

Fieldbook

COLUMBIA LAND TRUST



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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.

A woman wearing a yellow beanie, a blue plaid shirt, and grey waders stands in a shallow, marshy area. She is smiling and holding a black device, possibly a water sampling tool or a camera. The water is dark and reflects the surrounding reeds and sky. A vertical black pipe is visible in the water to her right.

Stewardship Based in Science

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

Cover photo: Natural Area Manager Ramona Arechiga checks on hydrology monitoring equipment. Inside cover: A rainbow over Kerry Island on the lower Columbia River.

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.



Learn more about accreditation on page 10.

The time for conservation is always now

Here at Columbia Land Trust, as autumn migrations begin, days shorten, and rains return, it is time to wind down some aspects of our fieldwork and look ahead to salmonid and avian annual returns. I look forward to seeing the Sandhill Crane's back at Cranes' Landing in Vancouver, where we cultivate crops specifically for their benefit. Over the 2022-2023 winter we tracked nearly 50,000 cranes utilizing the site – a great indicator that what we are doing is working. Across our service area, the team monitors our sites to ensure that our stewardship is achieving our goals for resilient, healthy landscapes, as you will read about on page 7.

The summer field season, and the countless hours our team spends hiking steep terrain, navigating dense forests, and wading through wetlands, is a tangible reminder of why our work matters – we are conserving the nature you love. Caring for our lands reflects our commitment to being good neighbors, maintaining adaptive and resilient landscapes, and serving as community leaders and partners. To this end, I'm delighted to share that in August Columbia Land Trust received renewal of our accreditation by the Land Trust Alliance Accreditation Commission. Accreditation is a rigorous review process during which we demonstrate our fiscal accountability and strong organizational leadership. It gives us, and you, assurance that we have the systems and resources to guarantee our lands are permanently cared for and conserved, not just now but into the future. At the recent Land Trust Alliance annual conference, the president shared a statement that resonated with me: "The time for conservation is always now, because once the land is lost, it is lost forever."

This year we are celebrating some milestone successes in applying our model of matching public grants with philanthropy to achieve our fundraising goals. In Trout Lake, Washington for example, we stand ready to protect 6,300 acres of working forest, thanks to the receipt of a \$8,250,000 federal Forest Legacy grant. With your support, we are able to unlock the full potential of these grants.

Our team continues to be motivated by your confidence in our approach, and in the value of conserving the Columbia River region's wild splendor. As we approach the final months of 2023, I encourage you to join us in acting now. There is so much yet to be done, and together we can build a legacy that benefits a diverse community of people, places, and wildlife.

- Meg Rutledge, Executive Director

Together we can build a legacy that benefits a diverse community of people, places, and wildlife.



Working forest in Trout Lake we seek to conserve



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Farmland for the future

Two new Washington state programs accelerate farmland conservation

Farmland in the Pacific Northwest, and across the United States, is being lost at an alarming rate. According to a report from the American Farmland Trust¹, nearly 100,000 acres of farmland were converted to urban and low-density residential development in Washington between 2001 and 2016, and more than half of the land lost was considered the state's best quality farmland. Additionally, the state's remaining farmland faces an uncertain future. According to the 2017 Census of Agriculture², 34.8% of Washington's farmers are over the age of 65, while only 6.5% are under the age of 35, meaning that aging farmers outnumber new farmers by a factor of 5:1.

Fortunately, land trusts are well-positioned to help protect the farms that feed our region. According to the Washington Association of Land Trusts (WALT), land trusts in Washington have already permanently protected more than 22,000 acres of farmland, primarily through purchase of conservation easements that extinguish development rights.

A challenge that land trusts often encounter when using this tool, however, is the historically slow pace of funding availability compared to the fast timeline on which farmland is sold. "Despite strong land-use planning, Washington State has been losing farmland to development at high rates. We knew that land trusts could make an even bigger difference if they were able to act faster, as with existing models it can take two to six years to protect a single farm," writes WALT in their annual report.

Following the advocacy of WALT and the American Farmland Trust, two Washington state agencies launched programs to address these challenges to the future of farming, and this August Columbia Land Trust completed the first farmland conservation project in the state utilizing both new programs! Working with the Schmid family of Trout Lake, Washington, the Land Trust conserved 40 acres of rich and productive dairy pasture at the base of Mt. Adams

"...This project accomplished two major things: permanently protecting important farmland that provides dairy products to the region and facilitating a transition to the next generation of farmers."

—Kate Delavan, the Washington Conservation Commission's Office of Farmland Preservation Coordinator

in Klickitat County.

