OUR VISION
We aspire to be the world’s premier forest resources education, research, and service institution.

OUR MISSION
To educate and engage the next generation of scholars, practitioners, and users of the world’s forest resources
To conduct distinctive problem-solving and fundamental research on the nature and use of forests and related resources
To share our discoveries and knowledge with others

OUR VALUES
We commit to sustaining forests and the functions, products, and values they provide for current and future generations. We value forests.
We share a passion for learning through teaching, research, and extended education. We value learning.
We address complex forest resource challenges through collaboration across disciplines, institutions, and perspectives. We value collaboration.
We recognize strength in diverse faculty, staff, students, and ideas. We nurture the College community through communication and mutual respect. We value people.
We serve the people of Oregon, the nation, and the world. We value service.
We aspire to excellence, innovation, and relevance in all that we do. We value excellence.

OUR PRODUCTS
Graduates: Well-educated, lifelong learners who reflect the diverse communities they will serve—globally savvy, adaptable, and capable of solving complex problems
Science: Research-based knowledge, technologies, and tools to solve problems and shape the future
Public Service: Extended education, technical assistance, policy advice, and training
Information: sound and scientifically based information for a well-informed citizenry
Our last report was issued at the historic moment of our Centennial. Reflection on 100 years of service to Oregon provided an opportunity to review where we've been, who we've helped, and where to direct our expertise in the future. Oregon's living legacy still covers nearly half of the state's landmass, providing clean air, clean water, fish and wildlife habitat, locales for recreation and tourism, jobs that pay above average, and about 11% of the total value of goods and services produced in Oregon. Since statehood, and after 150 years of growth and development, our forestlands have been reduced by less than 10%—this is truly a sustainable resource.

Economic and environmental sustainability does not happen by chance. Forestry and forest products processing face new changes and challenges each year. Global producers are providing low-wage competition; fire, disease, and insects continue to take a toll; climate change is adding new stresses on forests, (but forests may also help mitigate the impacts); urbanization and changes in forest ownership may degrade air quality, water quality, and wildlife habitat; and the current recession is undermining the economics and resiliency of many rural communities in Oregon.

Our goal is to create new synergies in research and education and to build bridges to future prosperity by discovering solutions to such challenges. As the Forest Research Laboratory (FRL), we are the state's primary forest-related R&D activity—charged with assisting in the use of forests and natural resources for the economic, social, and environmental benefits of our citizens. FRL scientists are among the most productive in the world. For every dollar of state appropriation supporting the core infrastructure, they have leveraged $6 in additional funding—money that stays in Oregon for salary and services. To better align our faculty expertise and create new synergies among scientists, we have spent the past 18 months reorganizing. We have reduced from four departments to three, creating new collaborations of scientists to work on the important issues of today and be adaptive to the issues of tomorrow. This report highlights some of the progress and evolving initiatives from these changes.

As the College of Forestry, our faculty has established an international reputation for teaching and public outreach—sharing their scientific knowledge and practical solutions with students, landowners, industry, and public agencies. The College has experienced a 50% increase in students over the past five years. We continue to attract high quality graduate students from around the world. We are building the bridge for the next generations of leaders, managers, and scientists who will provide continuing stewardship for Oregon's vital forestland resources.

I also want to thank our donors, large and small, who continue to provide their votes of confidence and contribute to our efforts. Many of our best students would not be filling our classrooms without gifts for scholarships. Our faculty and students also benefit from investments that provide resources to pursue new research, ensure new technology is available to enhance laboratories, and foster innovative approaches to education in the classroom.

Oregon's forestlands provide sustainable resources that serve multiple economic and quality of life objectives. We look forward to continuing to develop and share knowledge that will assist landowners, policymakers, and businesses in providing benefits for citizens and communities across the state.
If Forests Had Snouts…

CoF Scientists Would Be Finding Ways To Use Them—And Make New Ones
Talented chefs are often credited with using the pig from snout to tail. Not to be outdone, FRL scientists are striving to use the forest from bud to root. At the same time, they are seeking in many and diverse ways to renew and sustain the forest, the resources it grows, the air it breathes, and the watersheds beneath its trees.

If future generations are to enjoy the many benefits that forests provide, current generations need to find ways to sustain the forests we have today. “To sustain” literally means to “hold from below”, or support. The word has acquired other, related meanings—provide for, maintain, keep in existence—and they all pertain to forest sustainability.

