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program

treeline

partnering for climate adapted forests

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Treeline aims to: Engage PNW restoration practitioners, nursery partners and researchers who work for or represent Tribes, Indigenous groups, non-profits, agencies, businesses and more. We gather, disseminate, and discuss information and knowledge across a broad region.

The Diverse Pathways to Climate Resilience Issue

This issue of Treeline explores the diverse ways individuals, groups, non-profits, agencies, business and more are using their unique positions and expertise to fight the climate crisis. We hope the stories here remind you that there is no one way to be a part of this movement.

Missed the December Treeline Newsletter? Click [here](#) to learn about how our partners are adapting to climate change.

Interested in submitting an article? Reach out to Kayla Seaforth kseaforth@b-e-f.org

Ecostudies Institute's Willamette Valley Fire Collaboration is Blazing Trails for Cultural Burning

BEF's Jean-Paul Zagarola interviewed [Olivia Kasama](#) to discuss the indigenous led Willamette Valley Fire Collaboration and their budding program that develops Tribal, public and private partnerships to facilitate cultural burning in the region and provide training and career opportunities for Native burners.

JEAN-PAUL ZAGAROLA: Thank you Olivia for taking the time to do this. I'm excited to learn and share more about the work you, Ecostudies Institute and the Willamette Valley Fire Collaboration are doing around cultural and prescribed fire. How did you come to this work? What is your background, and what interested you in this position with Ecostudies?

OLIVIA KASAMA: Currently, I am the Operations & Outreach Coordinator for Willamette Valley Fire Collaboration,

hosted by Ecostudies, so I do a lot of the social media and networking, grant writing, and establishing relationships with area Tribes. I am originally from between the Bay Area and Santa Cruz, California. I am a Hopi Tribal Member (Coyote Clan), and we have done cultural fire for 1000's of years, but the practice is not as active in Arizona currently. Aside from that, my family has a history with fire. My auntie, who was a large part of my life growing up and continues to be, is in a management position at CAL FIRE and has worked in fire for over 35 years and has even lived at a permanent fire camp in the Santa Cruz Mountains for the majority of my life. She was a big proponent of prescribed burning in the Santa Cruz Mountains. Fire is definitely in my blood.

JPZ: You have deep roots in cultural fire, and we're lucky to have you here in the Willamette! Can you share a little about how the Willamette Valley Fire Collaboration (WVFC) came to be, and Ecostudies Institute's role in that collaboration? What gaps exist within the Willamette Valley prescribed fire community and how does this program seek to address them?

OK: Ecostudies is the organization that hosts the WVFC. WVFC staff are technically Ecostudies Institute Staff but the WVFC functions as its own separate program. Ecostudies has been around since 2001 and they do a lot of traditional conservation: water testing, avian monitoring, native plant revitalization and planting and removal of non native species. Ecostudies also



Coyote Creek South. Photo Credit: Ka-Voka Jackson

supports the WVFC through grant funding and other operational activities.

In terms of my work, I think what makes the Willamette Valley special is that it is such a visibly fire adapted area, with the oak savannas, and it's a place where the land is extremely dependent on fire. It seemed like a place where a greater degree of collaboration around cultural and prescribed fire was needed, which was the impetus for starting the program. In the Willamette, so much land is privately owned. It's really difficult to burn on privately owned lands, with a lot of bureaucratic hoops to jump through. Our role [WVFC] is that of a buffer between state organizations, the Forest Service, private landowners, and Native nations to ultimately return land management practices to Indigenous people with the support of other agencies.

I'm going to share how my colleague Katie MacKendrick (previous co-program manager) describes our program. She says our burn program was structured to understand the landscape as a shared partner in the efforts to realize a healthy community. It's not just that we are partnered with other organizations, it's also that we are genuinely trying to connect with the land and see it as a partner in our work. We develop cooperative agreements with a number of organizations, including Tribal governments, Oregon Department of Forestry, The Nature Conservancy and trainers. Previously, we hosted a training

program for Native youth so people could get their foot in the door doing cultural fire, and earn the qualifications necessary to burn off reservations and to even get their red cards to burn on public lands. That program was grant funded and ended after a year. Since it ended, we have been restructuring the program to figure out how we can best serve the community. What we're hearing from Tribes is not that we should necessarily be facilitating training, but that we should be acting as a liaison between Tribes and agencies, and trying to help the pieces come together more seamlessly.

JPZ: Can you talk about the lands that you work on, or what kind of landowners you work with?

OK: We are trying to return land management to Indigenous people and utilize Indigenous practices. What it takes to get there is creating a community understanding that prescribed fire is not only good, but necessary.

That really is our role: to help people understand that prescribed fire is something that has been happening in the Willamette Valley for a very, very long time, and that it's a necessary part of taking care of land that we live on. We predominantly work in the Willamette Valley, but we also have worked in Northern California, Eastern Oregon, and up into Washington. The point is to facilitate Native people burning land and we do that by creating connections. The

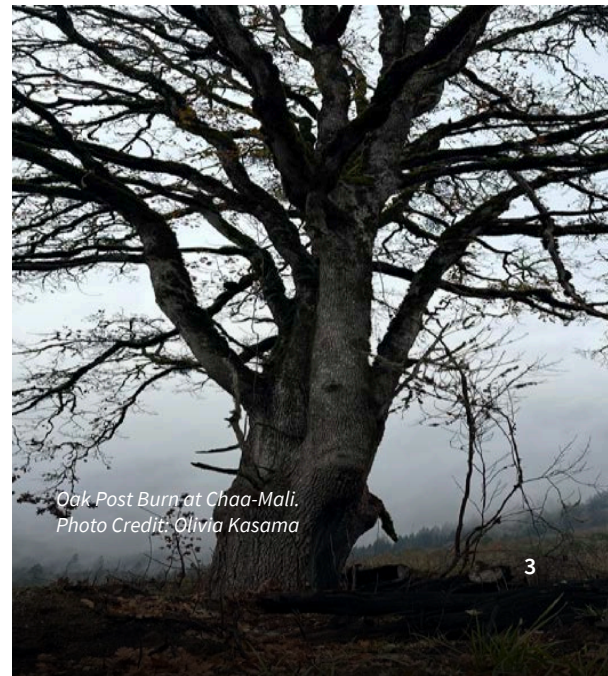
private landowners that we are in touch with often initiate the conversation, and we help with fundraising, grant writing, organizing burns and we keep that process very open to the community so they can see what we're doing and how good fire is not the same as a wildfire.

JPZ: Who are your teachers? How does Traditional Ecological Knowledge interact with Western fire management philosophy and techniques in your work?

OK: I think that Traditional Ecological Knowledge has not blended well with Western fire management. For example, in Northern California the Karuk and the Yurok Tribes have been burning on their reservations and ancestral lands without a lot of support from CAL FIRE or the Forest Service because there are so many barriers in making these things happen collaboratively. As time has gone by, it has gotten better. The goalposts are moving closer together. A major barrier is often licensing and insurance. Traditionally, these burns didn't have nearly as many parameters to work within as what we're dealing with today. The modern system has been developed to regulate wildfire, and prescribed fire in a much different way. Oftentimes, we have wildland firefighters doing prescribed burning, and it's almost like the difference between someone who is a military medic and a person who is a doctor in a hospital. Even though they might have a lot of the same training, the parameters of how they're able to execute the job is framed very differently.



Previous Program Managers Ka-Voka Jackson and Katie MacKendrick at Willow Creek. Photo Credit: Olivia Kasama



Oak Post Burn at Chaa-Mali. Photo Credit: Olivia Kasama

JPZ: I think that prescribed fire and cultural burning are often assumed to be the same thing, but they're really quite different. Can you explain how they differ?

OK: I think a big difference in conservation is often we're talking about the land as if it's something that is going to benefit us. How is the landscape going to benefit us as people who live there? Prescribed burns become a way to avoid houses burning down, or to avoid the upset that comes with looking at a scorched landscape. I think what cultural burning really brings to the table is that we, as Indigenous People, are connected to the land. It's almost like taking care of a relative, not taking care of something so it serves you.

As we're able to cultivate relationships between agencies, NGOs, and Tribes, being able to bring the cultural element to it is very powerful. I've seen people who work for state agencies come to burns where we employ traditional lighting methods and ceremony before we burn, and I think it really deepens the understanding that we're in this together. The point is to take care of this

land collaboratively so we can all exist on it. There are many layers to it.

JPZ: As Native Americans were removed from the land, fire and cultural practices were banned, and Indigenous people were intentionally, forcefully, separated from their culture, it seems like a lot of the knowledge around these practices may have been lost. How is that knowledge being regained and reapplied, and who are some of the mentors that are helping to lead the path forward?