Together, the new programs enable a conservation strategy commonly called Buy-Protect-Sell in which land trusts purchase a farm, place a conservation easement on it, and then sell it at a reduced price. The first of the new programs enabling this strategy, the Farmland Protection and Affordability Investment program (FarmPAI), launched in 2021 and is administered by the Washington State Housing Finance Commission. FarmPAI is designed to assist conservation entities in purchasing important at-risk farmland within a matter of weeks. The second program, the Washington State Conservation Commission's Farmland Protection and Land Access program (FPLA), is designed to work in tandem with FarmPAI by providing grant funding that makes it possible for eligible conservation organizations to purchase conservation easements to keep land in production, while also lowering barriers to land access for beginning or historically underserved farmers and ranchers. The grant funding to purchase the conservation easement allows partners to preserve

the farmland by removing the development rights and repays a portion of the FarmPAI loan. The land is then sold to a different farmer at a more affordable price due to the extinguishment of its development rights, and funds from that sale repay the rest of the loan. FarmPAI is a revolving loan program so as outstanding loans are repaid, funds can go on to help protect the next farm.

"The Columbia Land Trust Schmid family project accomplished two major things: permanently protecting important farmland that provides dairy products to the region and facilitating a transition to the next generation of farmers," said Kate Delavan, the Washington Conservation Commission's Office of Farmland Preservation Coordinator. "There are currently two additional projects under contract for FPLA funding, that would conserve 237 acres in three Washington counties when combined with this project."

"FarmPAI and FPLA were designed to help land trusts quickly and creatively conserve high-quality farmland. The Schmid Farm is an excellent example

Pages 4-6: Scenes from the Schmid family dairy farm. Below, Robert and Lesli Schmid.



of this and we are thrilled to support the next generation of farmers," said Dan Schilling, Senior Bond/Housing Credit Analyst at the Washington State Housing Finance Commission.

The 40-acre project permanently protected productive agricultural land that has been part of the Schmid family's dairy farm for decades. "Trout Lake Valley is a great place for pasturing dairy cows," said Robert Schmid. "Cool air comes off Mt. Adams, there is an abundant water supply, and even

though the growing season is short we can grow an unbelievable amount of grass.”

Robert and his wife Lesli both come from families with decades of farming history here, and their partnership with Columbia Land Trust and this 40-acre easement helped their family during a difficult economic time. “Running a dairy is a tough business and hay prices doubled during the pandemic,” explained Robert. “I’ve been farming for 45 years and had never seen anything like it. It happened so quickly, but this conservation easement saved us. It helped us ride out a tough time financially.”

In addition to easing financial pressure on the farm, the project also enabled the simultaneous benefit of facilitating a generational shift in ownership of the farm to the next generation of farmers, their two sons Aaron and Peter, which helps secure its long-term future. That’s because the FarmPAI and FPLA programs were designed to support historically underserved farmers: military veterans, people of color, and farmers that are early in their career.

“American Farmland Trust’s *Farms Under Threat: The State of the States* report identifies that one of the top actions states can take to prevent farmland loss is to actively facilitate the transfer of land to a new generation of producers,” said Addie Candib, American Farmland Trust’s Pacific Northwest Regional Director. “With these two innovative programs that leverage inter-agency collaboration, Washington stands to be an example for other states. Columbia Land Trust’s Schmid Farm project demonstrates that these programs are delivering real, lasting impacts for Washington’s farmland and farmers.”

Similar to scenes playing out in many farming communities, the cost of land in the Trout Lake area has increased substantially. “Trout Lake is a special place and its farmland is facing significant conversion pressure,” said Land Trust Conservation Lead Nate Ulrich.

Robert’s mother Esther was a long-time advocate for conserving farm ground. “She was determined to do it by any means available,” Robert said. “These land easements helped us move forward, generating liquid capital we could use immediately to continue operating.”

“The mountain is both a blessing and a challenge,” he said. “It’s the reason we love living here, and the reason others want to be here too. We love hiking, backpacking, skiing... the same activities that draw everyone here, but we’ve known for a long time that farmland would not always be affordable in Trout Lake.”

Transitioning to an organic dairy farm has helped the Schmids differentiate their product and compete with much larger mega dairies. The Schmid farm has been officially organic since 1996, although they implemented many key organic farming practices well before that. They were the first farm to work with the Organic Valley brand on



The programs were designed to support historically underserved farmers: military veterans, people of color, and farmers that are early in their career.

the West Coast. Today they distribute through Darigold Organic and their organic milk can be purchased affordably at Costco under the Kirkland Signature label. The Schmids don’t use antibiotics, herbicides, pesticides, or commercial fertilizers on their farm, practices which also benefit the downstream White Salmon River watershed.

