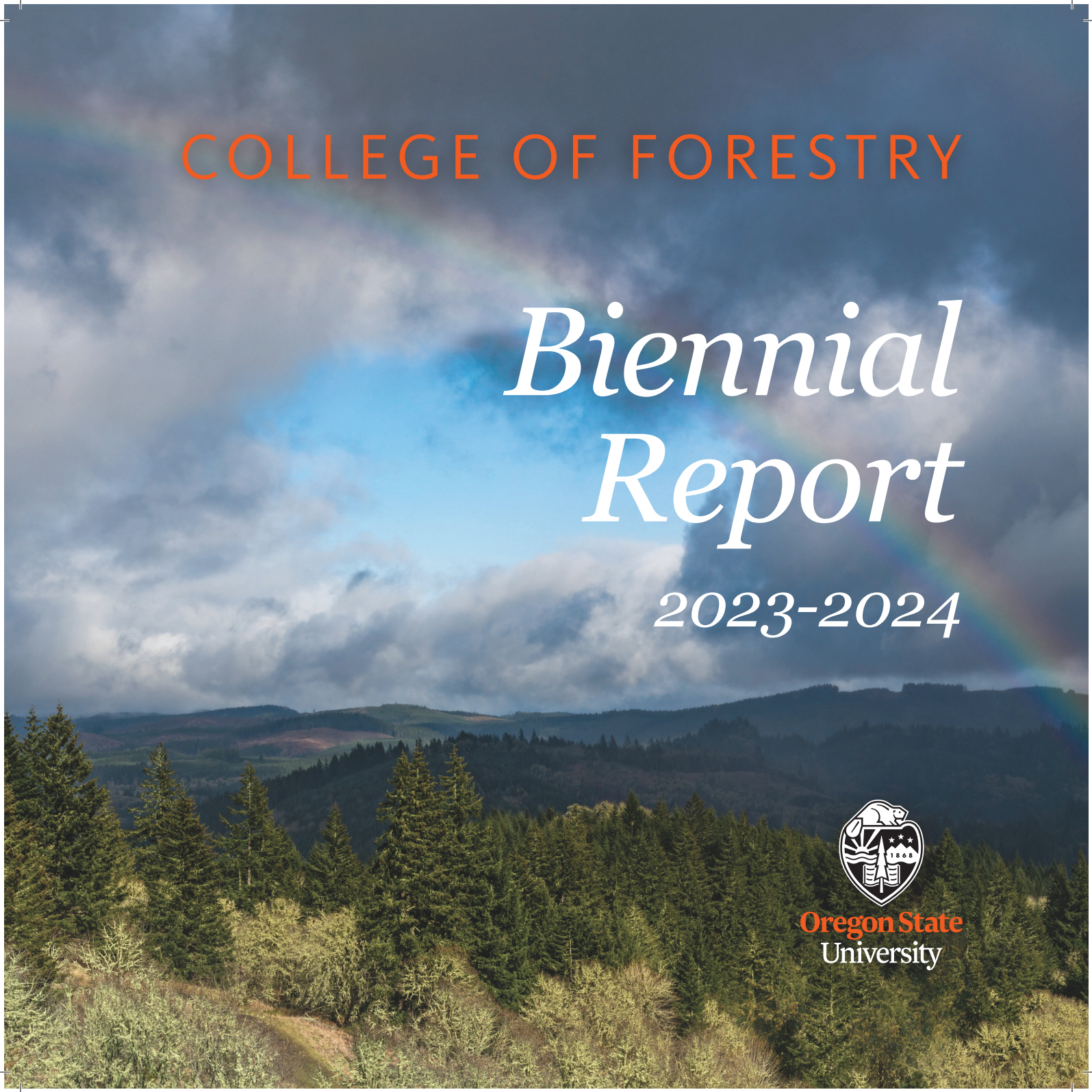

COLLEGE OF FORESTRY
Biennial Report
2023-2024
Oregon State University

College of Forestry

Biennial Report 2023-2024

Tom DeLuca
Cheryl Ramberg-Ford and Allyn C. Ford Dean of the Oregon State University College of Forestry

Our forests and natural resources operate as interconnected systems, where changes in one area can trigger ripple effects throughout. Every component — air, water, land and living organisms — is interdependent, influencing one another in profound ways. Like any complex system, whether in economics or education, our environmental system can be challenging to change.

Yet, I am often reminded that humans are inextricably linked to nature, to our forests and wildlands. And people possess the power and responsibility to create bold, transformative and sustainable solutions for our planet.

At the College of Forestry, our strength is in our community — students, faculty and staff — working together to drive our systems toward sustainability, progress and equity. As a dynamic and growing college, we are continuously expanding our capacity through new initiatives, faculty and expertise — ranging from carbon dynamics to mass timber and Indigenous Knowledge. With each new member, we inject fresh energy, ideas and research into our collective mission.

As systems thinkers, we understand that when people share a common vision, they can drive positive change more effectively. This led us to create a new strategic plan — our roadmap for a shared vision, which you can explore on the next page.

Systems thinking is inherently self-reinforcing. The more we nurture connections between people and solutions-based research, the greater our system's capacity for positive change. These transformations can be monumental or subtle, but they should always be intentional, dynamic and aligned with our commitment to a sustainable world. This report explores some of the transformations that have taken place at the college over the last biennium.

Thanks for reading, and for your interest in and support of our work.

Driving Forward Our Strategic Plan

This is a pivotal time for forestry — and for humankind — and the College of Forestry's leadership is needed more than ever before. We are committed to building an inclusive culture at the college and identifying and removing barriers to provide equitable access to research, learning and engagement. We are ready to accelerate our work to create thriving ecosystems, economies and communities. An impact that starts in the Pacific Northwest but is adopted on a global scale.

In 2023, we launched a strategic plan to guide our work, and gathered feedback across the college to make our vision actionable. Together, guided by the values on the opposite page, we are working toward the three goals of:

GOAL 1

Inclusive, experiential and impactful academics

GOAL 2

Transformational research and scholarship

GOAL 3

Community-focused outreach and engagement

Read the full plan at: beav.es/GAR

OUR VALUES

VISION

We are forward-thinking, encouraging our students, alumni and community partners to be passionate agents of change.

CRITICAL THINKING

We embrace sound scientific practices and alternative ways of knowing to educate and prepare students to become critical thinkers and successful communicators.

RECIPROCITY

We acknowledge that our facilities and forests are located on the traditional homelands of a diversity of Indigenous peoples who were forcibly removed from their lands and relocated to reservations. We navigate, and are part of, systems that marginalize people, and we take thoughtful action to decolonize our practices and ensure a diverse, inclusive and equitable environment for work and study that honors Sovereignty Rights. We respect the contributions of Indigenous communities and center our work around the Seventh Generation Principle, and incorporate multiple ways of knowing and cultural humility into our understanding and stewardship of natural resources.

STUDENT SUCCESS

We prioritize interactions, programs and services that provide transformative learning opportunities and enthusiastically support students in pursuit of their academic and professional goals.

SUSTAINABILITY

We promote land and resource stewardship to strengthen and protect the connection between communities, people and the landscapes they inhabit in the Pacific Northwest and beyond.

CREATIVITY

We embrace and promote the need for novel ideas and diverse voices to solve complex problems, engage in continuous improvement and advance knowledge and truth.

TRUST

We foster relationships and a culture of service within and beyond our College community and are committed to nurturing a climate of collaboration, accountability and trust with each other.

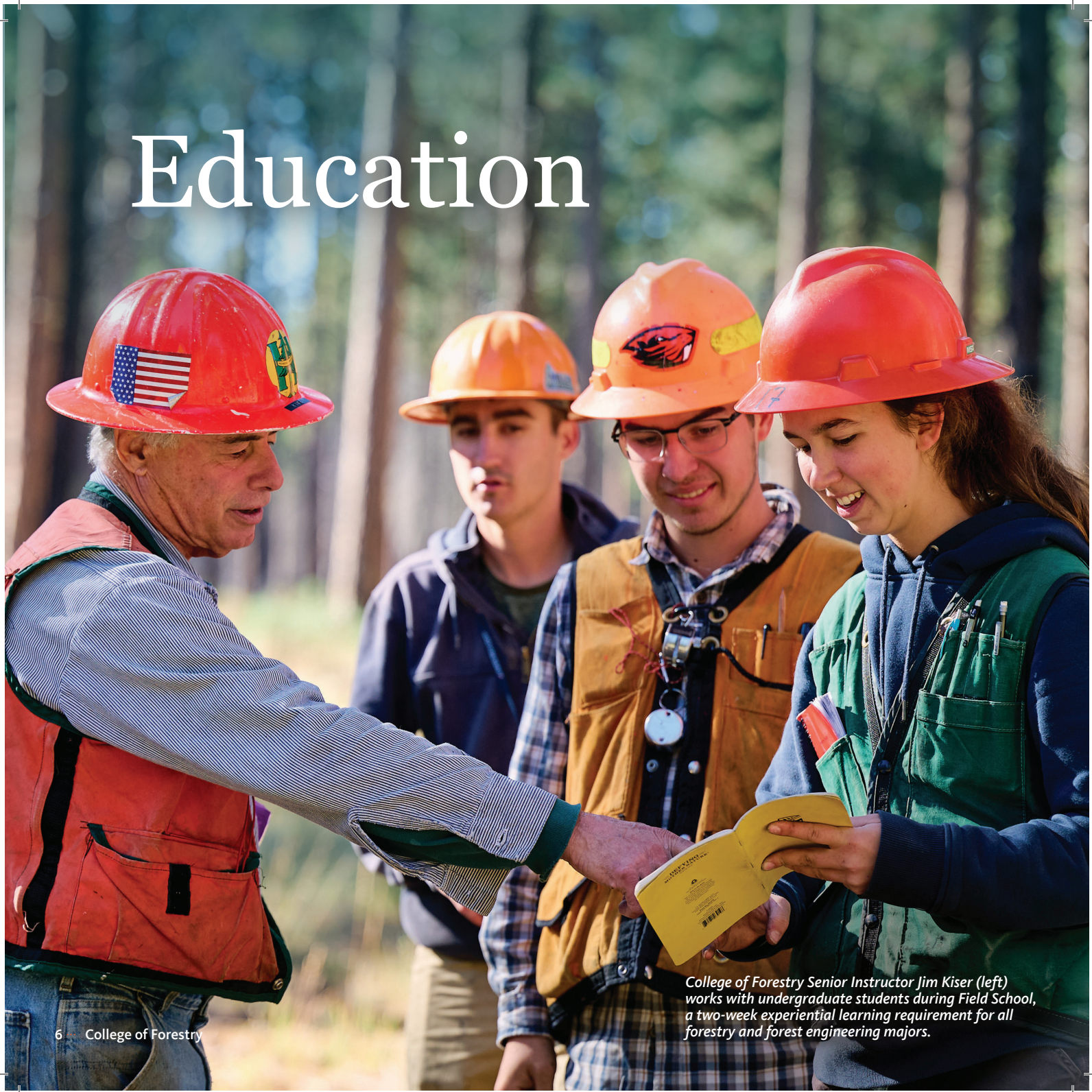
INCLUSIVITY

We foster a culture of acceptance, equity, understanding, belonging and empowerment in our learning community and emphasize an environment that is welcoming to all.