OK: It's a little difficult for me to answer that because I'm not an Oregon native. My tribe lost their rights to burn unless directly through the Feds or Hopi WEMP (Wildlife & Ecosystem Management Program). So, for my tribe, the idea of cultural burning was not practiced for multiple generations and it was only revitalized through the youth, who went to places like Flagstaff and Phoenix and came back and said, "this is a thing we need to start doing again, our environment depends on it." As far as the Confederated Tribes here, Klamath, Warm Springs, Grand Ronde in addition to many Northern California Tribes like the Karuk, Yurok — I am not sure that they ever lost their traditional knowledge. My understanding is that it was never exactly lost, the obstacles were genocide and regulations that were unjustly imposed on burning. This is still an issue today and while progress is being made, it is slow. Current progress towards returning fire to the land by indigenous hands was sparked because community members and government agencies are starting to realize that everything is catching on fire every year, and they don't love that.

JPZ: Would you say it's more of a relearning process that everyone's going through together?

OK: Absolutely. Ka-Voka, Katie (former program manager), and I recently attended a conference and it was incredible to see the work of the Lomakatsi program, and Native youth from the Klamath Reservation. They're prioritizing physically connecting to the landscape, and taking the lead on learning the Traditional Practices from Elders. A lot of Native people who are millennials, we really prioritized getting a college education to get ourselves into

positions where we can make a difference in academic circles, conservation, ecology, and that's great and helpful. But it is impressive to see these youths taking it upon themselves to learn from Elders. I'm so proud of them.

JPZ: How do you think we can sustain that engagement? It's hard to make a living wage, and hard physically to do the field work over the course of a career. Have you seen any creative ways this is being addressed?

OK: I think that we need to put a lot more money into funding for conservation efforts, especially for Indigenous people. I think people don't realize that in a lot of Tribal communities, everything's more expensive. Food, transportation costs, things that are very important for basic life. So if young Indigenous people are going to work in the field, they need to be fairly compensated, they need health insurance. I appreciate that the fire crew at Ecostudies is employed full time, with health insurance and other benefits. Another reason I believe we see fewer Indigenous people involved in field work is because there are obstacles to starting in the field that non-Native people typically don't understand. There are so many more hoops that we jump through as Indigenous people in areas like housing. The reason that Sara Fraser and Ka-Voka approached me about joining the WVFC was because I know those challenges, I've dealt with them my whole life, and I love helping other people do that. When we have crew members coming from reservations we connect them with things like housing resources. We try to approach it in a more holistic way. It's a commitment to the landscape, not just a job. Everyone who works in this field needs to be paid a living wage. People bring and develop such deep knowledge, but if they are not supported in a way that allows them to live comfortably, eventually they will burn out and take that knowledge elsewhere.

I'm also interested to see what the land turnover in rural Oregon will look like over the next 30 years. These landowners, ranchers, farmers, are an aging population and many of their children do not want to move back to care for this land. When that land turns over it will be purchased by younger people, people who want to connect



*Camas Chaa-Mali
Photo Credit: Ka-Voka Jackson*

with the land, and the more public exposure we can facilitate for good fire and conservation and why it matters, the more likely that we will have cooperative people who want to take care of the land in a way that it doesn't just serve their financial goals.

JPZ: We know that so many native plants vital to Indigenous Lifeways have been managed with fire for centuries. Is your staff involved in cultivation or harvest of the species beyond the act of putting fire on the ground?

OK: Absolutely. Many of my colleagues have ecology backgrounds, and we are involved in all aspects of the lifecycle of prescribed fire. It's not just about putting fire on the ground, it's about doing it in a way that allows native plants to flourish again. We also work a lot with the Long Tom Watershed Council and their [Traditional Ecological Inquiry Program](#) that Joe Scott is leading. We aren't always the ones doing every step of restoration, but we are trying to foster a community with many connections so that different organizations can share resources and get the right people doing projects on the ground.

One example from Joe Scott with Long Tom Watershed Council's TEIP program,

along with some tribal members from Confederated Tribes of Siletz Indians there were a couple burns where they identified some harvestable material, and made a point to avoid using drip torches around those plants. Those little things, those opportunities for Indigenous people to be involved at every stage of the process, that's what we're trying to foster.

JPZ: What barriers exist to carrying out this work?

OK: Burning is one of the hardest actions to get permission to do. Neighbors need to be on board, and some people in positions of power still believe that prescribed fire is completely infeasible. Decades of policies in Oregon made it outright illegal to do cultural burning, so while we've come a long way I think there are still a lot of policies and attitudes that need to change to make it more acceptable.

I think that some people have traumatic experiences with fire and oftentimes that shuts down the potential to understand that there is a capacity for good fire. Through the outreach portion of my job, my intention is to educate the public in a way that is understandable, and meet people where they're at to help

without overwhelming them, from the perspective of an Indigenous person.

JPZ: Who are some of the agencies or other partners, maybe that you're either not working with or would like to work with more to address some of those barriers?

OK: I think that there is growing momentum for working with federal agencies. There's been growing respect for the burning practices of Indigenous people at the federal level in recent years. Additionally, we work with the Nature Conservancy quite a bit, which has been great. We have a lot of people who are really passionate, and who cultivate business and personal relationships with one another. That can go a long way, but branching out beyond that into the general public and other influential people that don't work in conservation, for me, that is the goal. That could look like city firefighters, political figures, etc. I will say though, a lot of Oregon Tribes have some of the most incredible firefighting setups I've ever seen. I'd like to see more of that in Washington as well.

JPZ: I think there may be growing interest from city firefighters, especially in places in the wildland urban interface.

OK: I think that sometimes people don't realize about cultural burning is that there are multiple steps. It's not just putting fire on the ground, there're so many things to do to prepare for these fires. I think that as people start to understand the whole process more they start to see how this is beneficial. What's great about urban areas, such as the Portland area, is that I do see a lot more people interested in learning. A lot of places that are more urban in Oregon are surrounded by hills and without the return of fire to those areas, the likelihood of a huge fire happening is very high. And that is something that should scare us all.

JPZ: I think your point about all the steps to get to where you can actually burn is really apt. Education on that is critical.

OK: We once met with folks from a Fire Authority in a more rural area of Oregon, who seemed less than excited about the potential for a burn in their community



Check out what it means to implement a cultural burn. [This video](#) takes you on a journey on how and why cultural burning is used as a land management tool by the Tribes throughout the Willamette Valley, and shows you what this experience was like on June 29, 2023 at Smithfield Oaks.

as it had seen a lot of devastating wildfire in the previous years. Siletz had purchased a piece of land where they wanted to do a burn with no drip torches, just a Traditional Burn on around six and a half acres. Once we got to the property they were dazzled by the fact that there were fire lines cut and that like the lower limbs of the trees had been removed so they didn't catch on fire. It was really interesting to watch their attitudes change in real time. It's pretty inspiring to me to help people shift their perspective in that way.

JPZ: What does the future look like for the Willamette Valley Fire Collaboration? What opportunities are you excited about pursuing?

OK: There's a lot of movement in our program. We are currently hoping to hire a burn boss that is Indigenous. We'd also love to provide funding and facilitate training if someone hasn't quite made it to the burn boss level. That's the point, uplifting Indigenous people to do the things that they haven't been able to do before. It's hard when people have years and years of experience, but it

doesn't translate to the bureaucratic system that is necessary to get all the proper certifications. I'm also excited to work more with area Tribes. I would also like to see a lot more volunteer work. I would like to get volunteers to help with re-seeding burned areas because I think that kind of action is what really helps people understand what the goal is. The other day, I was walking my dog through the Willow Creek Preserve, where our office is located, and I came across a site that we had burned just a couple of months ago. There are tiny plants poking out of the ground that's still black; seeing the new growth of the native plants was so inspiring to me. It's an area that had been re-seeded and I think bringing people in to witness that lifecycle is what impacts them most.

JPZ: Is there anything else you'd like to share?

OK: I'd like to mention that there's a lot of exciting legislation that has come to be in Oregon. Some state and federal legislation and appropriation has come through that will make this work more possible than it's been in recent history.



Olivia Kasama (Honhongva) is Coyote Clan (Iswungwa) and an enrolled member of the Hopi tribe, as well as a descendent of the Comanche Nation and Cora Pueblo peoples. She is passionate about returning land stewardship to indigenous hands and investing in Traditional Ecological Knowledge implementation through prescribed fire. In her spare time she enjoys visiting petroglyphs, rockhounding, studying history, meandering walks with her dogs and hunting for obscure treasures.



Ka-Voka Jackson and Olivia Kasama at the Inter-Tribal Eco Restoration Partnership Summit. Photo Credit: Katie Mackenderick

Collaborative Grow 2024 Season Site Visit Updates

By Hannah Buehler

BEF's Collaborative Grow Program was established in 2011 to streamline native plant procurement for groups advancing reforestation and plant establishment as part of ecological restoration, soil and water conservation, and habitat initiatives in Oregon's Willamette Basin. From an initial order of 66,000 plants over a decade ago, the program has grown to include seven different nurseries and thirteen tree planting partners. In 2024, the program will distribute over 484,000 trees.

