

COLUMBIA LAND TRUST

Fieldbook

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Conserving and caring for the vital lands, waters, and wildlife of the Columbia River region through sound science and strong relationships.



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Working Lands Link People and Nature

Columbia Land Trust conserves and cares for the vital lands, waters, and wildlife of the Columbia River region through sound science and strong relationships.

Columbia Land Trust has earned accreditation from the Land Trust Alliance, which recognizes land trusts that adhere to national standards for excellence, uphold the public trust with rigorous ethical standards, and take steps to ensure that conservation efforts are permanent.



Cover photo: Courtesy of GreenWood Resources

Inside cover: Photo by Kelsey Farabee

Opposite Page: Photo provided by the family of Liz Cebula



Remembering a Friend of the Land Trust

In the 1940s Liz Cebula was a teenage Portland Girl Scout who attended camp in the Columbia Gorge. She discovered the joy of standing beneath towering old trees, feeling the spray of waterfall mist on her face, and venturing out to the Oregon coast to admire the beauty of the crashing waves.

Decades later, 69-year-old Liz began attending Columbia Land Trust tours of some of these same beloved places. With time, Liz became so committed to conserving the nature of the Northwest that she volunteered regularly with the Land Trust, stuffing envelopes, answering phones, and helping us plan events. It was Liz who, in 2005, came up with the name for our annual dinner

and fundraiser, as she unwaveringly supported our work to conserve the “wild splendor” of the Columbia Gorge and the Northwest coast.

As chance would have it, our conservation scientists have identified the forests of these two regions as priority areas for our work; the forests of the Columbia Gorge, including those in the Hood, Klickitat, White Salmon, Wind, Sandy, and Washougal river watersheds, and along the coast. In this *Fieldbook* issue we explore some of our exciting coastal forest conservation work. Next spring we plan to share updates from the forests of the Columbia Gorge.

The purpose of Wild Splendor has always been to raise funds to conserve the nature of the Northwest, and to raise fun by spending time together. This year, we have converted Wild Splendor to a format Liz would have loved: small, outdoor tours to see migrating sandhill cranes and spawning chum salmon. This structure will allow us to have COVID-19 safety protocols in place, and to be inspired by nature up close. We hope you will visit our website (columbialandtrust.org/wildsplendor2021) to sign up for a tour. Since these tours are replacing our fundraising gala, we also would appreciate any contribution you can make to help us move closer to accomplishing our ambitious conservation priorities.

In September, I joined fellow friends and family to remember Liz at her funeral service at the Grotto in northeast Portland. I realized with a smile that at the same moment we stood below towering old trees honoring Liz, our team was signing transactional papers to conserve more than four square miles of the coastal forest that she so loved. (See “Protecting the footprint of our forests” on pg. 8).

However you champion the nature of the Northwest, together we are making a big difference for our shared future. Thank you!

Glenn Lamb, Executive Director



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Benefiting Salmon and Students



“Students will be able to use the space immediately to collect data, do hands-on research projects, and gain the knowledge and skills necessary to work in a variety of fields.”

CHRIS BREITMEYER.
PRESIDENT, CLATSOP
COMMUNITY COLLEGE

- a | South Tongue Point sits near the mouth of the Columbia River
- b | Clatsop Community College's Marine and Environmental Research and Training Station

A Unique Collaboration Results in a Living Classroom at Clatsop Community College

BY KELSEY FARABEE

Inspiring the next generation of conservation leaders is an important way to support climate action and at Columbia Land Trust we believe that education and outreach are long-term ways to brighten our shared future and further our work caring for the lands, waters, and wildlife of our region.

This September, in an exciting move that will strengthen Oregon's conservation career pipeline and inspire the next generation of environmental leaders, Columbia Land Trust acquired and transferred 82 acres of land on the lower Columbia River to Clatsop Community College, after more than five years of planning and development. The property is adjacent to where the college's Marine and Environmental Research Training Station (MERTS) campus sits and will be used as a living laboratory by students. If this sounds familiar, it's because we've written about South Tongue Point in previous *Fieldbook* issues and are overjoyed that teamwork and patience paid off and we can celebrate this acquisition and move forward with vital restoration work.

Situated near the wide mouth of the Columbia River, South Tongue Point provides one of the last feeding opportunities for juvenile salmon migrating downriver, where they gain strength before entering the open ocean. Columbia Land Trust, Clatsop

Community College, and the Columbia River Estuary Study Taskforce (CREST) are partnering to restore this crucial habitat, which will also provide a place for community college students to observe and monitor ecological processes in real time.