CARE

We embrace a way of being that embodies openness, self-awareness, empathy, willingness to listen and a growth mindset of lifelong learning.

Education



College of Forestry Senior Instructor Jim Kiser (left) works with undergraduate students during Field School, a two-week experiential learning requirement for all forestry and forest engineering majors.

College of Forestry students come from around the globe, with diverse backgrounds, strengths and goals. From classroom to career, we strive to create a holistic support community that acknowledges the unique experiences and strengths of students and is attentive to their needs. We continue to focus on responsive increases in our student services staffing, program accessibility and financial support to give every student the best possible chance of success. Over the last two years, we've:

Increased enrollment and student scholarships to record numbers

Total enrollment increased by 8% over the prior biennium. We also increased first year retention of new freshmen by 7% and provided over $2 million in scholarships and fellowships to support the next generation of forestry and natural resource leaders as they work toward their degrees.

Expanded student support services and college program offerings

We added two academic undergraduate advisors, added a full time career advisor and revised our recruiting strategy to improve pathways and onboarding for incoming students. In 2024, the college offered its Tourism Recreation + Adventure Leadership undergraduate degree online for the first time, increasing access for non-traditional students and those unable to study on campus.

Improved access to experiential learning and research opportunities

The college increased financial support for experiential learning, including a 200% increase in funded student participation in URSA Engage opportunities. URSA Engage matches first-year, second-year and first-year transfer students with OSU faculty to conduct research in their field. We also grew funded undergraduate research positions by 64% through the college's Mentored Employment Program, and awarded nearly $20,000 in support of student-identified experiential learning opportunities.

Attended to the high financial need of our student population

The college increased access to scholarship support and resources to address financial hardships and reworked the graduate and undergraduate scholarship process to increase the equity of the awards process. We also implemented a $20,000 Ecampus Persistence Grant to help online students maintain their enrollment when financial challenges arise.

Reduced achievement gaps for underserved students

The college awarded over 600 undergraduate and graduate degrees and certificates between 2022–2024. Since 2022, our 6-year graduation rate increased by 11.5% to a high of 75.9% (vs 69.8% OSU overall). In the last year alone (2024 vs. 2023), this includes an increase of 10.8% (to 73.3%) for students of color. Additionally, as of 2024, Pell eligible COF students had an impressive 81.8% 6-year graduation rate compared to 72.2% for non-Pell eligible students.

Amy Riley
Director of Student Success

8%
enrollment growth in 2023-2024

$2M
in student scholarships awarded

673
undergraduate and graduate degrees and certificates awarded

Inspiring Student Voices

Glenn Jones, ’26

Graduate student, Sustainable Forest Management

National Wildfire Coordination Group Prescribed Fire Burn Boss Type 2 (RXB2) program enrollee

“This research — reconstructing historical fire regimes and blending Indigenous knowledge and Western science to revive traditional burning practices, support ecosystems and sustain cultural resources — is not only meaningful to me personally, it’s impactful to our next seven generations as we face an uncertain future with climate change and contemporary wildfires. Co-stewardship of the landscape with Tribes, agencies and stakeholders is essential in informing management of forest ecosystems of the future.”

Molly Pearson, ’24

Undergraduate student, Wood Innovation for Sustainability, Art & Design option

2023-2024 PRAx Student Fellow

Applied Mycology Lab Research Assistant

Multi-cultural scholars program member

“The College of Forestry was the right place for me because it offered both intellectual challenges and a strong connection to nature, which aligned with my passion for sustainable design. The college’s focus on interdisciplinary learning and environmental responsibility helped me grow academically and personally, shaping my approach to long-term sustainability in the built environment.”

Brendan Deur, ’25

Graduate student, Forest Ecosystems and Society

Alumnus (‘23), B.S. Natural Resources (dual enrolled in the Honors program)

Received the Presidential Scholarship, OSU’s most prestigious and competitive scholarship

“I knew I wanted to work outdoors, and I’ve always felt passionately that the natural world needs wise stewards. As an undergraduate at OSU, the natural resources pathway and the sustainability program allowed me to integrate knowledge from numerous fields, and I felt that this would provide the best holistic forestry education for me. My graduate work in the College of Forestry has allowed me to expand on that training, as I seek to understand how to apply Native American Traditional Ecological Knowledge to practical, modern forest management challenges.”

Anika Showalter, ’28

Undergraduate student, Forest Engineering/Civil Engineering

OSAF Foundation Scholarship Recipient

SAF Corvallis Student Chapter Co-Tree Farm Manager

“Growing up in Oregon, I’ve always understood the crucial role that forest stewardship and the timber industry play in both our economy and ecology. The College of Forestry has given me a unique opportunity to turn these values into a meaningful career. With its focus on hands-on fieldwork and access to a diverse range of faculty — from experts in cutting-edge research to those with practical experience in commercial timber harvest — I’m gaining the skills needed to make a real difference. I’m learning how to balance the need for renewable materials with sustainable practices that will ensure these resources remain available for future generations. When I first arrived at Oregon State, the college’s smaller size surprised me, but its tight-knit community has fostered cross-disciplinary relationships and a deeper sense of belonging that I’ve found rare in larger institutions.”

Sydney Andersen, ’23

Forest Engineering Intern, OSU Research Forests

Alumnus (‘23), B.S. Forest Engineering

Riparian Monitoring Research Project Intern, COF Mentored Employment Program

Semester abroad, University of Canterbury, New Zealand and Université Laval in Québec, Canada

“My study abroad experiences allowed me to learn global perspectives in forestry while my internships gave me helpful hands-on experience in forestry, enabling me to explore different avenues to applying a forest engineering degree. And of course, my favorite experience while at the College of Forestry was Field School. I made connections that turned into a tight-knit community that I enjoyed growing and learning with during my time at OSU. Not to mention, swimming at the lake was a fun way to wrap up a summer!”

Hunter Holeman, ’23

Graduate student, Forest Engineering, Resources and Management with a focus on silviculture

Alumnus (‘23), B.S. Forest Engineering

Student Forest Manager Intern, OSU Research Forests

SAF Corvallis Student Chapter Vice Chair

“The College of Forestry is distinguished by its ability to transform curiosity into professional expertise. As an undergraduate and now as a master’s candidate, I’ve developed the skills to sustainably manage forest resources, serve the broader Oregon community, and lead peers aspiring to achieve similar goals. The college’s reputation is built on academically outstanding yet personable faculty, stellar and inviting staff, and its globally unique, accessible research forest. This environment fosters individualized experiences that culminate in the production of capable, well-prepared professionals.”

Innovative Curriculum and Learning Opportunities

Fire and restoration curriculum updated with new courses

Led by Associate Professor **John Punches**, Guard School is a wildland firefighting course with field sessions on campus and in the College of Forestry's McDonald-Dunn Research Forest. With credit and non-credit versions, as well as undergraduate and graduate options, the program is open to OSU students and employees. Guard School utilizes National Wildfire Coordinating Group and Federal Emergency Management Agency curricula and certifies participants as entry level wildland firefighters. Punches also leads the prescribed fire practicum, which teaches students how to use prescribed fire to achieve ecological and fuel reduction objectives, with an emphasis on private land efforts. The course includes student-led prescribed fire implementation. Additionally, Associate Professor **Daniel Leavell**, in collaboration with Professor Mark Hoffman from the College of Health, created a new Wildland Firefighter Health and Safety course, and work is underway on an Ecampus course, Dealing with Stress in Wildland Fire. Funding for these new courses has been provided through a grant from the Bureau of Land Management.

Bridging gaps between forestry and engineering to promote community wildfire resilience

Wildfire researchers from Oregon State University, including College of Forestry Assistant Professor **Chris Dunn**, received $750,000 for multiple projects to advance the science of wildfire risk and resilience. The strategies include embedding a doctoral student in Ashland, Oregon, the site of the largest primarily urban blaze in Oregon history that occurred in 2020; planning a global center for transdisciplinary wildfire research on community resilience; and creating a wildfire risk and resilience graduate program jointly advised by faculty in OSU's colleges of engineering and forestry.

Training the next generation in digital manufacturing and mass timber buildings

Arijit Sinha, professor and JELD-WEN Chair of Wood-based Composites Science, received a USDA grant to fund summer internships for 50 undergraduates over five years. The internships focus on research and outreach, fostering critical thinking and problem-solving skills to prepare students for the workforce. With growing sustainability concerns, these internships emphasize digital manufacturing and wood technology, equipping students with the expertise needed in the expanding mass timber sector.