This was the second project Columbia Land Trust completed with the Schmid family, after conserving 215 acres in another area of their farm in 2012. “It has been great working with the Land Trust,” said Robert. “We really enjoy the people and the strong relationships we’ve built over many years. We would love to someday have our entire farm protected by conservation easements.”

We hope that this project will be the first of many agricultural conservation projects to be completed in Washington utilizing the state’s newest conservation programs, and we are excited for Aaron and Peter Schmid to take over farm ownership and continue to provide high quality local dairy products to our region. 🌱

1 American Farmland Trust’s *Farms Under Threat: The State of the States* Report

2 2017 Census of Agriculture, Washington State Profile

STEWARDSHIP BASED IN SCIENCE

Columbia Land Trust’s adaptive approach improves outcomes for nature

Since our founding in 1990, Columbia Land Trust has conserved more than 56,000 acres of land. Because of our collaborative approach, over time many of the conserved sites have been transferred into the care of other land management agencies, including state and county park systems and the National Forest Service. Often this is planned from the outset of a project, and our role is to help facilitate the transfer. However, more than 36,000 acres across five vastly different ecoregions along the Columbia River remain under our stewardship.

This is a large responsibility, and one that we take seriously. Guided by our 25-year Conservation Agenda, Columbia Land Trust is committed to fostering healthy and interconnected landscapes to benefit people, plants, waters, and wildlife across our diverse service area. We develop a comprehensive management plan for each site that includes specific objectives, strategies, and actions. The plan may include major restoration projects, like reconnecting rivers with their floodplain or removing a dam, weed control strategies, and habitat enhancements like planting or adding large wood structures to a stream to increase habitat quality.

Our conserved lands are intended to benefit future generations and exist in perpetuity, but there are countless variables that impact land management, including human activity, disturbances like floods and wildfire, and invasive species of plants and animals. These many variables are also constantly changing – especially as climate change increases the frequency of weather extremes, shifts stream



Helen Gavrilov monitoring vegetation at Mill Creek Ridge outside The Dalles, Oregon.

hydrology, causes vegetation mortality, and introduces myriad other ecosystem impacts.

Adaptive Management

To manage these many variables and the uncertainty they bring, we rely on adaptive land management strategies and continually assess how well our stewardship practices are working and whether we need to shift them to more effectively achieve our long-term goals. This creates space for flexibility, responsiveness, creativity, and problem-solving. “At its heart, adaptive management is learning by doing,” said Stewardship Director Ian Sinks. “You create a plan with a clear definition of success, you implement the plan, you measure and analyze the results, and you make any needed changes or adaptations to your plan. What we learn from this process informs both the next steps of that specific project as well as other future projects.”

Adaptive management is essentially scientific inquiry into how the landscape, wildlife, and plants are responding to given management actions. Our stewardship team tests different hypotheses and builds iteratively toward the conservation outcomes we are aiming for. In conservation and restoration, projects nearly always have room for improvement and create valuable learning opportunities.

“This process can be applied at any scale and to any landscape,” said Sinks. For example, the Land Trust routinely undertakes floodplain reconnection to create or improve habitat for juvenile salmonids along the lower Columbia River. We remove levees, excavate new channels, and revegetate – but it would be a mistake to automatically assume that fish will return to the restored area. We need to track and measure the presence of key species to know if our efforts have been successful,

The plan may include major restoration projects, like reconnecting rivers with their floodplain or removing a dam, weed control strategies, and habitat enhancements, such as planting or adding large wood structures to a stream to increase habitat quality.

or if there are unexpected hurdles to address.

We see a terrestrial example of this adaptive process at Cranes’ Landing in the Vancouver Lake Lowlands. The Land Trust farms about 400 of the site’s 527 acres to benefit migrating sandhill cranes. Throughout the winter, when thousands of cranes forage and feed at the site, we monitor how many cranes use each sector and take note of their behavior to inform what crops we plant, where we plant them, and even how far apart we space them, to make the site as useful as possible for cranes and geese.