In October and November of this year, the Collaborative Grow team conducted our biannual site visits to our nursery partners throughout the Willamette Valley. These site visits are a key time for the Collaborative Grow team to connect with our program's nursery partners, to check on the plants for the upcoming season, to build relationships and open communications with partners, and to learn more about the various challenges, constraints or needs that partners have.

The last time we conducted these nursery visits was in 2021, when impacts from the summer heat dome, the spring ice storm, and labor constraints were significantly impacting plants and nursery partners. While this year some October frosts had slightly impacted some plant species, overall plants for this year's season are growing well and are in great shape for the upcoming season.

Nursery partners shared an eagerness to connect more with Collaborative



Finn Rock Reach, Photo Credit: John Trimble

Grow planting partners and planting partners throughout the region to better understand restoration partners' needs. One nursery partner expressed interest in conducting experiments with planting partner feedback to explore potential for early lifting of certain species and changes to growing strategies that might provide greater resilience of plant species to increased climate variability.

The Collaborative Grow program also connects with our planting partners at our season orientation in December where we hear about our planting partners upcoming projects, provide information about species status, and deliver instructions about cooler pickup and access for the season.

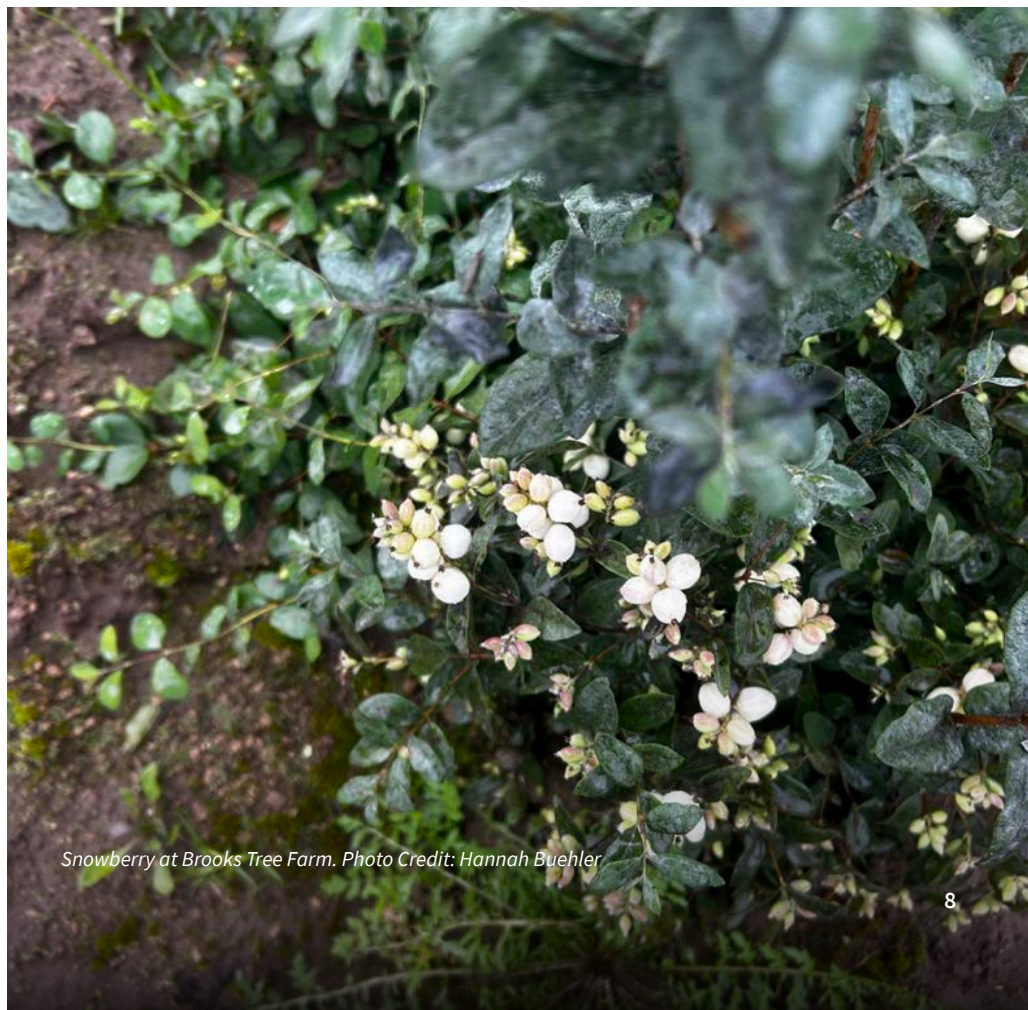
As the program continues to grow, change and adapt in the coming years, we are always open to feedback about the program. If you have questions, comments or if you would like to learn more about the program, please contact Hannah Buehler at hbuehler@b-e-f.org.



Plants at Scholls Valley Native Nursery. Photo Credit: Hannah Buehler



Doug fir plugs at Kintigh Mountain Farm. Photo Credit: Hannah Buehler



Snowberry at Brooks Tree Farm. Photo Credit: Hannah Buehler

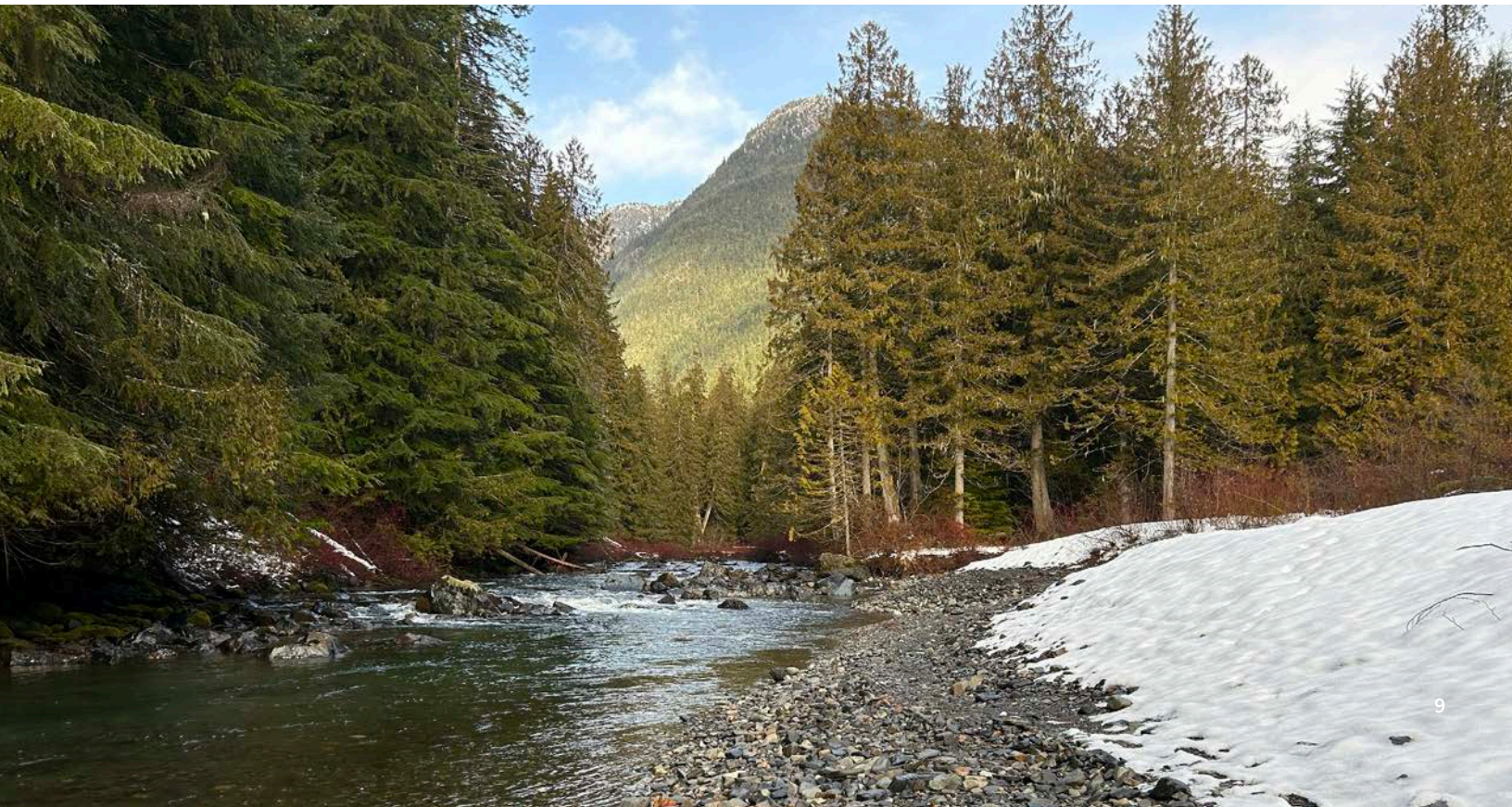
In this interview, [National Indian Carbon Coalition \(NICC\)](#) Program Director Bryan Van Stippen and his collaborator Dr. Kelly Cain, Senior Program and Policy Strategist, talked with BEF staff Kayla Seaforth about the program's efforts to work with Tribes and Indigenous communities to design carbon projects that serve their visions for the future.