Community based project advances timber structural engineering

Timber Tectonics in the Digital Age is the first and only collaborative course between the College of Forestry's Wood Science and Engineering department and the University of Oregon's Department of Architecture. The course, co-led by **Mariapaola Riggio** "Richardson Chair in Wood Science and Forest Products" (pictured far right) and UO's Nancy Cheng, explores timber structural systems and creates new design possibilities using digital techniques, modeling and tools. To incorporate real-world learning, the class partnered with the city of Salem, Oregon, through the Sustainable Cities Institute to create a prototype for a covered structure or park shelter. Permanent shelters are expensive and cheaper alternatives that can be deployed quickly are in great demand. The students created a design inspired by the circular economy which minimized waste, used components cut from scraps and promoted reuse.

With support of the TallWood Design Institute and material donated from Roseburg Forest Products, the class built a prototype that could be deconstructed and reassembled within six hours. The structure, made from engineered wood panels, uses a kit-like approach with the components interconnected using wood-to-wood joints.

Passionate and Committed Educators

Darius Adams

Woodam Chung

Globally recognized as leaders in their fields

The late Professor Emeritus **Darius Adams** played a key role in establishing OSU as a world leader in forest economics. His tenure from 1974 to 2009 was marked by significant contributions to the field. In 2023, Adams was awarded the Wallenberg Prize alongside Joseph Buongiorno and Richard W. Haynes, for the development of a pair of groundbreaking forest economic models. This honor, the highest award in forestry, is a testament to his profound impact and enduring legacy. Adams passed away on December 7, 2023. In remembering him, we celebrate a life dedicated to advancing forest economics and inspiring future generations of scientists and scholars.

Woodam Chung, the Stewart Professor of Forest Operations at the College of Forestry, was recently elected as the vice president for divisions of the International Union of Forest Research Organizations. IUFRO is the most prestigious international forestry organization in the world, and since 2014, Chung has been the chair of Division 3 Forest Operations Engineering and Management. He began his five-year term as vice president in June 2024 at the 26th World Congress held in Stockholm, Sweden.

Three members of the College of Forestry community also received awards at the IUFRO World Congress in Stockholm, as listed below:

John Sessions

OSU Distinguished Professor Emeritus

IUFRO Scientific Achievement Award

Pipiet Larasatie

Ph.D. Wood Science and Engineering, '21

IUFRO Outstanding Doctoral Research Award

Kamana Poudel

Ph.D. Forest Engineering, Resources & Management, '24

IUFRO Student Award for Excellence in Forest Science

Shaping solutions for our biggest challenges

Meg Krawchuk

Associate Professor **Meg Krawchuk** was named to a federal advisory panel charged with updating the landmark 1994 Northwest Forest Plan. The plan is a 100-year strategy for administering portions of federally managed lands in Oregon, Washington and northern California, with a focus on protecting old growth and other habitat while also providing for forest products, water quality, recreation and additional forest uses. Krawchuk is one of 21 experts selected by the U.S. Department of Agriculture to develop an amendment that reflects new management needs necessitated by climate change, wildfire risk, insect infestation, disease and other threats to federal forests in the region.

"This is a critical opportunity to contribute our perspectives to help chart the course of forest management and social-ecological adaptation in the region for future generations," said Krawchuk.

Rajat Panwar

When world leaders convened in New Delhi for the 2023 G20 Summit, they received policy briefs by the Think 20 (T20) engagement group to inform their decisions, including one led by Associate Professor **Rajat Panwar.** As a lead author of a policy brief by a T20 taskforce focused on accelerating sustainable development goals, he worked with four other experts to create "Aligning G20 Industrial Policies with Biodiversity Conservation."

"Our key conclusion was that biodiversity conservation cannot be left to markets," said Panwar. "G20 countries must make biodiversity conservation a core priority in industrial policies related to investments and manufacturing."

Panwar and COF postdoctoral scholar **Jazmin Tovar** also co-authored "Bioeconomy Assessment for Latin America and the Caribbean" by the U.N.'s Food and Agriculture Organization.

Ian Munanura

Associate Professor **Ian Munanura** has led research collaborations with multiple institutions to address human-wildlife conflict in East Africa. This has led to two sustainability advancing initiatives in the Global South, where biodiversity faces significant pressures: (1) Human-Wildlife Conflict Research Network (East Africa), a collaborative online platform aimed at bridging the gap between research and practical solutions to human-wildlife conflict; and (2) Center of Excellence for Sustainable Tourism Research at Makerere University, focused on monitoring risks to tourism in East Africa, guiding evidence-based policies to balance wildlife conservation with human development and supporting private-sector tourism investments.

"By fostering innovative, science-driven solutions, this work is contributing to a more sustainable future for Africa's wildlife, communities and tourism industry," said Munanura.

International Programs

Learning about the beautiful landscapes of New Zealand is just one option that College of Forestry students have for study abroad opportunities.

The College of Forestry is still the only college at Oregon State University with a dedicated International Programs Office, which was first established in 2013. With over 20% of students participating in study abroad, it boasts the highest percentage of student involvement across the university. The office helps break down barriers to global exploration by providing legal and logistical support to students and faculty. This support makes it easier for researchers to approach their work with a global lens and opens the doors to international collaboration. Over the last two years, the COF International Programs Office has:

Enabled research and collaboration across countries and continents through new exchange programs

The College of Forestry, ranked No. 1 in the U.S., initiated a new exchange agreement with the No. 1 globally ranked Swedish University of Agricultural Sciences. OSU students can now study at one of SLU's three main campuses, or any of its 25 teaching and research locations across the Nordic countryside. Courses include forest management, ecology and planning and policy, enabling COF students to go beyond national borders to gain global perspectives.

Secured 2023 U.S. State Department IDEAS grant to advance international relationships

The College is a proud recipient of a 2023 Increase and Diversify Education Abroad for U.S. Students (IDEAS) program grant. This funding will allow the International Programs Office to deepen relationships with its Chilean counterparts to create even more diverse and inclusive study abroad opportunities for students in STEM programs.

Introduced summer internship program for international undergrads

In the summer of 2024, the College of Forestry launched the Branching Borders internship program, where international partner universities nominated students for three-month summer research internships with COF faculty. The program aims to strengthen global partnerships and attract more international graduate students. 2024 interns came from Nigeria, Sweden, Uganda, Chile, Albania and Austria.

Improved access to immersive experiences with new passport-free Maine program

This new program opens experiential learning opportunities to students who are unable to travel abroad. Led by **Mindy Crandall**, associate department head of the Forest, Engineering, Resources and Management department and associate professor in forest policy, this week-long program allows students to learn about East Coast forest harvesting, maple sugaring, and Indigenous and government land rights easements, all while exploring a new landscape.

Rachael Fahrenbach
Director of International Programs

5
faculty-led programs on 5 continents

11
internship sites across 8 countries

38
visas supported for incoming students and scholars

Research

Professor Temesgen Hailemariam and graduate student Suchana Aryal perform fieldwork in the McDonald-Dunn Research Forest.

Forestry is, by nature, transdisciplinary and interdisciplinary. To advance new solutions, COF research spans multiple disciplines and ways of knowing to ensure the resiliency of our forests for generations to come. We do this work in classrooms, labs, on public and private lands across the state, including the H.J. Andrews Long Term Ecological Research Forest, in the college's 15,000 acres of research forests and through our 11 research cooperatives. Our world-class scientists lead studies that span the spectrum from climate resilience to plant genetics to wildfire science to clean energy. A few highlights of this work include:

Established the Center for the Future of Forests and Society

The College of Forestry is designated by the state legislature as Oregon's Forest Research Laboratory, guided by a diverse 15-member advisory council that supports the dean in identifying research priorities. In 2023, the college re-envisioned this advisory council, formerly known as the Institute for Working Forest Landscapes, as the Center for the Future of Forests and Society. Led by Director **Michael Paul Nelson**, professor of environmental ethics and philosophy, CFFS is working to holistically address the challenges facing Oregon and the world. Learn more at: **beav.es/GAP**

Continued advancing U.S. adoption of mass timber through Oregon Mass Timber Coalition leadership + Pacific Northwest Tech Hub

In October 2023, TallWood Design Institute, housed within the College of Forestry, was designated as one of 31 Tech Hubs by the U.S. Department of Commerce's Economic Development Association. The Pacific Northwest Mass Timber Tech Hub designation included EDA funding to support our work in establishing the region as a national leader in mass timber over the next 10 years. This follows a 2022 EDA award of $41.4 million to the Oregon Mass Timber Coalition, of which TDI is a founding member. $24 million of that funding came directly to the college to support OMTC's objectives of accelerating the use of mass timber, restoring forests, creating jobs and addressing the housing crisis.

Built capacity in advanced technology and nature-based climate solutions

The college hired several new positions in advanced wood manufacturing. This expertise will allow for better integration of robotics, machine learning and artificial intelligence in developing innovative sustainable forest management strategies. To further advance nature-based solutions to climate change, the college also made strategic faculty hires in forest carbon cycle science, carbon systems dynamics — how carbon moves or changes within the earth's system — and policy and economics of forest-based climate solutions. Nature-based solutions, like forested riparian buffers and natural floodplains to mitigate flooding, help solve environmental challenges to benefit people and planet.

Katy Kavanaugh
Associate Dean of Research

$45M

in research grants and contracts

11

research cooperatives supporting government and industry

315+

refereed publications published by COF faculty and students

Research Profiles

Artificial intelligence enhances monitoring of threatened marbled murrelet

Research by the College of Forestry and the U.S. Forest Service shows that artificial intelligence analysis of data from acoustic recording devices can serve as a promising new tool for monitoring the marbled murrelet, an elusive Pacific Northwest seabird.