“We are very excited that Clatsop Community College students will have the opportunity to get real-world experience in environmental science,” said President Chris Breitmeyer. “Students will be able to use the space immediately to collect data, do hands-on research projects, and gain the knowledge and skills necessary to work in a variety of fields.”

Breitmeyer estimates that up to 30 students will use the outdoor classroom each term, and the college hopes to increase that number as they develop more courses specifically to utilize the site. CCC already offers a robust science program and plans to explore developing a degree or concentration specifically focused on environmental science.

“South Tongue Point is a unique opportunity to create a valuable resource that benefits both students and fish,” said CREST Habitat Restoration Project Manager Tracy Hruska.

“It is very exciting to see this project come to fruition,” said Land Trust Conservation Lead Lydia Mendoza. “We are thrilled that this habitat for juvenile salmonids will be forever protected and will serve as a resource for students.”



After years of work, the local community is celebrating the collaboration that made the purchase and transfer of this property possible. “This partnership,” said CREST Director Denise Löfman, “is an excellent example of a community-based project that draws on the strengths of each organization to build something greater than we could do alone.”

Breitmeyer adds that “Without the Land Trust and our other partners this wouldn't have happened. We all came together to preserve critical habitat and create a space where students and the community at large can learn about the unique Columbia River ecosystem. We look forward to being good stewards of this critical habitat.”

The project was funded by the Oregon Watershed Enhancement Board and the U.S. Fish and Wildlife Service as well as funds raised by Columbia Land Trust from the Adams Foundation, Wildlife Forever Fund, and individual donors.



The Past and Future of South Tongue Point

South Tongue Point rose out of the Columbia River in the 1940s and 1950s when the U.S. Army Corps of Engineers filled in the area with dredge spoils from the river bottom. The South Tongue Point landform as well as Lois Island and Mott Island—both now part of the Lewis and Clark National Wildlife Refuge—was constructed as a place to store ships following World War II.

However, over the last 70 years nature has reclaimed South Tongue Point. More than half of the acreage that the Land Trust secured and transferred to Clatsop Community College is already a vital wetland, and the planned restoration will improve the quality and quantity of habitat.

Columbia Land Trust, Columbia River Estuary Study Taskforce, and Clatsop Community College plan to expand the area of tidal inundation through targeted shoreline excavation to create additional tidal channels and vegetated wetlands that will provide food and shelter for amphibians, birds, and juvenile salmonids.



THE RECIPROCAL NATURE OF CEDAR CREEK

Newly-Acquired Intact Forest
Furtheres Climate Action

BY ALEX ATKINSON, KELSEY FARABEE

Many of the properties Columbia Land Trust manages come into our care in need of restoration. In these cases, our stewardship team works carefully to create the needed conditions for a healthy, functioning ecosystem. Restoration plans may include increasing habitat complexity such as snags or log jams in rivers, re-establishing the native plant community, controlling weeds, and with some forested sites, thinning previously harvested areas to facilitate tree growth, let in sunlight, and promote natural understory development.

However, in a different and relatively rare case, the Land Trust recently received a donation of more than 600 acres of wonderfully intact forest in Columbia County, Oregon.

In the Cedar Creek forest, the trees are a magnificent mix of mostly Douglas-fir and western hemlock, with western red cedar, bigleaf maple, and red alder completing the overstory. Some are more than one hundred years old. There are very few invasive species present, and at the base of the large trees grows a vibrant understory of vine maple, salal, red huckleberry, Oregon iris, clubmoss, sword fern, and countless other species that thrive in the Northwest's oldest, healthiest forests.

"In a region that is fairly intensively managed for timber production this older forest is a special and important habitat area," said Stewardship Director Ian Sinks. "It provides a very diverse range of ecological functions including wildlife habitat and water catchment. On hot summer days this site is cool, the soil is moist, and the trees are full of bird activity."

"In a region that is fairly intensively managed for timber production this older forest is a special and important habitat area..."

IAN SINKS, COLUMBIA LAND TRUST,
STEWARDSHIP DIRECTOR

Columbia Land Trust is honored to conserve and steward this forest in perpetuity for the goals of protecting wildlife habitat and addressing climate change. The mature Douglas fir and hemlock trees pull carbon out of the atmosphere and store it in their leaves, bark, and roots. Long after a tree falls and decays, becoming part of the forest floor, it continues to store carbon for centuries.