Sustainability requires using resources no faster than they are replenished, while providing for environmental, economic, and social needs. Achieving this requires using and reusing materials and resources, even materials formerly considered waste, and conserving, maintaining, and sometimes restoring forest ecosystems.

The approaches of our scientists to address current and future challenges range from the seemingly esoteric, but ultimately useful, such as economic and environmental models, microclimates, and molecular genetics, to day-to-day practicalities, such as the Sustainable Living Project, the Sustainable Forestry Partnership, and CORRIM (the Center for Research on Renewable Industrial Materials). Extension foresters share the results of research with woodland owners seeking to enhance forests for the future. International exchanges of faculty and students allow on-site sharing of techniques, approaches, and perspectives. Professionals worldwide can obtain a Sustainable Natural Resources graduate certificate from OSU in an on-line program. Our students learn about natural resources and wise forest management and bring that knowledge to their professions. A new endowed professorship, the Giustina Professorship in Forest Management, will be filled this spring to further enhance both teaching and research in sustainable forestry. As Dean Hal Salwasser puts it, “Everything we do in the College of Forestry contributes to sustainability.”

The features that follow highlight just a few of the College faculty and programs that are using many approaches to asking—and answering—the basic question: How can we ensure a forest legacy for our kids and theirs?
Burning Issues Fuel Fire Research
Research Fuels Successful Management
Each year, wildfires rage through the headlines and smoke pours into the valleys of Oregon. People and wildlife flee the flames; standing timber is turned into charred snags; homes are reduced to chimneys and foundations; ecosystems are altered, often dramatically; and plant, animal, and human lives are lost.

The headlines disappear when the rains fall, but the complex issues surrounding wildfire do not. How do we maintain a healthy forest that won’t be badly damaged by fire? What is the best way to control a fire? To regenerate a burned forest? How are ecosystems affected by fire, both short and long term? Can controlled fire actually be useful, either in preventing wildfires or helping to restore an ecosystem? How do we preserve houses and settlements, which are encroaching on forests at an increasing rate? What will happen with climate change? These are only a few of the hot-button issues sparked by wildland fires.

College scientists at the CoF and their students refuse to be stumped by these and the many other fire-related issues, be they economic, environmental, or social. A common theme linking many of their projects is economical and effective management, be it management of the forests and ecosystems before and after a fire or efficient management of resources needed to fight fires.

The condition of the forest before a fire, including such factors as stand structure and density, species composition, and fuel loading, affects how severely the fire may burn and what’s left to work with afterwards. As silviculturist Klaus Puettmann puts it, “After the fire is before the fire.” A stand that is too dense provides plenty of fuel and is likely to burn severely if there is a fire. A stand that has been thinned and perhaps treated with a controlled burn will be more resilient and can recover if fire comes through. Management and silviculture provide tools to both maintain fire-resilient forests and regenerate burned areas. Dave Hibbs and John Bailey, as well as Puettmann and other College faculty, are working to determine the most effective silvicultural approaches to minimizing fire damage and encouraging regrowth.

Together with research assistant Jeff Shatford, Hibbs and Puettmann recently published a paper on natural conifer regeneration 9 to 19 years after fire in the Klamath-Siskiyou region. The study, which is ongoing, showed that regeneration during this period was plentiful but very variable over space and time. Thus, management strategies could well incorporate natural regeneration but would have to make allowances for spatial variability. This is only one of several studies on silvicultural management and post-fire recovery that Hibbs and Puettmann have underway, often in cooperation with the USDA Forest Service and the Bureau of Land Management.

Bailey is especially interested in thinning and management of stand structure as preventive strategies. “It's stupid that we're putting out fires so aggressively when they could burn beneficially and then spending millions to put them out when they're hard to control,” Bailey declares. Ideally, he points out, selling small-diameter wood for biofuels or processing it into wood composites would help pay for the costs of fire-preventive management while contributing to sustainability. Bailey is also examining post-fire recovery and restoration by both natural regeneration and regeneration in salvaged and actively managed stands.