A research team led by Professor **Matt Betts** and Adam Duarte of the U.S. Forest Service's Pacific Northwest Research Station used data from acoustic recorders, originally placed to assist in monitoring northern spotted owl populations, at thousands of locations in federally managed forests in the Oregon Coast Range and Washington's Olympic Peninsula. Researchers then developed a learning algorithm to mine the recordings for murrelet calls. Findings, published in *Ecological Indicator*s, were tested against known murrelet population data and determined to be more than 90% accurate. The results promise advances for rare species distribution modeling and long-term population modeling that are less labor intensive. Other contributors include College of Forestry graduate student **Matthew Weldy,** Zachary Ruff of the College of Agricultural Sciences and **Jonathon Valente**, a former COF postdoctoral researcher now at the U.S. Geological Survey, and Damon Lesmeister and Julianna Jenkins of the U.S. Forest Service.

Tracking and monitoring landslide risks and hazards

Associate Professor **Ben Leshchinsky** has been actively working on various projects relating to landslide hazards in Oregon, the western U.S. and internationally. This includes installation of weather stations, collecting repeat LiDAR data, as well as two projects supported by the Oregon Department of Transportation to evaluate changes in root strength in wildfire areas and setting up real-time monitoring stations at multiple landslides across Oregon. Further, he is exploring the cascading hazards stemming from wildfires in California and Oregon as part of multi-disciplinary projects supported by USDA National Institute of Food and Agriculture. He has also been collecting data and modeling large, slow-moving landslides in New Zealand as part of a National Science Foundation-supported effort in collaboration with GNS Science, New Zealand's geological survey. And finally, he is personnel on the recently funded $15 million Cascadia Region Earthquake Science Center, working to understand the impacts of subduction zones on landslide hazards in the Pacific Northwest.

Estimating photosynthesis from space

Assistant Professor **Loren Albert** and her research group are working with NASA to advance scientists' ability to estimate flows of carbon between forests and the atmosphere from space with remote sensing. This work includes a partnership with Brazilian faculty to lead a field course for Brazilian graduate students to learn more about concepts in tropical forest ecology and physiology.

Revision of PNW bee ID key to support identification of native pollinators

Associate Professor **Jim Rivers**, in collaboration with OSU Extension, Oregon Department of Agriculture and Mt. Pisgah Arboretum, developed several bee ID keys to support native bee identification in the Pacific Northwest. The last version of the bee key was published in 1969. Given the growing interest in native pollinator conservation and advancements in high-resolution photography since the original keys were published, the new bee ID keys will have a strong impact on bee research in the region. Learn more at: **beav.es/qyK**

An orchard mason bee collects pollen from lacy phacelia (Phacelia tanacetifolia). This image is one of many included in the new PNW Bee ID Key developed by Associate Professor Jim Rivers.

Tree Ring Lab studies fire history through dendrochronology

By analyzing tree rings, otherwise known as the science of dendrochronology, lead scientist **Andrew Merschel**, Oak Ridge Institute for Science and Education postdoctoral scholar with the U.S. Forest Service and OSU, is uncovering important new information about fire history, forest stand development and Indigenous burning that informs our understanding of forest ecosystems, the complexity of old-growth development and how we might better steward the diverse forests of the Pacific Northwest.

Merschel works with a large team of management collaborators, science partners and students to collect, process and interpret the stories trees tell through their rings and wood. Associate Professor **Meg Krawchuk** and **Amanda Brackett** codirect the lab and all three work together to support the research, training and teaching opportunities it provides.

Graduate students in the Tree Ring Lab are applying this research in various ways. Ph.D. student **Jennifer Bailey Guerrero** is studying the development of marbled murrelet nesting habitat in relationship to fire. **Sven Rodne**'s master's degree research involves historical stand and fire reconstructions in southwest Oregon. **Charles Drake**, who is also pursuing his master's degree, is looking at historical fire throughout the McDonald-Dunn Research Forest. A team of undergraduate students and field technicians are critical to collecting and processing samples, and are aspiring tree ring scientists, ecologists and practitioners of the future.

Enhancing wood durability and using fungi to remediate soil

Gerald Presley, assistant professor in wood science and engineering, researches wood durability, the environmental impacts of pressure-treated wood and applied mycology. As director of the Utility Pole Research Cooperative, he also specializes in developing ways to extend the life span of utility poles. His research focuses on developing innovative methods to enhance the durability and longevity of wood and using fungi to clean up contaminated soil, also known as mycoremediation.

A recent research collaboration with OSU Forestry and Natural Resources Extension examined the use of pressure-treated wood in raised garden beds, specifically focusing on copper leaching and its impact on plant health. The study found that while copper leaches from treated wood into the soil, it only affects the soil directly in contact with the wood and does not increase copper levels in vegetables or herbs. This suggests that pressure-treated wood, when used for

ground contact applications, poses minimal risk to plant health, offering gardeners an affordable and durable option for constructing raised beds.

Presley is also working with Ph.D. student **Leon Rogers** to experiment with different combinations of ultrasonic chemistry and fungi processes to clean up agricultural plastic pollution. Their research aims to combine fungal decomposition with ultrasonic chemistry to break down non-biodegradable plastics like polyethylene, offering an environmentally friendly solution for farmers to remove plastic waste from their land.

Supporting community wildfire resilience across Oregon with objective, science-based tools

In response to longer more severe wildfire seasons and more people living in the wildland-urban interface, the Oregon Legislature directed Oregon State University to create a map identifying wildfire hazards to structures and human developments, along with a map of the wildland-urban interface. Following a lengthy public engagement process, the college finalized the maps in October 2024. State agencies will use the maps to guide implementation of new defensible space and fire hardening building codes and prioritize resources for the Oregon communities most vulnerable to wildfire.

The College of Forestry led an interdisciplinary team from across OSU with expertise in wildfire risk, rural development, social vulnerability and outreach. This team worked with a 26-member advisory committee, county officials and the public to create maps based on the best available science and local knowledge.

OSU contributors include:

College of Forestry:
Assistant Professor Christopher Dunn, Andy McEvoy, Shannon Murray, Associate Professor Mindy Crandall and Caitlyn Reilley.

College of Engineering:
Associate Professor Erica Fischer

Institute for Natural Resources:
Myrica McCune

Understanding the effects of wildfire on water

Professor **Kevin Bladon** continues to lead a multi-year, multi-agency, transdisciplinary research project studying wildfire's effects on water. This research, which has received $16 million in funding over the last four years, is developing critical knowledge and increasing capacity to inform policy and management decisions for resilient forested watershed and downstream communities and ensure protection and distribution of safe drinking water.

Advancing SSMART (Sustainable, Safe, Machine-human harmonized, Agile, Resilient and Technology-driven) Forestry

Forest restoration in Oregon faces challenges from labor shortages, dangerous and dated forest practices and low-value wood. To combat these issues, the SSMART Forestry research group is pioneering innovative technology to enhance the safety and sustainability of forest operations while transforming traditional forestry jobs into high-tech, high-paying careers.

Woodam Chung, Stewart Professor of Forest Operations and principal investigator, is leading this charge to harness the power of smart technology and science-based approaches to enhance the resilience of Oregon's forests and the well-being of forest-dependent rural communities. His group's work centers around four cutting-edge technology solutions: (1) Advanced forest landscape mapping for data-driven decision-making in forest restoration, minimizing uncertainties in wood sourcing; (2) Smart technology applications for safety and efficiency improvements in forest operations and wood supply logistics; (3) Development of new mass timber design specifications and manufacturing technologies, adding value to restoration wood; (4) Interactive and intelligent training programs to build and equip a skilled workforce with future-ready forestry expertise.

Learn more and meet the 25+ OSU contributors from across the College of Forestry, College of Agricultural Sciences and College of Engineering who are involved in the SSMART Forestry Group at: **beav.es/GPa**

Using LiDAR to collect forest inventory and produce data-based images of forest structure

Monitoring and analyzing forest inventory are crucial for forest management and forecasting. Remote sensing, particularly LiDAR (light detection and ranging), is commonly used to collect data on tree dimensions and defects. Recent advancements in LiDAR technology now allow for handheld systems to scan forests from below the canopy, providing detailed data on lower tree structures. However, this approach misses information about the tops of trees, creating gaps in the data.

To overcome this, Associate Professor **Bogdan Strimbu** is leading a project to develop a system that integrates point clouds from both above and below the canopy. The goal is to create two software programs — one to merge the data and another to generate a comprehensive forest inventory. Providing a nearly complete picture of the forest ecosystem will help researchers and forest managers better understand the effects of climate change.

Improving scientific tools for managing forested watersheds

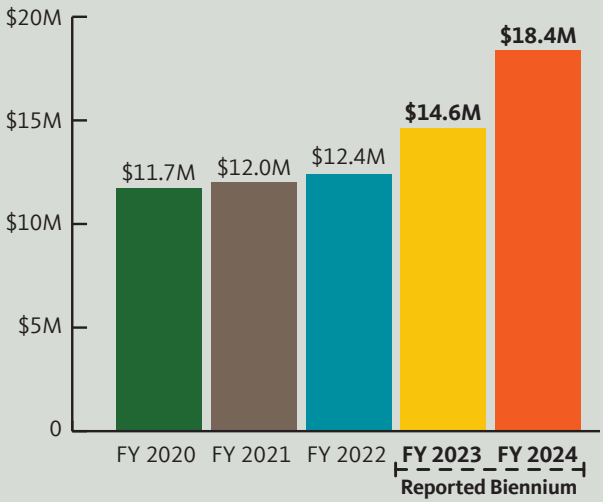
Water quality and availability are critical parts of life — for humans, ecosystems and every species on Earth. Forested watersheds are an important part of this equation as they provide water, sediment and nutrients that shape the health of aquatic ecosystems. How water moves through forested watersheds impacts the supply of clear water — along with things like fish habitat quality and the well-being of hydraulic infrastructure.