The forests that define the Pacific Northwest play a powerful role in mitigating the impacts of a warming climate, and protecting old forests like Cedar Creek (and enabling them to grow even older) is a critical part of the Land Trust's 25-year Conservation Agenda.

"This old forest is a quiet, resolute testimony to the salve nature provides our shared earth," said Forest Conservation Director Cherie Kearney. 🌿

c | *The undisturbed forest floor hosts a network of symbiotic fungi*

d | *A glimpse of the native understory in this mature forest*

The Wildest Classroom

Engaging the Next Generation of Environmental
Leaders with Upward Bound

BY ALEX ATKINSON

Through a recent partnership with the Upward Bound program at Clatsop Community College in Astoria, Oregon, a remarkable group of students explored two Land Trust properties over six weeks this summer. The Upward Bound program serves ninth to twelfth graders in cooperation with the Astoria, Warrenton-Hammond, and Seaside school districts, helping students gain the knowledge and skills to succeed in high school, continue on to college, and graduate college.

Together the group explored the Wal-luski Forest and Chinook River sites, helping with restoration projects, practicing outdoor skills, and discovering the secrets of the wild.

"Forests can be intimidating places," said Troy Henri, a college and career advisor with TRIO Upward Bound who led the summer program. "There were a lot of nervous questions on the first day, but it didn't take long for the students to find their confidence and increase their comfort levels."

Henri knows how tough it's been for teenagers during the recent disrupted school years. After being cooped up inside learning through a computer screen, spending time outdoors with a group of peers was a great privilege.

Before long, the students could distinguish oak from alder, identify invasive species, and determine where the juiciest red huckleberries were hiding. They also learned how the native people used plants like broad-leaf cattails, which serve as a food, fiber, and medicinal source [the cooked shoots resemble udon noodles]. They also learned useful survival skills like building primitive shelters using materials from the forest floor.

"Spending the summer in this magical forest was a healing experience for my students," Henri reflected. "But there's a longer-term value to programs like these. Nature changes people."

Henri taught the group about conservation and how organizations like the Land Trust work to preserve and restore natural areas. This lesson resonated with the students, some of whom may just grow up to study environmental science or work in conservation.

Next year Henri hopes to expand the program and bring nature into the lives of more local students. He knows how lucky we are to have so many habitats and ecosystems all around us—living classrooms preserved for this generation and the next. 🌿



"Spending the summer in this magical forest was a healing experience for my students. But there's a longer-term value to programs like these. Nature changes people."

TROY HENRI,
COLLEGE AND CAREER ADVISOR
WITH TRIO UPWARD BOUND

e,f | *Upward Bound students practice shelter-building skills and enjoy time spent outdoors*



LET THE LIGHT IN, LET THE WATER FLOW

Restoration Begins on Two Coastal Properties

BY KELSEY FARABEE

Along the lower Columbia River, estuaries, coastal dunes, and forests blend together, supporting wildlife and local industry. The Land Trust's conservation priorities here include connecting habitat areas, setting the stage for more old forests, and giving rivers room to move and flood naturally without threatening infrastructure. This fall we kicked off two restoration projects to support these goals.

Seal Slough

Located along Willapa Bay, Columbia Land Trust's Seal Slough property encompasses 564 acres of former industrial timberland, including tidal wetlands and numerous fish bearing streams. This summer work began to thin 130 acres of dense Sitka spruce forest to eventually foster older growth forest conditions.

"It will be a dramatic change, from a really dark and dense forest to a much more open forest," explained Natural Area Manager Austin Tomlinson. The thinning operation will create more habitat for wildlife like birds, deer, and elk, and will allow sunlight to filter in and encourage understory growth, which is currently nonexistent. "Hemlock and alder often fill in quickly in disturbed, open areas," said Tomlinson, "and we expect native shrubs like salal and sword fern to fill in over time."

We worked with forestry contractor Pacific Forest Management to develop a thinning prescription for the site, considering species' preferences to determine an ideal number of trees per acre to leave, while preserving the largest existing trees. Unlike the approach taken in commercial forestry, the Land Trust instructed forester to leave imperfect trees standing, like those with split or broken tops, and curves, to create structural diversity and enhance wildlife habitat.

"Historically, in a mature forest you have multiple different habitat structures and tree age classes," said Tomlinson. "Spruce grow so quickly, I can't wait to see how this forest changes over the next ten years."