KAYLA SEAFORTH: Can you share a little bit about what the National Indian Carbon Coalition (NICC) is and what prompted its creation?

BRYAN VAN STIPPEN: NICC is a tribally owned and operated nonprofit organization. It was created in 2003 by the [Indian Land Tenure Foundation](#) and the [Intertribal Agriculture Council](#),

who have provided services to Tribal Nations, Alaskan Native Villages and Corporations, Native Hawaiian organizations, and other Indigenous communities in the United States for a combined 50 years. After the Chicago Climate Exchange opened, Tribes were approached by many developers about enrolling their lands in carbon projects, so they reached out to the Indian Land Tenure Foundation to see if they [Tribes] truly benefited by implementing carbon projects on Tribal lands. There were a lot of questions, different opportunities, and misinformation. NICC was created to help Tribes get a better understanding of what the carbon industry was and what it meant for Tribal Nations.

The Chicago Climate Exchange later [blew up and folded](#), but eventually the California cap and trade program started, and again, a lot of developers were trying to get Tribal Nations to enroll their lands in that program. A lot of questions and concerns emerged over it, and there were a handful of Tribes that enrolled some of their lands into that marketplace and they generated a lot of revenue. Questions emerged about the management of the carbon projects on those lands, and about what that really meant and entailed. That was an additional role that we [NICC] took on: assisting Tribes to make sure they could show that there was a true benefit to their Tribal



communities through this protection of their land bases, and making sure these mechanisms actually protect and preserve their Tribal natural resources, rather than extract or exploit them.

KS: Can you speak to some of the attributes that are unique to Tribal carbon projects?

BVS: One of the big reasons that we see interest from Tribal Nations has to do with control over the majority of their land base. Most Tribes do not own or possess all of the land within the exterior boundaries of their reservations. In recent history, the easiest way to make money on that land was through extraction. In contrast, our cultures and histories include ensuring that we have natural resources for future generations; ensuring that we're protecting our trees, forests, our wild rice beds, and our medicines that we use within our culture and communities. Carbon sequestration projects were one of the opportunities that Tribes stumbled upon that they thought might help toward those aims. When we start looking at the different types of ownership within the exterior boundaries of reservations, many Tribes have Tribal trust lands, some lands are owned by individual Tribal members, and then fee simple

land that is owned by the Tribe; also on many tribal reservations non-members own land within reservation boundaries. The beauty of carbon projects is that you can enroll all three types of land, which helps achieve goals toward the protection and preservation of the total Tribal land base. In that capacity, the Tribes that we are currently working with on project development have given internal directives to define how the revenue from the sale of credits is going to be distributed. In those projects, most of the revenue is going to fund land acquisition. Many Tribes are working toward returning Tribal lands back into Indian hands. Utilizing carbon revenue, Tribes can target certain parcels that they've been trying to acquire, since it was lost through what we call "crook and took"; land taken and stolen by different entities throughout our histories.

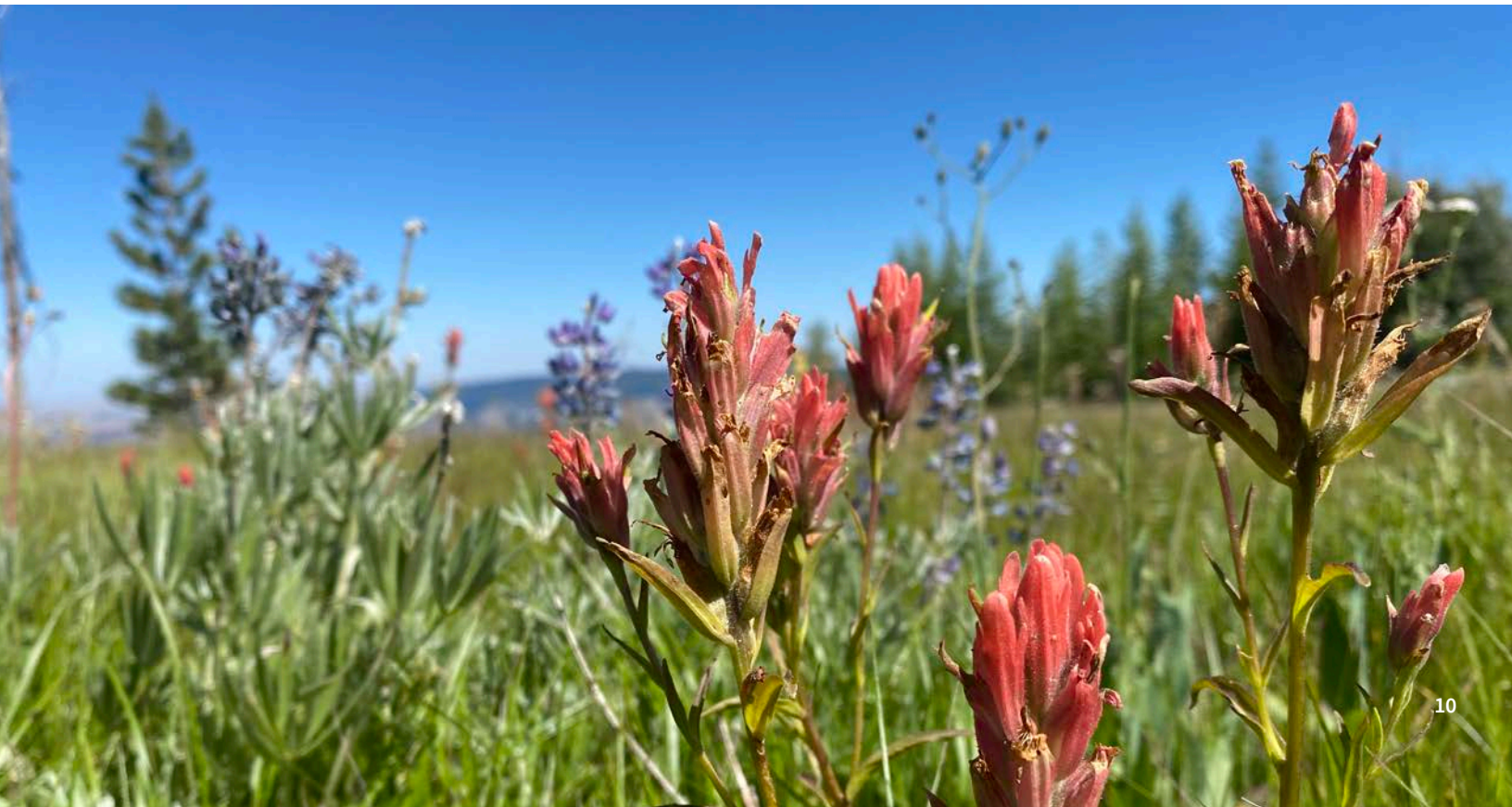
Many buyers of the credits also want to see what the owners of these carbon projects are going to utilize the revenue for, and we're able to tell them that it's to take back and control our land bases, plus developing additional projects focused on carbon sequestration, renewable energy, building efficiency upgrade projects, and weatherization of Tribal homes.

KS: That's great. So carbon revenues are unrestricted by the buyers?

BVS: Tribal leadership is in control of the budgets and how the dollars are dispersed. We work closely with leadership and staff at the Tribe to develop resolutions with a plan for how these funds will be dispersed internally. For instance, we're working with one Tribe in which they are going to be utilizing the carbon revenue to develop a Tribal school. Their Tribal school was built by the federal government in the 1960s and has never been updated. They're trying to do a \$20 million new build with all the bells and whistles to make it up to date for their community. We're advocating all of this to the buyers of their credits. We can tell them where the money is going to be directed, and that's what a lot of the buyers want to see. This also helps internally, so Tribal members, Tribal staff, Tribal leadership all know what the money is going to be directed toward.

KS: I'm sure that transparency is going a long way in promoting confidence in these projects. Can you share any examples of the kinds of projects you're doing?