Professor **Catalina Segura** is leading research that aims to improve our understanding of water movement in forested watersheds using approaches that incorporate direct observations of water quality and catchment physiography as well as water tracers such as water stable isotopes. The research is contextualized based on long term records that allow drawing connections between observed phenomena and climate change. This research will provide critical insights into hydrologic processes — which are influenced by factors like drought, wildfire, timber harvest and urbanization. Understanding how forest management, human activity and natural disturbances affect water flow and supply is key to sustainable management and will help inform management policies, practices and regulations. Segura's research will also offer valuable data and tools to better predict the impacts of disturbances on these ecosystems.

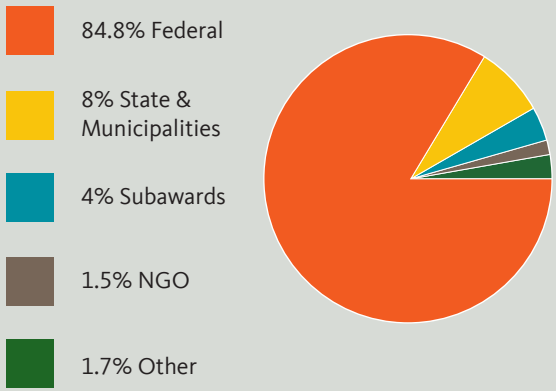
Research by the Numbers

View a full list of our 315+ refereed publications at: **beav.es/COFpubs**

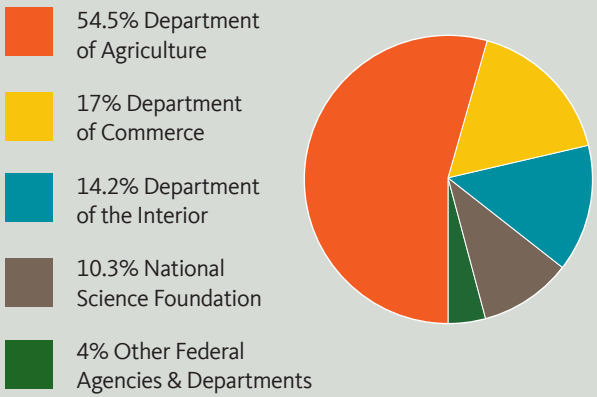
Annual Research Expenditures (FY20-24)



Research Awards by Sponsor Type (FY23-24)



Top Research Funding Sources (FY23-24)



Cooperatives

The College of Forestry provides science leadership through 11 research cooperatives that conduct research and apply the results to solve problems, develop new products, support long-term field studies and develop decision support tools. The co-ops, with funding and representation from five government agencies and 107 unique private organizations, provide valuable learning and research experiences for students from the undergraduate to the doctoral level. Each co-op is led by a college faculty member and jointly funded by its members, who work together to develop a mutually agreeable program of research. Highlights from COF cooperatives during FY 2023-2024 include:

The **GREAT TREES Co-op**, with grant support from USDA NIFA, filed a patent for a new method for controlled excision of genes in plants. This work, led by University Distinguished Professor **Steve Strauss**, will allow genes that may slow regulatory and market approval, such as for CRISPR genes for gene editing, to be efficiently removed from plant genomes. 2024 marked thirty consecutive years of cooperative tree biotech work in the College of Forestry.

The **Center for Intensive Forest Planted Silviculture (CIPS) Co-op**, led by Professor **Temesgan Hailemariam**, is pursuing site and regional specificity for the proprietary growth and yield model CIPSANON, producing increment and mortality equations for Douglas-fir that incorporate climate and soil variables. CIPS staff continued their efforts to incorporate select genetics into their growth and yield model with development and validation of genetics multipliers, monitoring the link between select genetics and maximum carrying capacity, and investigating the potential productive advantages gained by use of families with specific crown characteristics.

The Wood-Based Composites Center, led by Director **Arijit Sinha** and Managing Director **Patricia Vega Gutierrez**, proudly celebrated its 25th anniversary, with their industry members contributing over $360,000 in 2024 to support fundamental research in wood composites.

College of Forestry Research Cooperatives

*Visit **beav.es/GAW** to learn more.*

Center for Intensive Planted-Forest Silviculture
Director Temesgen Hailemariam

Environmental Performance of Treated Wood Research Cooperative/OSU Aquatic Cooperative
Director Gerald Presley

GREAT Trees (Genetic Research on Engineering and Advanced Transformation of Trees)
Director Steve Strauss

Hardwood Silviculture Cooperative
Director Glenn Ahrens

Northwest Tree Improvement Cooperative
Director Keith Jayawickrama

Pacific Northwest Tree Improvement Research Cooperative
Director Glenn Howe

REACTS Consortium (Research on Engineering, Architecture & Construction of Timber Structures)
Director Iain Macdonald

Swiss Needle Cast Cooperative
Director Jared LeBoldus

Utility Pole Research Cooperative
Director Gerald Presley

Vegetation Management Research Cooperative
Director Carlos Gonzalez-Benecke

Wood-Based Composites Center
Director Arijit Sinha (pictured above, left)
Managing Director Patricia Vega Gutierrez

Two-Eyed Seeing

Associate Dean Cristina Eisenberg (center) collaborates with graduate students Tessa Chesonis (left) and Ashley Russell (right), members of the Traditional Ecological Knowledge Lab, in the McDonald-Dunn Research Forest.

Our world faces social, economic and environmental challenges of unprecedented complexity and scale. The College of Forestry is committed to addressing those challenges in the realm of forestry and natural resource management as well as within our own community. This includes braiding together Indigenous Knowledge and Western science to reimagine a climate resilient future — a concept known as Two-Eyed seeing. The college is partnering with Tribal Nations to accomplish this in many ways. During the last biennium, our faculty, staff and students:

Established the Indigenous Natural Resource Office

The Indigenous Natural Resource Office, and within it, the Traditional Ecological Knowledge Lab, embodies the college's commitment to going beyond the land acknowledgment. Whether it's creating partnerships with Tribal Nations that honor Sovereignty rights and nation-to-nation relationships or providing opportunities for Tribal youth to attain higher education, receive training and find jobs, the INRO centers our work. Located in Richardson Hall 109, this Indigenized gathering place enables us to develop relationships and allyships across cultures and respectful, caring, innovative partnerships with the nine Tribal Nations of Oregon, Tribal Nations in the PNW and beyond, and Indigenous people globally.

Developed Principles for Partnering with Tribal Nations

The College of Forestry strives to be an inclusive, diverse and caring community of interdisciplinary, multi-cultural scholars who respect and value Tribal partnerships, Indigenous ways of knowing and relationships with Indigenous Peoples. In 2023, the college developed Volume 1 of its Principles and Best Practices for Partnering with Tribal Nations to provide an effective, proactive and mutually supportive process built on prioritizing deepening intercultural relationships and helping them flourish in a reciprocal manner. Learn more at: **beav.es/GXX**

Continued building capacity for Tribal youth

In partnership with five Sovereign Tribes in Oregon, members of the INRO are weaving together Indigenous Knowledge with Western science to help the Bureau of Land Management adapt its forests in Oregon to be more resilient to climate change. As part of this work, we are working with Tribal youth to perform native seed collection and provide Tribal youth with mentorship and natural resource employment through the Seeds of Success Fellows program.

Meaningfully engaged Tribal Nations to advise federal policymakers

In 2023, the college received a $1.13M grant to work with leaders from the U.S. Forest Service and Tribal Nations to convene a series of Tribal roundtables around the Pacific Northwest. This work was in direct response to President Biden's Executive Order 14072, which called for conserving and safeguarding mature and old-growth forests.

Cristina Eisenberg
Associate Dean for Inclusive Excellence and Maybelle Clark Macdonald Director of Tribal Initiatives in Natural Resources

5

Tribal roundtables hosted in partnership with U.S. Forest Service

$8.1M+

funding for Indigenous Natural Resource Office initiatives

35

Tribal youth mentored via BLM Seeds of Success program

Going Beyond the Land Acknowledgement

Indigenous Knowledge and Western science braided into recommendations for land managers

In 2023, the College of Forestry received a $1.2M grant from the U.S. Forest Service and convened a diverse team to write an ecocultural state-of-knowledge report, Braiding Indigenous and Western Knowledge for Climate-Adapted Forests. Published in 2024, the report brings together Indigenous Knowledge and Western science to support climate and wildfire adaptation strategies for forest landscapes. Building on federal directives to respectfully and intentionally braid Indigenous Knowledge and Western science knowledge systems, the report provided recommendations to address current challenges facing our nation's forests.

Associate Dean **Cristina Eisenberg** and **Michael Paul Nelson**, professor of environmental philosophy and ethics, are among the lead authors of the report, along with fire ecologists Susan Prichard of the University of Washington and Paul Hessburg of the U.S. Forest Service Pacific Northwest Research Station. The report urges that Tribal stewardship practices such as thinning and burning be considered in future land management decisions by the U.S. Forest Service.

"Our forests are in grave danger in the face of climate change," said Eisenberg when describing what guided the report. "By braiding together Indigenous Knowledge with Western science, we can view the problems with what is known as Two-Eyed Seeing, to develop a path forward that makes our forests more resilient to the threats they are facing. That is what this report is working to accomplish." Represented on the core writing team are Tribal members and Forest Service personnel as well as faculty from various universities. Read the report at **beav.es/c24.**

Seeds of Success

Established by the Department of the Interior in 2001, Seeds of Success is the national native seed collection program led by the Bureau of Land Management in partnership with numerous federal agencies and non-federal organizations. A primary goal of the program is to create a repository of native seeds to draw from to restore public lands degraded by fire, soil degradation and invasive species. But that's not the only goal.

Over the years, the project has significantly expanded to include respectful, co-created partnerships with Tribal nations that honor and observe the highest respect for Traditional Ecological Knowledge, data sovereignty and self-determination. These partnerships also emphasize employment opportunities for native youth, to perpetuate Indigenous Knowledge, traditions and values, while collecting native seeds to restore landscapes, particularly grasslands. The program aims to make restoration and native seed collection progress that benefits both plant communities and human communities.

