the Palensky project post restoration, where the marshplain was lowesred, a culvert was removed and replaced with a bridge, channels were excavated, and extensive replanting and reseeding wtih native plants occurred. Credit Columbia River Estuary Study Taskforce.

Palensky Restoration Project

Columbia River Estuary Study Taskforce

The Palensky Restoration Project is a large-scale habitat restoration effort at the upstream end of Multnomah Channel near Portland, Oregon. Spanning lands within the Burlington Bottoms (Palensky Wildlife Area), owned by the Bonneville Power Administration and managed by the Oregon Department of Fish and Wildlife, and the adjacent privately held McCarthy Creek property, this project restored critical connections between the Columbia River and over 300 acres of historic floodplain wetlands.

For more than a century, levees, culverts, roads, and water control structures limited natural hydrologic processes and blocked fish passage throughout the site. These barriers reduced access to critical off-channel habitat, degraded water quality, simplified habitat, and created fish stranding risks as seasonal flows receded. The project addressed these issues by removing a large water control structure and multiple culverts, installing channel-spanning bridges, excavating new floodplain swales, and lowering marshplain elevations to restore natural inundation patterns.

As a result, more than 280 acres of floodplain habitat have been fully reconnected to Multnomah Channel. Combined with neighboring conservation lands, this creates a 600+ acre wetland complex. This work significantly expands rearing and refuge habitat for juvenile salmonids, including 13 ESA-listed species known to use the area. By improving access to productive floodplain habitats rich in food resources, the project is expected to increase juvenile survival during a critical life stage as fish migrate downstream to the Columbia River estuary.

The restoration also delivers substantial benefits for other species and ecosystem functions. Expanded wetland connectivity and increased periods of inundation improve water quality, enhance nutrient exchange, and support diverse native plant communities. Over 50,000 native plants were installed post removal of invasive species such as reed canarygrass. Design features such as ponded habitats and large wood placement provide important breeding and refuge conditions for amphibians, including northern red-legged frogs and painted turtles, as well as migratory waterfowl.

A key innovation of the project was the strategic lowering of marshplain elevations to suppress invasive plants and promote native wetland species adapted to longer periods under water. This approach not only improves outcomes for native plants, but also enhances habitat suitability for amphibians and other wetland-dependent species.

The project's location makes it especially impactful. Much of the Columbia River floodplain in the Portland-Vancouver region has been disconnected or developed, leaving few large, functional off-channel habitats. Palensky/Burlington Bottoms helps fill a critical gap, creating a substantial, contiguous habitat area that works in concert with nearby protected lands to support the broader food web.

This effort was made possible through strong partnerships among private landowners, federal and state agencies, and local organizations, including Bonneville Power Administration, Oregon Department of Fish and Wildlife, Natural Resource Conservation Service, the West Multnomah Soil and Water Conservation District, and the Columbia River Estuary Study Taskforce.

Above are before, during, and after photos from the removal of a water control structure. Credit Columbia River Estuary Study Taskforce.

Building on this success, partners continued to collaborate and pulled in additional support from Oregon Department of Transportation, Metro, Oregon Wildlife Foundation, and Oregon Watershed Enhancement Board to construct a wildlife underpass beneath U.S. Highway 30 in 2024, reconnecting floodplain wetlands with adjacent upland forests in the Tualatin Mountains. Early monitoring shows substantial use by amphibians and other wildlife, further enhancing connectivity in the region.

New, braided channels on the East Fork Lewis River during a high water event in October 2025. Credit Tapani, Inc.

East Fork Lewis River Reconnection Project

Lower Columbia Estuary Partnership • Clark County

More than a century ago, the East Fork Lewis River was a complex river system with braided, multi-threaded channels flowing throughout the river's ecosystem, seasonally connecting to floodplains and wetlands. This meant abundant amounts of salmon, fish, and other wildlife were consistently present throughout the river and surrounding floodplain habitat providing sustainable, immeasurable value to not only the river, but to the communities close by.

Over the years, increasing development and significant weather events, including the historic floods of 1995 and 1996, have greatly affected the East Fork Lewis River. The river has experienced significant erosion, became much more incised, and has been confined to a single channel with few side channels and little floodplain connections. This has created greater flood risk for nearby propoerty owners, and far less habitat for salmon and other fish and wildlife. In addition, historic gravel mining adjacent to the river has caused extreme habitat degradation. The 1996 flood caused the river to break through a levee, shifting its flow through the mining pits, abandoning a long section of channel that had been a spawning area for salmon. These deep mining holes significantly slowed water and increased water temperature, leading to warm water dwelling, predatory non-native fish to take over. These types of fish prey on salmonids, further threatening their survival.

Over the last decade, the Estuary Partnership and partners have worked with Clark County and other landowners to design a large-scale project on a 3-mile stretch of the East Fork Lewis River to restore the river and reconnect it to adjacent floodplains and habitats.

Construction began in 2025 and is expected to be complete in fall 2026. The project will regrade and lower the floodplain adjacent to the river, using the local fill and cobble material from the regrade to fill the pits and level out the entire floodplain to restore flow. The project is also creating a new braided channel with connectors and new side channels, further increasing floodplain connectivity, and install over 500 large wood structures to create floodplain complexity. This work at this site will also include years of replanting native shrubs and trees conducive to the surrounding habitat.

This project will not only create a more complex system similar to the river's historic conditions, which is beneficial for numerous fish and wildlife species, but also reduce flood risk and erosion to neighboring communities, provide opportunities for educational tours, and serve as an example of one of the region's largest floodplain habitat reconnection projects in history.

Project partners include Clark-Skamania Flyfishers, Columbia Land Trust, Washington Department of Ecology, Lower Columbia Fish Enhancement Group, Clark County Public Utilities District, Washington Department of Fish and Wildlife, and Washington Department of Natural Resources.

81,000 lamprey were found during fish salvage efforts prior to construction.

Crews work to revegetate along the new channels.

Large wood is anchored in a wetland area.