BVS: We currently have two projects at market, one with the Fond du Lac



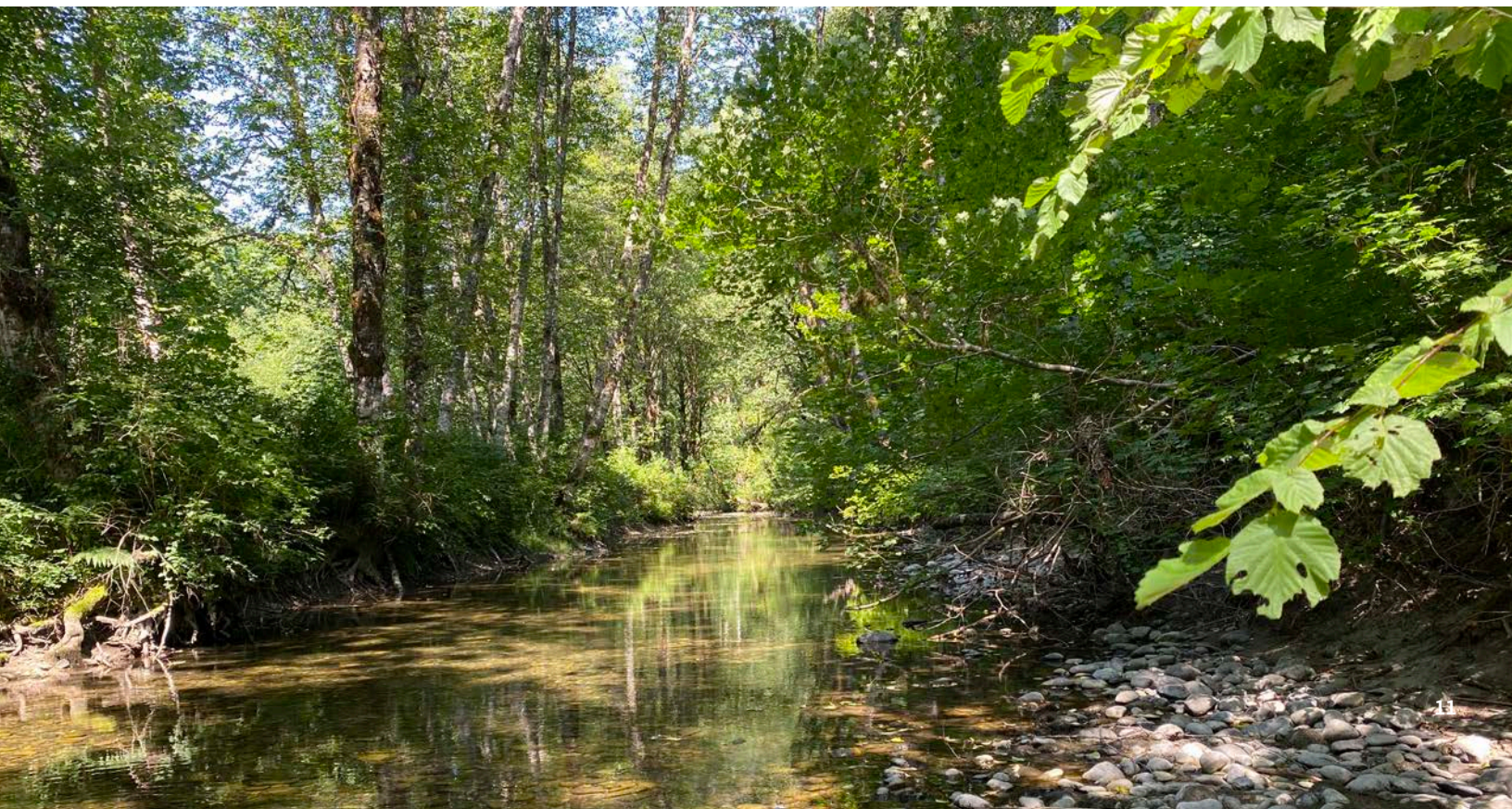
Band of Lake Superior Chippewa Indians, which is located just outside of Duluth, Minnesota, and with the Keweenaw Bay Indian Community in the Upper Peninsula of Michigan. Both of those Tribal projects are listed on the American Carbon Registry marketplace. We've worked closely with those Tribes on who can acquire the credits. Most Tribes don't want to sell to oil and gas or anybody up and down that pipeline, as well as some financial institutions that support the industry. This makes my job a little bit more difficult, because we only operate on the voluntary carbon market, which means that we sell credits directly to what we call socially responsible organizations. We have relationships with and make sure those organizations have the same or similar values to the Tribal Nation. Once we have an interested buyer, we go back to the Tribe to ask if they are comfortable selling credits from their project to a particular organization. One of the main concerns by Tribal membership about carbon projects has been the idea that selling carbon credits allows polluters to continue to pollute. Giving Tribes the final say on who can buy their credits has been a successful way of speaking to that concern.

KS: Can you share what your process is like to develop these carbon projects?

BVS: We at NICC have created the Tribal Land Conservation Initiative. Our goal is to protect and preserve Tribal natural resources. Through this program, again, we only operate on the voluntary carbon market. One reason for that is the duration of projects. The major regulatory market, the California cap and trade marketplace, requires a project duration of 100 years, which Tribes tend to be uncomfortable with. My opinion is that Tribes have been here since time immemorial, and Tribes are going to be here until time immemorial, but leadership has a tough time putting lands into 100-year projects. The second issue was that projects entered in the California cap and trade marketplace require a limited waiver of sovereign immunity. Tribal nations do not like to waive their immunity if they do not need to. The third issue was about allowing polluters to continue to pollute, because anybody could buy the credits, and the Tribe's had no control over who their credits were purchased by.

Projects in the voluntary carbon market have a duration between 30 and 40 years, which is more appealing to Tribal

Nations. There is no requirement for a limited waiver of sovereign immunity. And then as I mentioned, we work directly with Tribes to determine who can acquire the credits. We kicked that initiative off a few years ago, and now have five Tribal projects in our portfolio. Two are at market, and the other three are in the process of development, as it takes multiple years to get projects from start to finish. We're here to listen to Tribes' concerns and ensure that everybody's comfortable with the process. To make this sustainable, we've created a revolving fund, and are trying to raise \$5 million — we're about halfway there — to help cover the upfront development costs, so that Tribal Nations don't need to come to the table with any capital. We're trying to eliminate the financial risk as much as possible. With the revolving fund, once we start selling the carbon credits, we will be reimbursed for those upfront expenses, but we don't charge any sort of fees from Tribes. On the back end, we assist in the sale of the carbon credits, so that Tribes don't have to go through any broker services or pay additional fees. We want to make sure that the majority of the revenue is getting back into the Tribal Nations' hands so they can better their communities.



KS: What types of carbon projects are you doing?

BVS: All of the projects currently in our portfolio are what are called improved forest management (IFM) projects. We are moving toward more afforestation and reforestation by hiring a new position to focus on those types of projects. There are many Tribes out there that want to do reforestation projects, but they're much different than IFM, because there's a higher cost associated with putting trees in the ground. We are working with some large NGO partners to figure out how to cover those expenses. We are also exploring grassland projects through a couple of feasibility studies with Tribes, because not all Tribes have trees, a lot of Tribes have grasslands. And then in that same vein, some Tribes don't have large grasslands, but they have a lot of agricultural lands. We have another partnership in which we are looking at enrolling grazing and pasture lands as well as row crop lands into carbon sequestration marketplaces. It depends on what natural resource type the Tribe has; we try to find a solution for enrolling them into a project so that they can make some revenue. Some of those other projects don't generate quite as much as the forest projects, but they're still valuable to the Tribes.

KS: All of these ecosystems sequester carbon from the atmosphere at various rates, but I'm curious what kind of co-benefits come along with these projects? I hear that you've developed a tool to identify some of these additional benefits, can you share more?

BVS: A few years ago, NICC received a USDA NRCS Conservation Innovation Grant to develop a co-benefits tool. We have since found out that many buyers are strongly interested in seeing the co-benefits of carbon projects. These are things like soil, air, and water quality. Through our tool we also added a cultural component as well as a socio-economic component to track benefits to Tribal communities. Dr. Kelly Cain has been taking the lead on that project, and I'll let him share more about it.

DR. KELLY CAIN: The relationship between the Tribes and the land exists in a very holistic, systems approach, so the co-benefits represent that same approach applied to forest management. These are all of the ecosystem goods and services that are derived from healthy, intact forest ecosystems that are well managed. All carbon projects that are available to Tribes: commercial harvest improvements, reforestation, afforestation, grasslands,

wetlands, peatlands, biochar, even methane capture off of abandoned wells; these all cut across every element of Tribal ecosystems and socio-economic, cultural and spiritual objectives, and fulfillment of them on an intergenerational basis. The co-benefits model that we developed first is what we call the Tier1 Model. It's based on the best available public data across all the ecosystem and socio-economic goods and services. We've now put that model out for national debate, utilization, and value added appreciation on carbon projects. Having these co-benefits quantified could elevate the integrity of carbon projects, and provide value added benefits to buyers and greater revenue to tribes. We identified 283 metrics that are distributed across all 17 of the United Nations Sustainable Development Goals (SDGs) that buyers can use for ESG reporting. The environmental benefits measured by this tool include things like soil health, water impact, air quality, fire risk, and biodiversity.

We have that set of ecosystem focused metrics, and are also measuring a set of socio-economic and cultural metrics, which are predominantly derived from the American Community Survey, a subset of the US census that



is updated on a much more regular basis. Those include everything from unemployment rates, to the incidence of hypertension, diabetes, kidney disease, and other health measures. Employment is really important to our Tribes and partners. We want these projects to provide opportunities for Tribal members to receive technical and professional training, so they can manage these projects long term. These metrics are aligned with the SDGs to make data transfer and reporting accurate and efficient for companies that buy the credits.