Led by Associate Dean **Cristina Eisenberg**, the College of Forestry is collaboratively partnering with the Fort Belknap Tribal Nations (Aanniiih

and Nakoda) in Montana, collectively referred to as Fort Belknap Indian Community, as well as with the Cow Creek Band of the Umpqua Indians in Oregon. Over 50 student workers, nearly all Tribal youth, have been hired as Community Fellows. The Community Fellows perform ecocultural restoration, under the guidance of the project team, while being exposed to as many job and education opportunities as possible.

Specifically, the project team is implementing DOI National Seed Strategy and Plant Conservation and Restoration Program protocols to collect seeds of culturally and ecologically significant plants on BLM lands. They are assessing soil processes, seed banks, and forest understory and overstory structure, as well as wildlife habitat. All work is being done using Traditional Ecological Knowledge best practices, which include reciprocity. Data collected on culturally significant plants will be protected and not made publicly available without the permission of the Tribal Nations involved.

Tribal Forestry Partnership Symposium

In May 2023, the College of Forestry's Indigenous Natural Resource Office hosted the university's first Tribal Forestry Partnership Strategy Symposium at the kaku-ixt mana ina haws. The private event provided dignitaries from the area's Sovereign Tribal Nations with a forum to share concerns, challenges, needs and hopes for what partnerships with the college could look like.

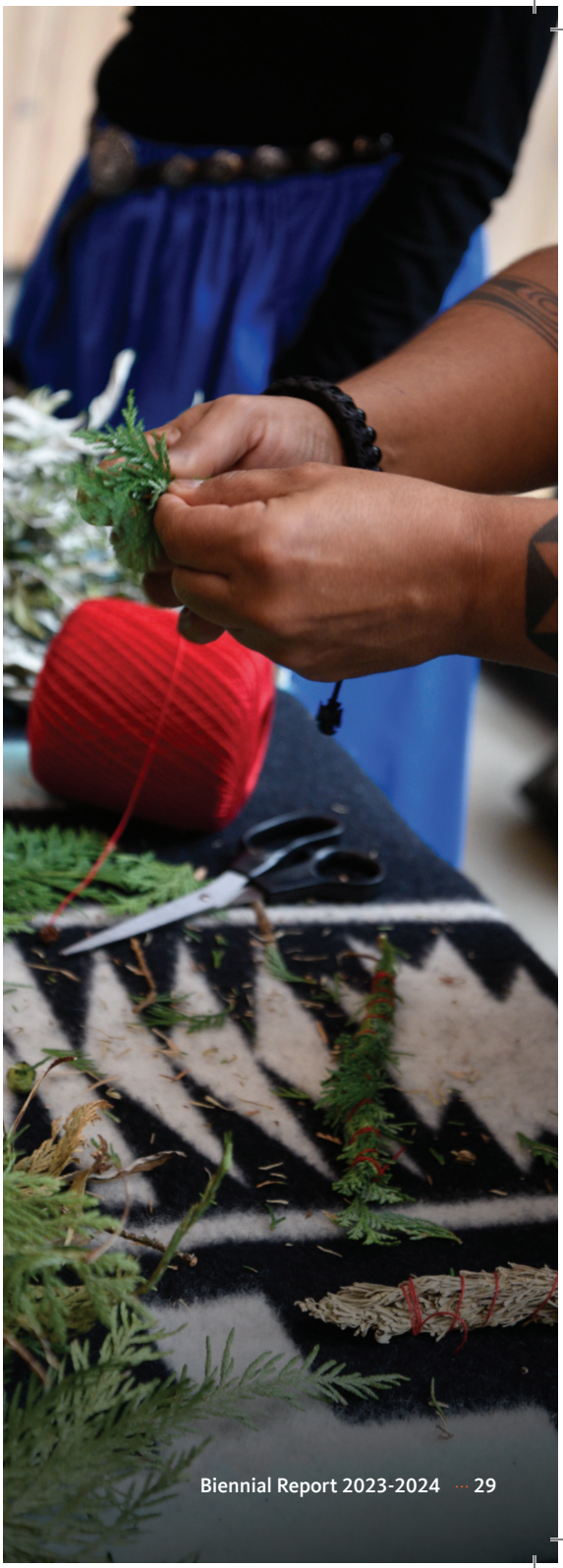
Oregon State University President Jayathi Murthy, College of Forestry Dean **Tom DeLuca**, Associate Dean **Cristina Eisenberg**, as well as members of College of Forestry leadership and academic faculty also attended, reiterating the university's commitment to taking the College of Forestry beyond the land acknowledgement, to find ways to support and empower Indigenous peoples and their communities.

The gathering was the first of many steps in a process of building trust and capacity for Tribal partnership, supported by funding from the Bureau of Land Management and U.S. Forest Service.

Celebrating Indigenous Peoples' Day

The College of Forestry celebrates Indigenous Peoples' Day, recognized across the U. S. on the second Monday in October. The college gathers to celebrate the rich histories and invaluable contributions of Indigenous peoples. For the last two years, Indigenous students, faculty and community members shared their experiences during events at Peavy Forest Science Center, and led demonstrations like making tea with native plants or crafts that educated participants on the cultural significance of dentalium.

Indigenous Peoples' Week celebrations at OSU are about more than reflection — they are about honoring Indigenous peoples while working together to decolonize narratives and move toward a more complete understanding of the Indigenous experience at OSU, in Oregon, and beyond.



Research Forests

The McDonald-Dunn Research Forest, spanning 15,000 acres and located near OSU's Corvallis campus, provides students and faculty with opportunities for education, research and outreach.

The College of Forestry stewards nine research and demonstration forests across the state, comprising 15,000 combined acres of living laboratories. These outdoor classrooms are where students, faculty and staff learn, study and work, and where Extension faculty teach forest owners and managers. The McDonald-Dunn Research Forest, located just outside Corvallis, is the largest and where the majority of active management, education and research take place. The college aims for the McDonald-Dunn to be a globally recognized model for actively and sustainably managed forest systems. Highlights of research forest activity over the last biennium include:

Planned for the future management of the McDonald-Dunn

Development of the new forest management plan has been a multi-year process with input from diverse voices, including individuals external to the university with representation from Tribal natural resource managers, state and local agencies, NGOs, private industry, forest neighbors and the general public, as well as representation from five academic departments across OSU. Following its implementation in 2025, management decisions and activities on the McDonald-Dunn Research Forest will be driven by research agendas, education and demonstration opportunities, and considerations of an inclusive balance of forest uses and values. Learn more at: **beav.es/G6x**

Engaged 400,000+ visitors through outreach and education

The college is proud to offer community access to the research forests as a demonstration of how recreation and active management can be compatible. With 38 miles of trail and 100 miles of road, we welcomed more than 400,000 recreational visitors over the past two years. Through avenues like Get Outdoors Day, the Environmental Leadership for Youth program, and the Discovery Trail in Peavy Arboretum, the forests also served as an educational backdrop for local schools, non-profits and other educational organizations to host camps, field trips and more. A special thank you to the dedicated volunteers who logged nearly 10,000 hours on trail building and maintenance, making 6,600 feet of Peavy Arboretum trails more wheelchair accessible.

Catalogued hundreds of research projects in a searchable database

In 2023, the college launched a new searchable research database for the forests, providing access to many of the research studies that have been conducted on the forests since 1926. The research forests help the college demonstrate how actively and sustainably managed forests foster economic prosperity, biodiversity conservation and resilience amidst disturbances and global change. The research supports social and cultural values of forests and how we can better enhance the wellbeing of local and Tribal communities. Browse the diversity of studies from the forests at: **beav.es/GAd**

OSU Research Forests Team: *(from bottom left, clockwise) Brent Klumph, Carli Morgan, Steve Pilkerton, Jamie Bridenstine, Jenna Baker, Finn Leary, Matt McPharlin*

400K+

recreational visitors to the McDonald-Dunn

15K

acres of OSU research forests across Oregon

25K+

student visits to the McDonald-Dunn for coursework

Research on the McDonald-Dunn

Bees flock to clearcut areas but numbers decline as forest canopy regrows

Native bees in the Oregon Coast Range are diverse and abundant in clearcut areas within a few years of timber harvest, but their numbers drop sharply as planted trees grow and the forest canopy closes, found a study led by graduate student **Rachel Zitomer** and Associate Professor **Jim Rivers**, an animal ecologist in the College of Forestry.

The findings, published in *Ecological Applications* in 2023, are important for understanding the roles forest management might play in the conservation of a crucial pollinator group, the researchers said.

"Management that promotes open conditions and enhances floral resources in the initial years following harvest are likely to promote bee diversity in intensively managed forest landscapes," Rivers said.

Thinning promotes drought adaptation in Douglas-fir

Climate projections predict more frequent and severe drought in coastal Douglas-fir *(Pseudotsuga menziesii)* forests of western North America, raising concerns over how to promote drought adaptation.

To examine the effects of thinning related to drought resistance, graduate student **Madelene Elfstrom** and Associate Professor **Matt Powers** collected tree cores from a long-term thinning study with four residual density levels replicated across both uniform thinning and thinning with gaps. They used annual growth data to investigate responses to droughts occurring eight and 21 years after thinning.

They found that spatial arrangement had little impact on drought resistance or resilience and residual density level had a significant effect on the periodic annual volume increment — drought resistance trade-off. Their results suggest that thinning can promote drought adaptation in Douglas-fir forests, but these effects dissipate over time.

Harvest rotations that maximize carbon sequestration

Forest modeling conducted by graduate student **Catherine Carlisle** and professors **Temesgen Hailemariam** and **Stephen Fitzgerald** at the McDonald-Dunn Research Forest shows that a site's productivity is the key factor in determining the optimal time between timber harvests for maximum carbon sequestration. Over a 240-year projection, the study found that highly productive stands had the greatest carbon storage with 60-year rotations and low-intensity thinning at 40 years. For less productive sites, carbon storage was maximized with rotation periods of 80 or 120 years.