Taking another approach, economist Jo Albers is intrigued by how management decisions can affect wildfire behavior, as well as by the risks and decision-making challenges that wildfires present. “Economics is about how we make tradeoffs and how we make decisions when we can't do everything we want to,” Albers explains. Together with colleagues Claire Montgomery and John Bailey and three students, she has been developing models to help in determining optimal tradeoffs in specific circumstances. One recently completed study examined interactions between public and private land management decisions about fire risks under a variety of scenarios when land ownership abuts, such as in the urban/wildland interface. A second study developed a fire behavior model that examined fire spread as governed by the type of forest and fuel management. A third student has just started a project that focuses on management of fire-fighting resources before fires even start. These studies are in cooperation with the USDA Forest Service.

Students realize the importance of fire, as both threat and tool, in their futures. Wildland Fire Management has become the most popular undergraduate option in Forest Management. They benefit from the expertise of Albers, Bailey, and several other faculty, who teach both undergraduate and graduate courses pertaining to wildfire management, as well as mentor graduate students.

Because drought often increases fuel loads, fire potential and severity are strongly correlated with climate. Bailey, Hibbs, and Puettmann are also collaborating with more than a dozen other College faculty in the climate change initiative described in the following pages.

Fire in the forest can be a useful tool to enhance sustainability or a fearsome foe that consumes huge amount of resources. The work of these and other College researchers will help to contain fire to the toolbox.
## I/O in the Forest

*Carbon Cycling And Climate Change: Scientists Tease Out The Links*

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Not many of us think of our wood-frame houses or the trees in our yards and forests as carbon banks. Nor do we think of the leaves above us, the rotting foliage under the trees, or the falling-down barn in the countryside as sources of greenhouse gas. But all contribute to carbon dynamics, a key factor in climate change worldwide.

Questions about climate change seem to swirl around us. How bad is it—or can it be beneficial? Is it even real? Do apparent changes result solely from natural cycles and processes, or do human activities contribute? What effects will it have on ecosystems? How can we adjust to physical and biological changes in our environments that it might bring about? College of Forestry scientists are making major contributions to finding the answers to these and many related questions.

What does forestry have to do with climate change? Forests and forest products are key factors in carbon dynamics. Trees and understory plants suck up carbon dioxide (CO₂)—the number one greenhouse gas, other than water vapor—through their foliage. They stash it as sugars and other chemical compounds and give it off as they respire. Their decomposing debris on the forest floor returns CO₂ to the air. Climate change affects fire regimes; fire in turn results in CO₂ emissions, both during the fire and over the long term, as snags and other debris decompose. Lumber, paper, and other forest products store carbon until they, too, are burned or decompose. Burning logging slash and firewood also gives off CO₂. All these factors figure as input or output in the global carbon budget, and they are interconnected in complex ways.

Mark Harmon heads up the Climate Change Initiative of the College, which brings together 20 scientists whose work focuses on the research, education, and outreach needed to address climate change in the region. Their interests encompass climate and its relationship to ecosystems, genetics, silviculture, carbon storage, air quality, forest health, and economics.

“The issues addressed by the initiative can be summed up in two quite broad questions,” says Harmon. “Can we use forests to reduce CO₂, and how are we going to manage forests in the future, given the reality of climate change?”

This, of course, sounds much simpler than it is. Developing the capability to use forests to reduce CO₂ in the atmosphere requires a thorough understanding of the complexities and dynamic nature of carbon cycles—how forests take up or release carbon, and how forests can be managed to favor carbon uptake and mitigate carbon emissions from other sources, such as fossil fuel. Genetic strategies that permit tree stocks to adapt and respond to climate change and silvicultural practices that favor carbon uptake need to be identified. And the solutions to all these challenges have economic costs that need to be determined and taken into account.

“We have real strengths in the area of climate change—basic and applied scientists studying carbon flux and genetics, economists, people who measure tree and stand responses to climate change, people who do ‘cradle-to-grave’ analyses of wood products,” emphasizes Harmon. “Because we have this great diversity, we can talk together about theory, practicalities of measurements, and economics and policy and help think through about what it’s all about.”

The initiative is in its formative stages, but concrete results are already emerging. Faculty involved in the initiative have organized and led two short courses, one on carbon management in forests and the other covering the use of silviculture and genetics to minimize potential problems stemming from climate change. Participants included members of federal and state agencies, private landowners, and nongovernmental organizations. “The short courses benefit us as much as the participants,” says Harmon. “They are fast ways for us to work together, form connections, and learn from each other.”