Biodiversity is the “co-benefit” getting the most attention right now. It’s often described as a commodity of ecosystems that you can pull out in an isolated way. From a Tribal perspective, that’s pretty weird, because biodiversity does not exist outside of its relationship with the rest of nature and the Tribal cultures. Our biodiversity data is built around a biodiversity index, which basically gives a score to how rich is the breadth and depth of native species compared to invasives that are present, without getting into critical species populations and impacts. Tribes often do not want data around critical species for hunting, fishing, gathering, and especially around medicinal, cultural,

spiritual practices to be available to the general public.

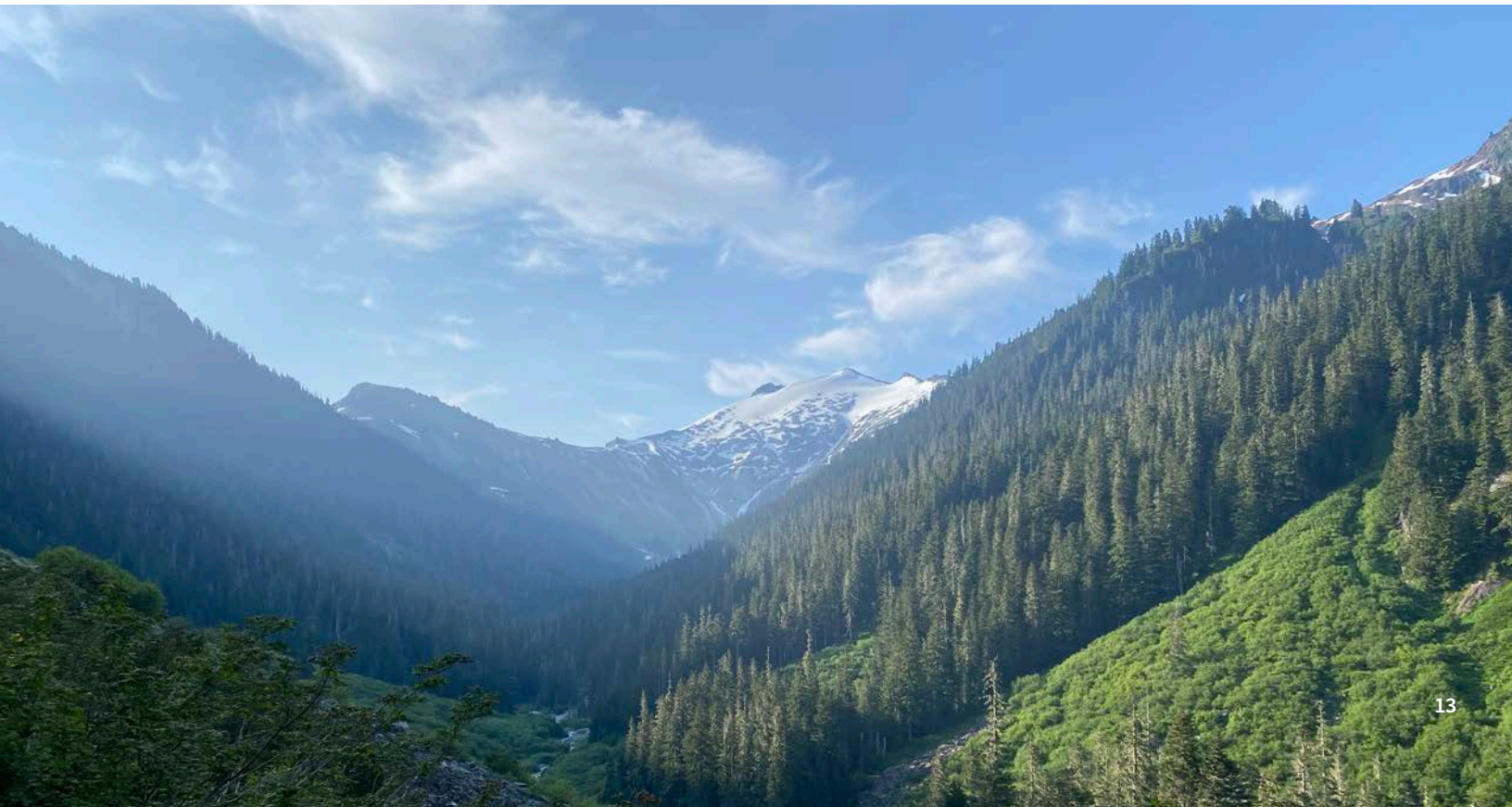
We are keeping that sensitivity in mind while moving toward a Tier2 Model, where we will add data that Tribes, co-managers at states and federal agencies, and regional Tribal management organizations can share. These data sets will be much more closely guarded in terms of confidentiality, but also get into critical species impacts. For example, in the Pacific Northwest, salmon are going to be one of the species we look at. We hope this iteration of the tool can benchmark and track the impacts of a carbon project on the population of a particular species.

Here in the Upper Midwest, one species that is significant to track is walleye. We know what the spot price is on carbon in various circumstances, but what happens to that when we couple it with data that we have around critical species and Tribal subsistence and cultural impacts? From a Western economics perspective, when I go to the grocery store, walleye is about \$10 a pound. But if you go to a Tribal reservation and ask what the walleye is worth, the answer is going to be very different. It’s important to note that all species, from black ash, to traditional rice, or Manoomin beds,

to cyanobacteria bacteria in the soil, impact other parts of the ecosystem and by extension, Tribal practices and lifeways. However, it becomes a fool’s errand to track every species. Instead, if we track critical keystone species, and we can see if populations are improving, declining, or holding steady, that will give us insight into the health of the whole ecosystem. We’re now moving toward a pilot application of the **Tier1 Model** to a Tier2 Model on a number of our upcoming carbon projects. It identifies all 574 federally recognized sovereign Tribes, and shows their entire land base, plus the best available public data across all of these metrics that we’ve identified.

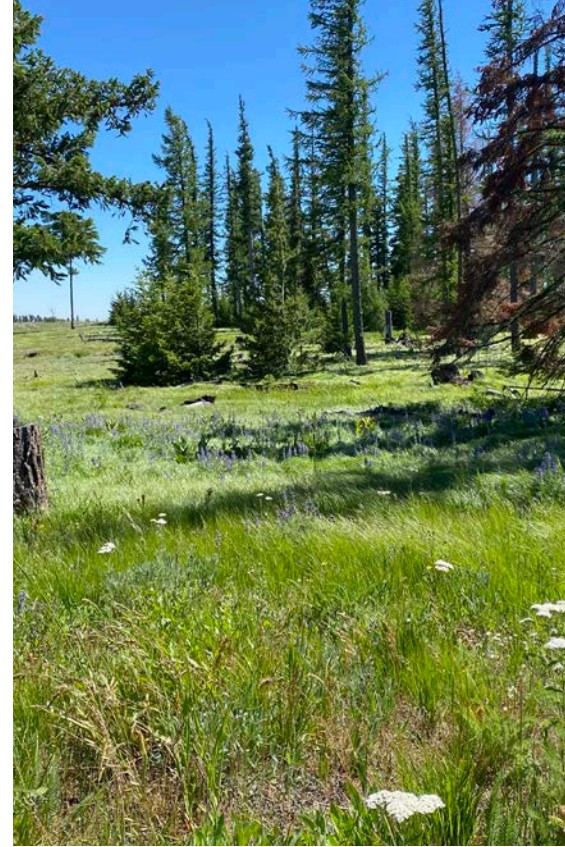
The inclusion of Tribal data brings up the issue of data sovereignty, which walks hand in hand with the keen interest buyers have in this. Our interest is in taking our model and utilizing it as a Tribal certification process that addresses the unique needs of Tribal projects. Many other carbon standards are more international in focus, and have not been developed through a North American Indigenous lens.

KS: How will data sovereignty and privacy be protected as the Tier2 Model is implemented?



BVS: There are many Tribal Nations involved, and we understand that not every Tribe may want to participate in sharing this data. We have good relationships with many Tribes, and they understand that this is information that a lot of buyers want to see, and it may add additional value to the carbon project. Our hope is that if we're able to gather and provide this data to certain buyers, that they'll be willing to pay a premium for it. This goes back to our goal of using the carbon revenues to reacquire traditional lands. Sometimes that's very expensive, depending upon what is currently happening on that land. For example, in the Pacific Northwest much of the former Tribal land base is currently owned by timber companies, and they want a very high price per acre for it. We're trying to figure out every way that we can show an increased value for these projects, and co-benefits are one of the methods

to do that. We want to ensure that we are working closely with Tribal leadership and staff to determine who is going to have access to that data, and to track information that is important to them. Kelly mentioned a couple of different species that we're looking at, and that is going to really come from the Tribes, including what information they don't want to share. Just like we talk about Tribal sovereignty over their government, we're talking about data sovereignty over their information to ensure that the Tribe retains control over any information shared. We understand it's a heavy lift. Not every Tribe is going to want to do it, but we are working with our current Tribal partners to show them the value of this information and why it needs to be collected. We're pretty confident that the Tribes that we are currently engaged with see the need for this, they understand the benefits.