All revenue generated from the sale of the thinned lumber will be invested into the Land Trust's conservation fund which will help support future forestland acquisitions.

Kandoll Road North

Restoration began this fall on Columbia Land Trust's 37-acre Kandoll Road North property along the lower Grays River. The project will move 3,000 cubic yards of material to create freshwater channels and ponds in an old pasture that has stood overgrown for years. The goal is to transform the area into an emergent scrub shrub forested wetland with water features and enhanced habitat for waterfowl and amphibians. (It will be a freshwater wetland, as the area currently is not tidally connected.)

A large, existing drainage channel runs through the center of the property. It holds water throughout the year and is influenced by beaver activity and used by ducks and geese. The excavation will create two additional channels connecting to this main central channel, and the dirt spoils from the dig will be used to build up micro topography in the surrounding landscape.

The planting of Sitka spruce trees, willows, emergent grasses, rushes, and a variety of wetland and upland shrubs is slated to begin in early 2022. Because of the invasive reed canary grass, thistle, and blackberry currently growing there, close attention will need to be paid to ensure the new plants survive.

"This project will be a great addition to the hundreds of acres we have already restored in the Lower Grays River," said Tomlinson "It is also highly visible and accessible from Kandoll Road and may provide a unique space for bird watchers, locals, and visitors."

The Willapa National Wildlife Refuge provided support for the Seal Slough project in the form of equipment and labor. Funding for the Kandoll Road North work came from Natural Resource Conservation Service and North American Wetland Conservation Act grants, and in-kind support from U.S Fish and Wildlife Service.

g | Thinning operations in the Seal Slough forest

The towering Sitka spruce (*Picea sitchensis*) is an iconic tree of the Pacific Northwest. The Land Trust's Seal Slough property on Willapa Bay in Washington is home to a well-preserved Sitka spruce stump that measures 16 feet in diameter; we estimate the tree was cut down sometime in the 1900s. During the early twentieth century Sitka spruce was heavily logged because its light, strong, flexible wood was used to build aircraft during World War I.

Sitka spruce are salt-tolerant trees and thrive near tidally influenced rivers and in locations where they are misted with ocean spray. Regionally, they grow in two ecological systems: upland Sitka spruce forests and intertidal Sitka spruce swamps. Uniquely, they can grow their roots outward, spreading across the surface of the land instead of requiring a deep tap root. This allows them to grow in locations where the water table is close to the surface.

These days, intact intertidal Sitka spruce forests are very rare in the Northwest and for the most part exist only in state or national parks, or in difficult-to-access environments.

The Land Trust has been conserving and restoring intertidal spruce swamps in the Columbia River estuary for more than twenty years, and while research is ongoing, Sitka spruce swamps appear to be a significant carbon capture ecosystem that is important for climate resilience.

See "Let the Light In," on the opposing page to learn about the restoration work being done in two Sitka spruce landscapes.

h | The large upper branches of towering Sitka spruce can provide nesting sites for marbled murrelets