Tracking vegetation community changes in an oak savanna restoration

Graduate student **Julia Metzler** studied plant community changes in the first year of a prairie and oak savanna restoration project at the McDonald-Dunn Research Forest. These ecosystems — like the one pictured here — once abundant in the Willamette Valley, have been severely reduced due to settlement, development, and threats like conifer encroachment and invasive species such as false-brome *(Brachypodium sylvaticum.)* Metzler tracked changes in native and invasive plant species across conifer forest, transition and open meadow habitats. Results showed the greatest change in the conifer habitat, with an increase in annual, introduced and forb species. In the transition habitat, false-brome decreased due to mastication, while Pacific blackberry *(Rubus ursinus)* showed no significant changes.

Extension

Associate Professor Mark Swanson leads a tour of early seral forests in the McDonald-Dunn Research Forest, as part of a Forestry and Natural Resources Extension tour coordinated by Extension Forester Lorelle Sherman.

The Forestry and Natural Resources Extension program, a branch of OSU Extension housed within the College of Forestry, partners with local communities across the state to provide trusted expertise and science-based knowledge. FNR Extension is the largest in the country with a presence in every part of the state. Our specialists support resilient and productive forests and natural ecosystems through educational programs designed to foster new ways to manage and use Oregon's forest resources wisely. In FY 2023-2024, our diverse group of Extension faculty and staff:

Fostered place-based fire adaptation and mitigation partnerships across Oregon

The FNR Extension Fire Team supports many different communities, climates and ecosystems. Six regional fire specialists, who live and work in their fire service areas, along with two outreach program coordinators who lead initiatives focused on fire science application and workforce equity, provided place-based wildland fire outreach, education and engagement to communities across Oregon. This work is supported by a manager and director who provide overall program direction.

Supported 32,595 community members with expertise across seven broad topics through 13 outreach and education programs

Our agents and specialists amplified forestry and natural resource education across Oregon and to forest owners, foresters, natural resource managers, educators (Pre-K-12), Christmas tree growers, loggers, forest workers and the general public through 727 educational presentations, 568 questions answered via "Ask Extension" and 92,438 volunteer hours reported via trained Oregon Naturalists.

Engaged the next generation of youth in forestry and natural resources

Offered in partnership with Oregon Forest Resources Institute and Oregon Department of Education, events like Forestry Days and School Forestry Tours reached over 1,200 elementary and middle school students, promoting careers and education in natural resources, wildfire science and forestry. And individual team members, like **Peter Matzka**, OSU's Extension Forestry Program Outreach Coordinator and Hopkins Demonstration Forest Educator, met with thousands of students to inspire the next generation of forestry leaders.

Led 600 participants through the award winning Land Steward Program

This 11-week training program introduces locally appropriate best practices for woodland and pasture management, fire hazard reduction, biomass utilization, riparian and noxious weed management, wildlife habitat and more to enable participants to create personalized stewardship plans.

Holly Ober
Associate Dean for Science Outreach, Forestry and Natural Resources Extension Program Leader

40

FNR Extension faculty + staff across Oregon

32K+

community members engaged through educational programs

10,000

K-12 youth engaged as the next generation of forestry leaders

Statewide Impact

Portlander finds purpose in OSU Extension's Oregon Naturalist Program

Natalie DaSilva says the Oregon Naturalist Program changed her life. "It's opened doors for me to bring others out into the natural world," said DaSilva, an avid hiker and certified naturalist.

The Oregon Naturalist program's mission is to increase knowledge, sense of place and connection to the natural environment for all Oregonians. The program provides transformative, science-based, experiential learning in outdoor settings, and encourages service that protects and supports ecosystems and community well-being in Oregon. Becoming an Oregon Naturalist involves taking an online course, then an ecoregion field course, then completing 40 volunteer hours.

DaSilva completed a field course designed by Alice Phillips, 4-H faculty member in Washington County who coordinates the Oregon Naturalist Program in the Portland area. For her volunteer hours, DaSilva wrote a children's booklet about the Tryon Creek State Natural Area near Portland, which she considers to be a second home.

Clocking in around 30 pages and illustrated by DaSilva's son, the story is about the creek, as told by the creek.

"I consider it my love letter to Tryon Creek," said DaSilva. To maintain her Oregon Naturalist certification, DaSilva is required to complete eight continuing education hours. She breezes past that mark, accumulating up to 10 times that number.

"This program has had a huge impact on my life," said DaSilva. "It's a wonderful way to connect with nature, with other like-minded people, to really make a contribution."

Extension helps land nearly $6 million for wildfire resilience in Wasco County

Wasco County, Oregon, located near the Washington state line, is at a higher wildfire risk than 95-100% of other communities in the U.S.

Because of this, Kayla Bordelon, the Oregon State University Extension Service regional fire specialist for the Willamette Valley and north Cascades, made the county a top priority.

"We will have a really good sense of exactly what needs to be done and where. That makes us more competitive for federal and state dollars."

And that is not just talk: Bordelon and other local and regional collaborators have been awarded a nearly $6 million grant for the county through the federal Bipartisan Infrastructure Law, which designated a $1.5 billion investment into wildland firefighting and wildfire resilience.

"Building this funding proposal was definitely a labor of love for the handful of us on the grant writing team," said Bordelon.

A substantial component of the grant funding will create and fund a full-time, countywide wildfire coordinator position with Wasco County.

"One of my long-term goals is to build local capacity to coordinate wildfire resilience efforts in the nine counties I serve," said Bordelon. "My number one priority for this grant was funding this county coordinator position. Investing in people allows us to do more work together."

The rest of the funding will be spread among several sub-awardees including Wasco County Planning Department, the Oregon Department of Forestry, and OSU Extension and includes projects such as creating defensible space around homes to clearing roadside vegetation that is susceptible to sparking or carrying wildfire.

Looking forward, Bordelon is working to get similar grants for the other counties she serves. Because of its high-risk status, Wasco County was "an obvious place to start for me, but Wasco is also just the beginning," she said.

Bordelon's goal is to help strengthen the counties she works with, so they are best prepared for wildfire before it happens. "In many rural areas, fire departments and wildfire agencies are understaffed or are run by volunteers" she said. "They don't always have the capacity to write and manage federal grants. By building a coalition and doing it together, we help everyone out."

OSU Extension is utilizing $6 million in grant funding to support wildland firefighting and wildfire resilience Wasco County, Oregon.

Community

Undergraduate students work collaboratively in the field, measuring and counting trees in Central Oregon, to learn how to conduct a theoretical thinning operation.

When you ask someone to describe what they love about their experience at the College of Forestry, the first thing they almost always say is "community." That's not something we take for granted. Whether it's creating events to support staff and students, connecting with alumni or raising funds to enhance food security and provide financial support for students, we are dedicated to fostering an inclusive environment that promotes success and well-being for all. Over the last biennium, we continued efforts to deepen the lasting connections we've built across the college, OSU and beyond, with highlights including:

Met with alumni at home, throughout the PNW and around the world

Alumni returned to Corvallis for the homecoming tailgate, Women in Wood Science Symposium, and the annual logging sports event Conclave, which was hosted at Peavy Arboretum for the first time in over a decade. We also took the COF community on the road, catching up with our alumni and collaborators in Baltimore, Seattle, central Oregon and even Stockholm, Sweden at IUFRO.

Supported food security for students through Rootstock

In FY 2023-2024, Rootstock provided over 1,000 College of Forestry students with fresh produce, dairy, meat, bread, canned goods, household supplies and hygiene items. We also connected students with OSU Basic Needs Center programs for SNAP benefits and textbook lending. With ongoing funding from donations and an annual OSU Foundation crowdfunding campaign, Rootstock was bolstered by a $5,000 expansion grant from the OSU Women's Giving Circle in 2023.

Celebrated two years of Holiday Craft + Art Fair success

First launched in 2022, the college brought back its highly successful Holiday Craft + Art Fair in 2023 as a fundraiser for Rootstock, the volunteer run food pantry. More than 60 local artisans and 1,500 visitors filled Peavy Forest Science Center over two days in December 2023, raising $12,500 to support food security for our students. New in 2023 was a holiday tree auction, with trees donated by Starker Forests and decorations by various OSU units.

Raised $250,000+ for scholarships, placed 1st on Dam Proud Day 2024

Each April, OSU Beavers around the globe rally for a 24-hour day of giving called Dam Proud Day. Individual colleges hold virtual and in-person events as a way for the university community to support and celebrate the programs and projects they believe in. On Dam Proud Day 2023, OSU raised a record $2.1M, with our community generously contributing $105,500 to the college. In 2024, OSU set another record with $2.7M raised, with an incredible $168,145 donated to the College of Forestry. Despite being one of the smallest colleges on campus, the generosity of our community landed us 1st place on the leaderboard for the most dollars donated — thank you!

Jessica Fitzmorris
Director of Alumni Engagement and Events

1,000+

student visits to Rootstock, the college food pantry

#1

university-wide for Dam Proud Day in 2024

$250K

raised for student scholarships

Starker Lectures Series

Each year, the College of Forestry partners with Starker Family Forests to present the Starker Lecture Series. This series takes inspiration from the Starker family's history of leadership in supporting sound forestry and vibrant communities through scientifically grounded education and positive, sustained action. The Starkers' long-time recognition of the value of closely observing and learning from actions and outcomes "in the woods" also inspires an integration of technical knowledge with practical, on-the-ground experience. We highlighted these topics and more through seven lectures in FY 2023-2024:

2023 — *Innovation in Forestry*

Bill Robbins
60 Years of Forestry: A Retrospective on the Douglas-fir Region

Patrick Freeman
Log and Lumber Scanning Technology

Monika Moskal
Precision Forestry: Remote Sensing, Geospatial Analysis and More

Tom Fox
Innovations in Silviculture: Forest Management in a Changing World

Michelle Medley-Daniel and **Mindy Crandall**
Social Innovations to Meet Societal Challenges

2024 — *Forest Conservation, Then and Now*

Buddy Huffaker
Land Ethic: A Sand County Almanac 75th Anniversary

Tom DeLuca
Digging into Forest Soils

View the recordings at ***beav.es/starker-lectures.***

Conclave Returned to Peavy in 2023

Conclave, the Association of Western Forestry Club's annual logging sports event, returned to Peavy Arboretum for the first time in more than a decade in 2023. Hosting teams from across the West Coast, this event allows students to compete in traditional forestry events like axe throwing, caber toss, birling and log chopping. The OSU Forestry Club team proudly claimed the No. 1 ranking, with many of the team's competitors also earning first place in their individual events.