Dr. Kelly Cain: Kelly is the founder and CEO of the St Croix Institute LLC, and spin-off of LICO2etm (GBC) — dba 'Locally Invested Carbon Offsets' — a public benefit corporation. Kelly has a long history of diversified clients and disruptive initiatives, including multinational and domestic corporations, non-profits, college campuses, and communities, both tribal and non. He serves as Senior Program & Policy Strategist for the National Indian Carbon Coalition.



Bryan Van Stippen: Bryan is Program Director for National Indian Carbon Coalition, an initiative of the Indian Land Tenure Foundation (ILTF) that provides education, training and technical assistance to American Indian tribes, Alaska Native Villages, Corporations, Native Hawaiian organizations and First Nations in Canada on the development of carbon credit and renewable energy projects on tribal land. A member of the Oneida Nation of Wisconsin, Van Stippen previously served for seven years as Tribal Attorney for the Ho-Chunk Nation Department of Justice in Wisconsin where he was responsible for land acquisition and other land-related issues. He earned a Bachelor's Degree in Business Administration and a Masters in Computer Information Systems from Tarleton State University in Texas. Van Stippen is a graduate of the University of North Dakota School of Law (J.D.); the University of Tulsa College of Law (LL.M. in American Indian and Indigenous Law); and the University of Arizona James E. Rogers College of Law (S.J.D in Indigenous Peoples Law & Policy). He lives with his wife and two children in Green Bay, Wisconsin.

Bryan is a representative on the [Voluntary Carbon Market Initiative Expert Advisory Group](#), a Legacy Member of the [Ecosystem Service Marketplace Consortium](#), and a representative on the [Bipartisan Policy Center Farm and Forest Carbon Solutions Task Force](#).

Promoting Understanding and Engagement Through Art on a National Stage

BEF staff Kayla Seaforth sat down for a conversation with Allyza Lustig, senior staff manager on the [National Climate Assessment \(NCA\)](#) team and program lead for [Art x Climate](#). *Art x Climate* is the first art gallery to be featured in the NCA. The US Global Change Research Program issued a call for art submissions with the understanding that, together, art and science move people to greater understanding and action.

KAYLA SEAFORTH: How did the idea for Art x Climate come about?

ALLYZA LUSTIG: This project started when Allison Crimmins, the director of the Fifth National Climate Assessment, joined the U.S. Global Change Research Program (USGCRP) and mentioned that she wanted to include more visual art in the National Climate Assessment. I have an informal arts background, so when I heard that my interest was piqued. Eventually, we convened a group from across the federal government with experience at the nexus of art, climate, and the environment. We had people

from the National Science Foundation (NSF), the Smithsonian Natural History Museum, FEMA, the National Oceanic and Atmospheric Administration (NOAA), and the National Portrait Gallery. Over the course of several months, we worked together and built out a call for artists, which launched the rest of this project.

KS: You received around 800 submissions, right? What was the process like to narrow it down to the 100 or so pieces that made it into the gallery?

AL: We convened what is called a “jury,” which is basically a team of evaluators. We had one jury for the youth artwork and one for the adult artwork. We also had a very intentional process that used a specific platform to help the jurors sort through the 800 pieces, which also collated the scores and kept the process blind and anonymous. Some of the criteria that they used to judge the pieces were things that

you’d typically see in an art contest, like originality, thoughtful design, composition, etc., but we also verified accuracy if there were references to science, and made sure pieces adhered to the theme. As an aside, we got a notable number of pieces about plastic — people seem to conflate climate change with pollution in ways that I wasn’t aware of. That was really educational for me, and maybe points to some work that we need to do.

After the scoring, we sat down, and deliberated. We realized that we had certain themes that had attracted more art — for example we got a lot of work about wildfire and glacier melt. We did some ranking within categories to make sure that we didn’t have overwhelming representation of any one theme or category.

KS: How do you think this showcase and art in general can help us understand and process the impacts of climate change?



Allyza Lustig

Senior Manager on the National Climate Assessment team at the US Global Change Research Program

Allyza Lustig is a Senior Manager on the National Climate Assessment team at the US Global Change Research Program, where she helps manage the assessment process and led the development of Art x Climate. Allyza has an interdisciplinary social science background with a focus on the boundary space between climate science and decision making. She is also a painter and is passionate about the power of art as a means of documenting climate change and inspiring action.

AL: Art and science are parallel ways of understanding the world around us. One thing that art does that figures and data typically don't do is engage emotion. I once heard someone say that emotion is the gateway to memory. If you think about your strongest memories, oftentimes they're tied to emotion. With this project, we're really trying to get people to internalize the issue of climate change, and art, with its ability to engage emotion, is incredibly powerful. The other thing I'll say is that it's oftentimes hard to relate to changes that are happening very far away. And yet, climate change is a global phenomenon.

Art allows us to transcend our individual perspectives and connect with things happening across the world.

Art humanizes climate change in a way that is critical because climate change is a deeply human crisis. It's caused by people, it's going to be addressed by people, and it affects people, in addition to natural systems. I think that when you put art and science together, they act in different ways, and they can be greater than the sum of their parts. That's really what we were trying to do with this: we took this project on with the understanding that together art and science move people to greater understanding, and then potentially to action.

KS: Well said. What kind of feelings did you see represented in the artwork?

AL: There was a lot of grief and anxiety, there was processing, there was some hope, and some determination, and a lot of love of place, and of community. I think it tells you a little bit about where people are at in their thinking.

KS: Why do you think the call for submissions was so well received?

AL: I think people oftentimes feel a little bit paralyzed about the issue of climate change, and don't really know how they can contribute. If you give people

an opportunity to do something, to be involved, I think they want to. This was an opportunity for artists to contribute to the conversation on a national scale, and I think that people were really drawn to that. The fact that people are looking for ways to contribute makes me hopeful, and we need to make more opportunities for them to do so.

KS: With the strong interest from the arts community that you received, are there any plans to include this in future assessments or expand on this work?

AL: It's a little early to say what the next assessment will be like, but in terms of what we're doing with this current project, we've developed a lot of exciting programming. We had a standing-room-only night of programming with the San Francisco Exploratorium. We brought Art x Climate to the American Geophysical Union annual meeting, which has something like 20,000 people attending.

We're setting up programming with the New York City Climate Museum. I'm very open to collaboration on other ways to share this too.

KS: Do you have anything else about this project that you want to share?

AL: We were very careful throughout this process to make sure we were clear that art is not science communication. Art is a parallel form of knowing and of observing, of documenting, imagining, interpreting. I think that's an important thing for scientists to keep in mind. Sometimes, for example, scientists think about including art as creating better graphics in reports. Although there sometimes are overlaps, in general art is not the same as better data visualization. I think that mindset can be alienating to artists, and if we're doing this respectful, truly interdisciplinary collaboration, it's really important to acknowledge art as a separate and critical way of knowing.

"I recently did a show in a small, very wealthy and conservative town where they were not in agreement with me on the issue of climate change. It was exactly the right place to show this work. Having a place where you can get people with differing opinions in a room to talk about this issue at all is an accomplishment. We had conversations about how things have changed and [specific concerns folks had with things like transitioning to renewable energy sources]. There was this clear split between how they engaged with the subject of the art and the beauty of the art. People were able to look past their politics and appreciate the work on another level. I couldn't ask for more than that as an artist."

James Keul

We could only highlight a small selection of the artwork featured in the Art x Climate Gallery, and reached out to artists whose pieces spoke most clearly to the themes of the Treeline newsletter. We highly encourage you to check out the full gallery of insightful and thought provoking works [here](#).



Fish in Troubled Waters

By James Keul

Finalist

Artist's Statement: This painting is about the effects of human-caused climate change and sea level rise on island and coastal populations. The people trapped within the composition, like fish in an aquarium, are disproportionately affected but not responsible for their circumstance. This piece was inspired by the noticeable effects of climate change in Polynesia. I witnessed eroding coastal areas and a reduced ability to provide agricultural subsistence due to saltwater infiltration when I returned to Samoa after 25 years.



Eutrophication

By Eric Tomberlin

Artist's Statement: Built infrastructure aims to tame the forces of nature, but it can also be hugely disruptive. This image was made in downtown Austin, TX on the Colorado River. Standing water is a breeding ground for the mosquitoes that carry West Nile virus and for algae, which feed off agricultural fertilizer and cattle waste washed into the water supply.



Imagining Climate Resiliency in the Pacific Northwest

By Claire Sianna Seaman

Artist's Statement: This piece was commissioned by the University of Washington Climate Impacts Group. Developed in collaboration with scientists and tribal members, the work acknowledges the inevitable while highlighting how we can cultivate good. From the urban West Coast to the shrubsteppe of eastern Washington, resiliency looks different in every landscape. True resiliency is not bound within the realm of science; social justice is equally as vital to every solution. The piece aims to make climate resiliency concepts more accessible. After all, before any goal can be accomplished, it must first be envisioned.