Monitoring

As Columbia Land Trust has grown, our monitoring capabilities have also expanded. Amy Borde joined the organization in early 2023 as our Monitoring Program Manager, bringing more than 25 years of experience. Much of her career has been spent in the Columbia River Estuary, and a priority for her new position is to standardize our estuary data to better enable analysis across time and location. “The three largest pieces in estuary systems are sediment, water, and plants,” explained Borde. “I’m very interested in the interaction between hydrology and plants. Some hydrology is predictable, but the lower Columbia Estuary is hugely dynamic, and interpretation of the

data you collect is the most difficult part of this work.”

Sinks and Borde have been working together in collaboration with Pacific Northwest National Laboratory to publish the results of a seven-year study on control methods for invasive reed canarygrass. Lots of research already existed from non-tidal systems, but when they discovered a lack of findings directly relevant to our work in the intertidal freshwater wetlands of the lower Columbia River, they embarked upon a study that will inform other practitioners working to restore native marsh habitat. “We present and publish our findings because it helps all of us in the conservation community do our work better and more effectively,” said Sinks.

Additionally, Borde’s work will focus on the Ecological Integrity Assessment tool, which we adapted in partnership with the Washington Department of Natural Resources Natural Heritage Program. The tool is designed to be broadly applicable and easy to use, allowing us to quickly assess habitat metrics for ecological systems in our service area. Key metrics include native vegetation cover and composition, presence of non-native species, hydrology, soil condition, and other habitat features such as snags and downed large wood.

With Columbia Land Trust’s leadership, the East Cascades Oak Partnership is also collecting data to better understand how oak systems in the East Cascades respond to management and wildfire. The partnership developed a monitoring protocol standardizing how tribal, federal, state, and local partners collect information about oak systems that has already been deployed 75 times. The data will inform how partners manage oaks to improve resilience in the face of intensifying drought and wildfire.



Monitoring work is rarely glamorous, but it does afford the Land Trust stewardship team deep connections with nature and the opportunity to witness firsthand the results of our conservation and restoration efforts. “There is no better way to get to know the landscapes the Land Trust cares for than spending hours squelching knee-deep in the marsh on a hot summer day,” said Stewardship Assistant Helen Gavrilov. “It is worth the sweat and mud to get so well acquainted with native plants and wildlife, and to see the powerful impacts of our stewardship work. I’ve discovered beaver dams while navigating tidal marshes, been swallowed up by cattails, come face to face with marsh wren, and seen juvenile salmon utilizing newly restored habitat. It is immensely satisfying to see these conserved lands thriving and full of life because of our work.”

While much of our monitoring work requires boots on the ground (or waders in the swamp), the Land Trust is also exploring how technological advances can enhance our data collection and

analysis. Our stewardship team recently kicked off a vegetation mapping pilot program that utilizes drone technology to chart large expanses of difficult-to-access and difficult-to-map terrain, in order to outline key habitat areas. Data is collected on the ground and then fed through a machine learning algorithm that can identify the plant signatures, including invasive weeds, and map them across an entire site. If successful, this project will streamline our management planning and allow us to track changes in plant communities in much greater detail. The drone data is also able to measure the presence of chlorophyll, which is an indicator of plant stress levels. The pilot program will include about nine sites, initially focusing on herbaceous plant communities in marshes, and eventually expanding to forest sites, where tracking plant stress can be used to inform fire prevention and management strategies.

Borde is excited by the project and energized by the intensive fieldwork it requires. “Combining drone imagery

Amy Borde on a monitoring visit to Nelson Creek, where the Land Trust completed a major restoration project in 2022.

with on-the-ground plant observations is a powerful method to expand our knowledge from small-scale to site-scale,” she said. “The products from this technology will provide a better understanding of these complex sites and allow us to quickly identify necessary management actions and to evaluate progress toward restoration goals.”

Putting It All Together

Caring for nature is complex, important work; our team is continually learning, and our strategies are continually evolving. Columbia Land Trust’s Conservation Agenda emphasizes climate resilience and climate mitigation, and anticipating climate vulnerabilities at conserved sites is a major aspect of our management planning. Our team frequently asks questions like, how do we predict a site will evolve over time? Will it eventually reach a more stable state following restoration? If we conserve a wetland, is it located somewhere that will be negatively impacted by sea level rise? Is it connected to other conserved lands to create buffer zones for wildlife and plant migration in the future?

We don’t have the answers to all of these questions, but adaptive management allows us to learn and adjust as we move forward, to better serve nature, wildlife, and human communities.