The success of the event was due in large part to the support of dedicated alumni, including former logging sports team members, who secured sponsorships, spent hours in the research forest fixing up the arenas and volunteering at the event. To celebrate that spirit of giving back at the 2023 event, the chopping arena was dedicated to **Patrick "Hoss" Fitzmorris** who graduated from OSU in 2013 and passed away in 2022. Patrick, along with fellow logging sports teams from the classes of 2010-2015, built the chopping arena for the 75th Annual AWFC Conclave in 2012, as well as the George W. Brown Sports Arena. Dean Emeritus **George Brown** passed away in June 2023. The college is grateful for the immeasurable contributions he made during his 32 years of service to OSU.

Women in Wood Science Symposium

The Society of Wood Science and Technology named four members of the COF wood science community as "Women Ambassadors Creating the Future of Wood Science." Associate Professor **Mariapaola Riggio**, **Balkis Bakar** (Ph.D. '19), former graduate faculty member **Andreja Kutnar** and **Anne Toppinen** who previously completed her sabbatical at OSU, were recognized for their contributions and mentorship of women in wood science. They were celebrated during a year-long traveling exhibition, concluding with the Women in Wood Science Symposium at OSU in April 2023.

Won *Top Banana* for the 2024 Food Drive

Through soup lunches, a virtual 5K, cute pet photo contests, silent auctions and more, the COF community donated $35,000 during the 2023 and 2024 OSU Food Drives — the equivalent of more than 100,000 meals. In 2024, the college took back the "Top Banana," the prize awarded by OSU to the unit that raises the most funds for the food drive.

Liz Reeve, AWFC Conclave President and member of the College of Forestry logging sports team, competes at the 83rd Annual AWFC Conclave event, held in the McDonald-Dunn Research Forest.

Senior Leadership Team

Thomas H. DeLuca

Dean, Professor and Director of the Oregon Forest Research Laboratory

Forest soils, fire ecology, restoration, natural resource sustainability

B.S. University of Wisconsin-Madison, 1984
M.S. Montana State University, 1987
Ph.D. Iowa State University, 1993

Kevin Bladon

Department Head (FES), Professor

Watershed hydrology and management, disturbance effects of water quantity and quality, aquatic ecology, hillslope runoff and biogeochemical processes, microclimate change and tree-water relationships

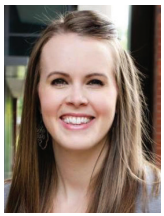
B.S. University of Alberta, 2002
Ph.D. University of Alberta, 2006

Cristina Eisenberg

Associate Dean for Inclusive Excellence

Traditional Ecological Knowledge, ethnobotany, restoration ecology and ecocultural restoration

M.A. Prescott College, 2006
Ph.D. Oregon State University, 2012



Jennifer Elston

Administrative Assistant to the Dean and Associate Dean of Research

B.A. University of Oregon, 2011

Eric Hansen

Department Head (WSE), Professor

Organizational innovation, environmental marketing, corporate responsibility, forest products marketing

B.S. University of Idaho, 1990
Ph.D. Virginia Tech University, 1994

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Department Head (FERM), Associate Professor

Forest soils and nutrition

B.S. Western Washington University, 1999
Ph.D. University of Washington, 2007

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Associate Dean of Research, Professor

Forest ecosystem science and management

B.S. SUNY College of Environmental Science & Forestry, 1977
M.S. SUNY College of Environmental Science & Forestry, 1987
Ph.D. Oregon State University, 1993

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Director of Marketing and Communications

B.A. Portland State University, 2009

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Director of Strategic Initiatives

B.A. University of Connecticut, 2007
M.E.M. Yale University, 2014

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Associate Dean for Science Outreach and Program Leader for Forestry & Natural Resources Extension

Forest ecology, wildlife ecology

B.S. Duke University, 1994
M.S. University of Arizona, 2000
Ph.D. Oregon State University, 2007

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Director of Student Success

B.A. University of Washington, 2001
M.S. University of Wisconsin, 2016
Ed.D. Oregon State University, 2024

Adrienne Wonhof

Director of Administration and Operations

B.S. Southern Oregon University, 1999
B.S. University of Oregon, 2001
M.A. Fielding Graduate University, 2024

Endowed Faculty

Endowed and named faculty support funds honor nationally and internationally known scholars, educators, researchers and leaders in their fields — empowering them to undertake groundbreaking research, develop exceptional learning opportunities for students and forge new paths in their field. College of Forestry endowed faculty include:

Matthew Betts

Ruth H. Spaniol Chair of Renewable Resources

Forest wildlife landscape ecology

B.A. Queen's University, 1992
B.S. University of New Brunswick, 1999
M.S. University of Waterloo, 1995
Ph.D. University of New Brunswick, 2005

Cristina Eisenberg

Maybelle Clark Macdonald Director of Tribal Initiatives in Natural Resources

Traditional Ecological Knowledge, ethnobotany, restoration ecology and ecocultural restoration

M.A. Prescott College, 2006
Ph.D. Oregon State University, 2012

Woodam Chung

Faye and Lucille Stewart Professorship in Forest Engineering

Improving forest operations and management systems to better address environmental, economic and social needs

B.S. Seoul National University, 1993
M.S. Seoul National University, 1995
Ph.D. Oregon State University, 2002

Temesgen Hailemariam

Giustina Professor of Forest Management

Forest biometrics and measurements

B.S. Alemaya University of Agriculture, 1986
M.S. Lakehead University, 1992
Ph.D. University of British Columbia, 1999

Ashley D'Antonio

Gene D. Knudson Chair in Forestry

Sustainable recreation and tourism, social science, policy, natural resources

B.S. Pennsylvania State University, 2006
M.S. Utah State University, 2010
Ph.D. Utah State University, 2015

Reem Hajjar

Maybelle Clark Macdonald Professor of Teaching Excellence in Forestry

Integrated social and ecological systems, social science, policy, natural resources

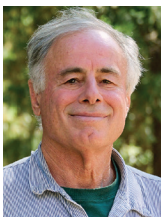
B.S. McGill University, 2000
M.A. Columbia University, 2004
Ph.D. University of British Columbia, 2011

Thomas H. DeLuca

Cheryl Ramberg-Ford and Allyn C. Ford Dean of the Oregon State University College of Forestry

Forest soils, fire ecology, restoration, natural resource sustainability

B.S. University of Wisconsin-Madison, 1984
M.S. Montana State University, 1987
Ph.D. Iowa State University, 1993



Jim Kiser

Richard Strachan Scholar in Fire and Silviculture

Surveying, photogrammetry, residual stand damage

B.S. Humboldt State University, 1982
M.S. Oregon State University, 1992
Ph.D. Oregon State University, 2009

Meg Krawchuk

Fischer Family Fellow

Science of conservation, restoration and sustainable management, forest, wildlife and landscape ecology

B.S. University of Guelph, 1995
M.S. Acadia University, 2001
Ph.D. University of Alberta, 2007
Post-doctoral Fellow, University of California, Berkeley, 2011

Ben Leshchinsky

Richardson Chair in Forest Engineering, Resources and Management

Geotechnical engineering

B.S. University of Delaware, 2007
M.S. Columbia University, 2008
M.Phil, Columbia University, 2010
Ph.D. Columbia University, 2012

Kevin Lyons

Wes Lematta Professor in Forest Engineering

Forest harvesting and process engineering, forest road management

B.S.F. University of British Columbia, 1997
M.F. University of British Columbia, 1998
Ph.D. Oregon State University, 2001

Matt Powers

Edmund Hayes Professor in Silviculture Alternatives

Silviculture, fire, forest health and biodiversity

B.S. Ball State University, 2002
M.S. Michigan Technological University, 2005
Ph.D. Michigan Technological University, 2008

Klaus Puettmann

Edmund Hayes Professor in Silviculture Alternatives

Silviculture, forest ecology

Diploma, Albert-Ludwigs Universität, 1986
Ph.D. Oregon State University, 1990

Mariapaola Riggio

Richardson Chair in Wood Science and Forest Products

Timber mechanics and structural engineering, wood architecture, green building and environmental performance, art, architecture and design

M.S. University of Florence, 1997
Ph.D. University of Trento, 2007

William Ripple

Richardson Chair in Forest Science

Wildlife habitat analysis, landscape ecology

B.S. South Dakota State University, 1974
M.S. University of Idaho, 1978
Ph.D. Oregon State University, 1984

Arijit Sinha

JELD-WEN Chair in Wood-based Composites Science

Green building materials, sustainable built environment, product development for efficient use of renewable materials, life cycle analysis

B.E. Delhi College of Engineering, 2003
M.S. Oregon State University, 2007
Ph.D. Oregon State University, 2010

Mark Swanson

Starker Chair in Private and Family Forestry

Silviculture, Fire, Forest Health and Biodiversity

B.S. University of Washington, 1999
Ph.D. University of Washington, 2007

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To learn more about endowments, contact **Zak Hansen**, Senior Director of Development: **zak.hansen@osufoundation.org** or visit **www.osufoundation.org**

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