SPECIES SPOTLIGHT

The Sitka Spruce Is a Model of Resilience and Strength

BY KELSEY FARABEE

*Picea
sitchensis*

SITKA SPRUCE

FAST FACTS

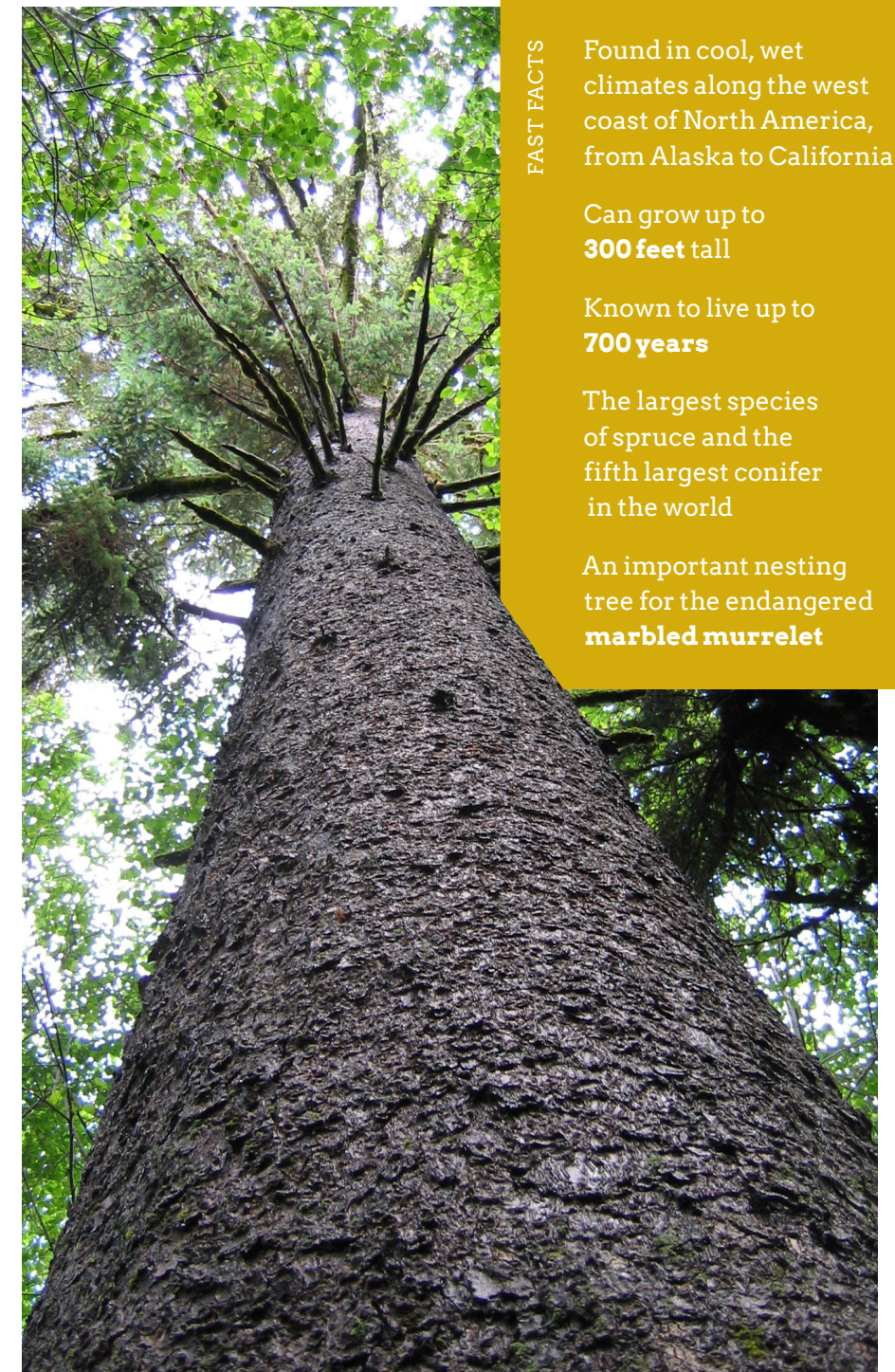
Found in cool, wet climates along the west coast of North America, from Alaska to California

Can grow up to **300 feet** tall

Known to live up to **700 years**

The largest species of spruce and the fifth largest conifer in the world

An important nesting tree for the endangered **marbled murrelet**



PROTECTING THE FOOTPRINT OF OUR FORESTS

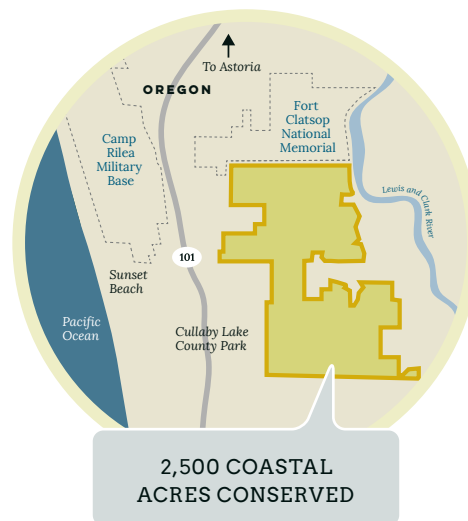
Working Lands Link People and Nature

BY KELSEY FARABEE

The rolling foothills slung between the Pacific Ocean and mountains of the Coast Range are home to some of Oregon's most productive working forests, which are interwoven culturally and economically with local communities, beloved by visitors, and essential to native wildlife.

This fall, a consortium including Columbia Land Trust, North Coast Land Conservancy, and Sustainable Northwest announced the conservation of more than 2,500 acres of forestland between the towns of Astoria and Seaside in Clatsop County. The land is owned by GreenWood Resources, the timberland investment manager of Nuveen, who collaborated with the conservation partners to achieve this conservation agreement.