“Nature is complex,” said Sinks. “There can be huge differences in how a landscape reacts to external variables from one side of the river to the other, and even the same site can react differently from year to year. We must work with natural processes, use the best information available, be aware of what we don’t know, and implement monitoring to ensure we are constantly learning and adapting. It is part of what makes our job so challenging and fulfilling.” 🌿

POOL PARTY

One watering hole serves a multitude of species

Take a behind the scenes look at a popular water pool in a forested site Columbia Land Trust cares for! Trail camera footage recorded this summer revealed a diverse group of wildlife, including American black bear, mountain lion, black-tailed deer, and a pair of barred owls visiting the pool.

“There were some telltale signs that this watering hole was heavily used by wildlife, but I was pleasantly surprised when the camera revealed the full range of species utilizing it,” said Natural Area Manager Adam Lieberg. 🌿

To watch the incredible footage, visit

📺 www.columbialandtrust.org/trailcam

American black bear
(*Ursus americanus*)



Barred owls
(*Strix varia*)



Mountain lion
(*Puma concolor*)



Black-tailed deer
(*Odocoileus hemionus columbianus*)

Accreditation process shows commitment to our supporters, our community, and ourselves

Columbia Land Trust is excited to announce that the Land Trust Alliance Accreditation Commission has renewed our accreditation! Accreditation is awarded to Land Trusts that meet the highest national standards for organizational excellence and conservation permanence, and must be renewed every five years through a multi-step process that includes a robust review of documentation and procedures.

Columbia Land Trust is part of a network of more than 900 Land Trust Alliance members that together have protected more than 60 million acres. We were originally accredited in 2012 and received our first renewal in 2018.

“At Columbia Land Trust, we view our Land Trust Alliance accreditation as a commitment to our supporters, our community, and ourselves,” said General Counsel Steve Cook. “It assures our supporters that their contributions are used effectively. It tells our community that we are a professional and trustworthy partner in conservation. Internally, it’s both a roadmap for how to do things right and an affirmation that we are working at the leading edge of land conservation. Renewing and maintaining our accreditation is a lot of work, but it is worth it.”

For more information visit www.landtrustalliance.org



Staff Spotlight

Introducing Susanna Summers

Columbia Land Trust is excited to welcome Susanna Summers to our Advancement team! Susanna and her family recently moved to Portland from San Diego so Susanna could begin her new role. They hit the ground running and have been enthusiastically exploring the diverse landscapes of the Northwest. “There is so much nature to see, we’ve only scratched the surface so far,” she said. “My young kids are struck by how green it is!”

Susanna has long had an affinity for nature and has strong family ties to conservation. She remembers a childhood trip to Muir Woods in Marin County, California that sparked a love of forests, and her great-grandparents were instrumental in conserving Saddle Rock in Big Sur, an iconic stretch of California coastline near McWay Falls.

As Columbia Land Trust’s Individual Giving Officer, Susanna is excited to build connections between supporters and the places that their gifts help conserve and care for. “I love learning what our donors care about and how their passions intersect with our work, whether it be maintaining access to recreation spaces or ensuring clean drinking water. I enjoy my role because I get to help people support issues and projects they care deeply about.”

Susanna has been working in philanthropy since 2011 and is deeply motivated by collaboration and the camaraderie of a shared mission. “The Land Trust couldn’t do what we do without our supporters, and our supporters can impact positive change at



“Columbia Land Trust couldn’t do what we do without our supporters.”

a much larger scale by giving to the Land Trust,” she said.

She has been busy visiting Land Trust sites to see conservation and restoration in action. When asked about her initial impressions, she reflected on Kerry Island in the Columbia River estuary, where seven years ago the Land Trust excavated channels and breached levees to reconnect 100 acres of land to the Columbia River floodplain. “Seeing photos of the site from before the restoration work and then experiencing the now active floodplain and lush wetland was magical,” she said. “I’d never been anywhere like

it and I can’t wait to see how it continues to evolve.”

Susanna has also been immersing herself in the Land Trust’s diverse partnerships with landowners, corporations, government agencies, Tribal nations, individual donors, and philanthropic institutions, just to name a few. “The expertise of our staff is truly impressive,” she said, “and these strong partnerships empower the Land Trust to tackle complex projects and achieve impactful outcomes. I look forward to getting to know more Land Trust supporters and working together to accomplish transformational things!” 🌿



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Wild Splendor ²⁰²³ TOUR SERIES

In 2023 we are again hosting a series of tours to bring together our community and celebrate the land, water, wildlife, and people of the Pacific Northwest.

The Wild Splendor series, and the opportunities it creates to share our conservation work and spend time together, would not be possible without the generous support of our sponsors! Make sure you are subscribed to our *Moss* email newsletter for registration information.

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