“The climate crisis hurts my heart... so for me, creating this work was a way to deal with my own climate grief... I could stay mad or sad... or I could choose to do something about it.. in a sense, taking those emotions and making them productive.”

Tammy West



Keeping it Together

By Tammy West

1st place award winner in the Adult category

Artist's Statement: Texas and much of the Western United States have been experiencing climate change-induced severe drought. This site-specific piece focuses on our collective climate grief. "Keep It Together" conceptually wills climate change and the drought to end by literally tying cracked earth back together. I wanted this piece to convey the desperate situation that we are in by mimicking surgical sutures or stitches with red string and nails. If we must resort to tying our world back together, we have nothing.



Reflecting on What I Could Be

By Snow Dietrich

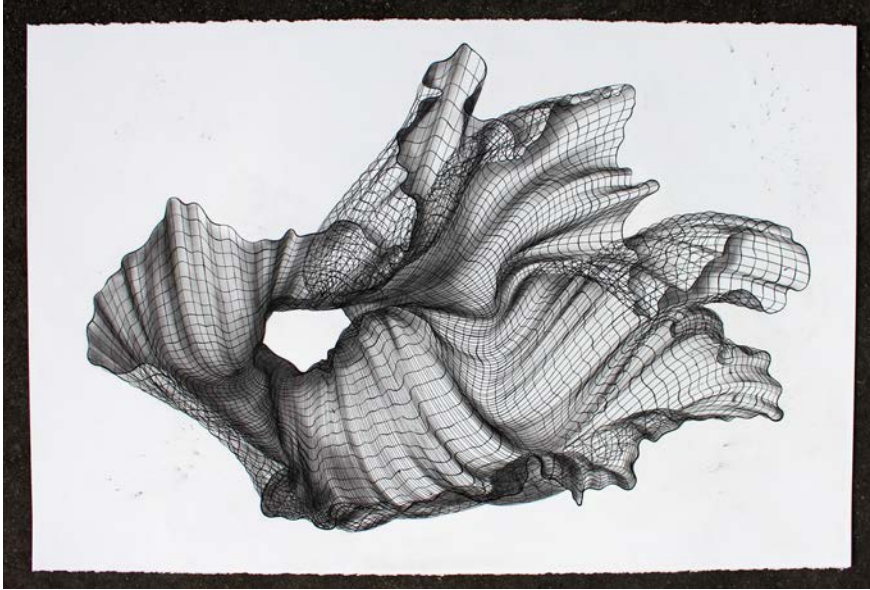
Artist's Statement: As natural areas are replaced with human development, we are stealing from future generations the right and joy of feeling a connection to the natural world. This piece shows a girl yearning for the experience of exploring a waterway, but the cityscape reflected in the water suggests the reality in her environment is different. I hoped to not only convey a solemn feeling, but also the optimism of youth to imagine what could be.



Rivers Feed the Trees #467 (Aquifers)

By Meredith Nemirov

Artist's Statement: Rivers Feed the Trees, is a series of works where blue is painted into the topography of historic maps to create an abundance of water and visually create a Colorado without drought. I hope people will be compelled to learn more about our water and to look for solutions to the dire situation we are facing, now and in years to come.



Rim Fire Progression

By Adrien Segal

Artist's Statement: I created the Wildfire Progression Series sculptures and drawings using geographic data to reveal the shape of wildfires as they grew over time. Wildfire is both a necessary process for a healthy forest ecosystem and very destructive to human lives. I bring attention to the dissonant forces at play in wildland areas that have regularly burned throughout history, and are increasingly being developed by humans, whose presence in turn disrupts the wildland ecology.

“Climate change is an intense topic. A lot of people look away and ignore it and I think it’s one of the jobs of an artist to not look away. To tackle these things head on, so that it can affect other people’s hearts, too.”

Tammy West

“I’m interested in the ways that actions toward climate resiliency also create a more beautiful world. We all know there’s a battle between those who are making moves towards resiliency efforts and those who think everything should stay the same as it’s always been. I think where art comes in, is finding the middle of the venn diagram where we all want the same things. With better public transportation, we all spend less time in traffic, and we can have more parks instead of parking lots. Our children are healthier when they breathe clean air And no one wants beloved, historic cities worldwide to be drowned in the ocean. The list goes on.”

Claire Sianna Seaman

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Upcoming Events

CONFERENCE:

Tribal Lands Staff National Conference

April 2-4, 2024

The 13th Tribal Land Staff National Conference will be held April 2-4, 2024 at Planet Hollywood in Las Vegas. This year's theme is Advancing Tribal Sovereignty in the Digital Age. Learn more and register [here](#).

WEBINARS:

Fire, Fuels and Density Management Webinar Series

This winter and spring, OSU Extension is hosting twice monthly webinars on topics related to fire conscious ecosystem management. Learn more and register for the series [here](#).

National Climate Assessment Webinar Series

The U.S. Global Change Research Program is presenting a series of webinars to share the findings of the 5th National Climate Assessment, with each webinar taking a look at a specific chapter. Learn more, register and view the archive [here](#).

Yale Forest Forum on Tribal Forestry

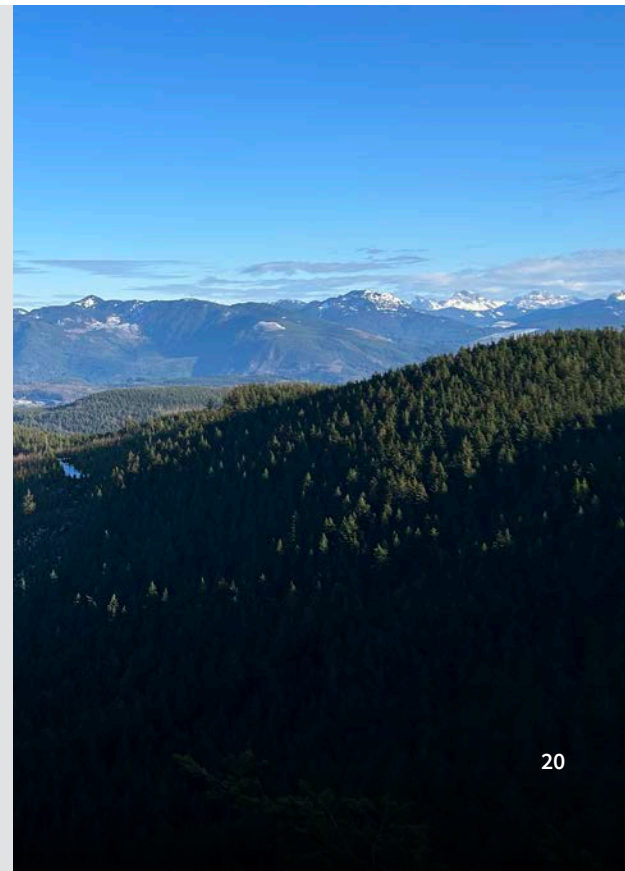
This spring speaker series is co-developed and co-hosted by The Forest School at the Yale School of the Environment, the Yale Center for Environmental Justice, and Salish Kootenai College. Webinars will take place on Thursdays through April 25. Learn more and register [here](#).

Does your organization plant trees and shrubs in the Willamette Valley?

Our Collaborative Grow native nursery partners would love to hear from you! In the spirit of increasing collaboration and information sharing between planting and nursery partners, we are seeking the following information from planting organizations:

- What species are having the highest and lowest survival rates? Any relevant info you can give about site conditions would be great.
- What species does your organization plan to plant more of in the next 3-5 years?
- If any Willamette Valley organizations are interested in experimenting with late summer / early fall lifting and exploring off season planting, please let us know and we can connect you with an interested nursery partner.

Have information to share? Please email hbuehler@b-e-f.org with the above info or with any other feedback you'd like to share with Willamette Valley nurseries.





Additional Reading

Survey Looks at Public Knowledge of Estuaries

A survey conducted by Puget Sound Institute found that 75% of Puget Sound area residents did not correctly identify Puget Sound as an estuary. Learn more from Puget Sound Institute [here](#).

Fourth Dam Breached on the Klamath River

In late January, the fourth and final dam in the current removal project on the Klamath was breached. Learn more from Oregon Public Broadcasting [here](#).

What is 'Assisted Migration' and What are the Risks?

A story from Columbia Insight highlights assisted migration trials from around the region, and features reflections from many working to test and shape this strategy, many of whom have been featured in previous issues of Treeline. Read the full story [here](#).



watersheds
program

Do you have an idea for a future newsletter article or interview, or a suggestion for how we might improve? Please reach out to Kas Guillozet at kguillozet@b-e-f.org.

This issue of Treeline is supported by the *Building Nursery and Recovery Infrastructure for Climate and Fire Resilient Oregon Forests Project* which is supported in part by a subaward from an agreement between the USDA Forest Service and Sustainable Northwest.