Columbia Land Trust's purchase of a conservation easement will protect the Clatsop Ridge forest from future



development, preserve water quality, and maintain public and tribal access, while GreenWood will continue to own and manage the property for forestry.

The forests that define Oregon's coastline are important for so many reasons. They are a scenic backdrop to coastal

communities, a habitat for fish and wildlife, a natural filter that provides clean air and water, a sink for carbon, and a place where countless people have fond memories of running, biking, hunting, fishing, and exploring. Where they are managed for timber, they provide forestry and mill jobs, a timber supply, and a regional tax base.

"Clatsop Ridge is a great example of what can be achieved when conservation organizations and a timber company work together to protect our forests," said Columbia Land Trust Conservation Director Dan Roix. "What we strive for in our conservation work is a nuanced approach that protects the land, water, and wildlife of our region, while supporting the communities that are deeply connected to these places. Now this forest will exist forever, benefiting both people and wildlife."



An ecological feature of the conservation easement is the expansion of buffer zones along creeks and streams, where trees cannot be harvested. The Clatsop Ridge parcel encompasses more than 11 miles of fish-bearing streams and nearly 39 miles of seasonal, non-fish-bearing streams. These buffers will be expanded along all the fish-bearing streams and many of the perennial streams. Newly protected riparian areas total more than 650 acres. Trees will grow old and tall along these creeks and tributaries, regulating water flow during both wet and dry seasons, and helping keep the water cool and clear to support salmonid and steelhead spawning and rearing, and improve water quality downstream to places like Lewis and Clark River, Cullaby Lake, and Skipanon River.

Conserving this forest also supports the Land Trust's long-term goal to leverage the natural climate solutions that Northwest forests offer. In addition to increasing the number of trees and vegetation adjacent to streams, the conservation easement lengthens harvest rotations to at least 50 years, giving trees more time to grow and remove carbon from the atmosphere.

Columbia Land Trust was excited to work on this project in partnership with North Coast Land Conservancy, who secured more than \$2 million in funding from the National Guard Bureau and Oregon Military Department, through the Army Compatible Use Buffer program, to purchase the conservation easement.

Columbia Land Trust's conservation vision for our region is to ensure that the footprint of our forests does not diminish. To achieve this goal, our conservation strategies are wide and varied. They include conservation agreements like this one, that keep a working forest in private ownership while preventing the loss of the forest to development. In other situations, including fragile ecosystems and rare wildlife habitats, our strategy prioritizes the outright protection of forests through ownership by Columbia Land Trust or other conservation groups. Working with communities, landowners, and conservation partners and utilizing all the conservation tools available to us is how this vision will ultimately be realized. 🌲

We would like to thank US Forest Capital for helping originate this conservation opportunity and advising on the transaction.



"We strive for a nuanced approach that protects the land, water, and wildlife of our region, while supporting the communities that are deeply connected to these places. Now this forest will exist forever, benefiting both people and wildlife."

DAN ROIX, COLUMBIA
LAND TRUST CONSERVATION
DIRECTOR

- i | The Pacific Ocean glints just beyond rolling coastal hills
- j | Foresters survey the landscape. Courtesy of GreenWood Resources
- k | Expanded stream barriers preserve water quality and improve habitat



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Wild Splendor **ON TOUR** *Cranes & Salmon*

TOUR DATES, TIMES AND REGISTRATION:

columbialandtrust.org/wildsplendor2021

Our annual Wild
Splendor fundraiser
has a new format!

Join Columbia Land Trust staff on a sandhill crane or chum salmon tour and learn about these iconic species, their seasonal journeys, and our work to conserve their habitat.

Throughout November and December we'll be hosting two types of hour-long outdoor tours within Vancouver city limits.



SANDHILL CRANES

Frenchman's Bar Regional Park

Take in the majestic migration of sandhill cranes at Frenchman's Bar Regional Park.

Each year thousands of Sandhill cranes descend upon Cranes Landing to forage as they make the 1,300-mile journey from southeast Alaska and British Columbia, where they nest, to the Pacific Northwest where they spend the winter.



CHUM SALMON

Columbia River near Hwy 205

Today, the Columbia River is one of only two U.S. chum salmon runs listed as threatened. Chum look for clean gravel and specific water conditions to lay their eggs, and this unlikely spot near a major highway is prime spawning habitat thanks to underground springs that deliver clear fresh water to the spawning beds.