A web page directing people to the scientists who have the expertise they seek or to other sources of information is in the planning stage. The page will also have essays, animations, and simple interactive models so people can manipulate conditions and see what changes. Faculty also are striving to include the challenges posed by climate change in their graduate and, especially, undergraduate courses.

The diverse interests of initiative participants focus on one ultimate objective: to develop a holistic program that integrates teaching, research, and outreach activities concerning forests and climate change issues in Oregon and the Pacific Northwest. The initiative is a major step toward attaining that objective and will help to ensure sustainability of forest resources world-wide, whatever climate change may occur.
Rumpelstiltskins for the Modern World

Our Scientists Turn Wood Waste Into Valuable Products
Researchers in the College of Forestry may not be spinning straw into gold, but they’re coming close, mixing straw, plastic, and other materials with wood to form useful and valuable wood composites. Wood composites are all over—in your roof, the walls, the floor, maybe in ceiling beams or flooring your deck. You may know them better as plywood, oriented strand board, fiberboard, particleboard, composite decking, even glulam, and see them regularly in your local building supply store.

The composite skills and collaborations of researchers in the Wood-based Composites Group are contributing greatly to the improvement of such materials. Rakesh Gupta, Fred Kamke, Kaichang Li, Lech Muszyński, John Nairn (Director), and John Simonsen form the core of the group. They combine their interests—often overlapping—in engineering, chemistry, and wood technology to cover the field, from devising adhesive molecules and nanocrystals through testing the structural strength of the resulting panels. All combine theoretical modeling with experimental studies to predict and improve wood composite characteristics.

Finding the right mix of wood and other materials is crucial to developing strong wood composites. Simonsen, a materials scientist, and Li, a chemist, have been working to find compatibilizers that allow the hydrophilic (water-loving) wood to bond more easily with hydrophobic (water-hating) potential composite materials such as plastic and straw.

Simonsen is also investigating production of nanocrystals from cellulose, a principal component of wood and one of the most widely available plastic polymers in the world. With several collaborators, he’s examining the use of these nanocrystals in such applications as protective fabrics and dialysis tubing, as well as in wood composites.

Formaldehyde-free, environmentally friendly wood adhesives that Li has developed from renewable natural resources have garnered national awards and may revolutionize wood products manufacture. His many research interests center on developing stronger wood composites, but you may eventually run across products of his work in your dentist’s office. He’s working to develop novel dental adhesives and dental composite materials.

Once the materials have been mixed, they must be made into panels or other forms that will be structurally functional. This is Kamke’s bailiwick. Master of the hot press, he specializes in wood densification and heat and mass transfer in wood and wood-based products. He’s particularly interested in adhesive distribution and penetration, wood and moisture relationships, drying, and modeling these processes. He also is improving imaging techniques for examining internal structure.

When the time comes to examine strength and attributes of the composites, Gupta, Muszyński, and Nairn bring their strengths to bear. Gupta tests the ability of panels and other structural components to withstand stresses placed on building components, both under normal conditions and in extreme situations such as hurricanes, earthquakes, or tsunamis. Muszyński is especially interested in the mechanics and characterization of composites on several scales. He, too, often uses and works to improve imaging methods for examining internal structure. He and Simonsen recently collaborated to determine the effects of incorporating nanoscale contrast agents in composites that would improve the images obtained by scanning. Nairn’s work encompasses several aspects of composite durability, including deformation and fracture properties and analysis, effect of residual thermal stresses, and mechanical properties of interfaces, such as adhesive bonds. Many of these areas are being studied by advanced computer modeling of wood composite structures.

OSU is a university partner of the national Wood-based Composites Center. Every six months, researchers meet with industry representatives to identify research needs from industry. Funding from industry supports university research, especially the work of graduate and undergraduate students. Collaborations also take place among the universities associated with the Center. Industry workers can soon take advantage of an on-line course that Kamke is developing with e-Campus. Students who successfully complete 120 hours of instruction will receive a Certificate of Mastery of Wood-based Composite Science. All these researchers also collaborate with the Oregon Wood Innovation Center, which works to bring research advances to the wood-products industry.

Unlike Rumpelstiltskin, these scientists do not demand jewels or first-born children as recompense. In recognition of their work, though, industry and their research peers have conferred national awards and research support that contributes as well to educating the next generation of wood composite researchers. As demand for wood products increases and forestland diminishes, their work on developing wood-based composites will contribute to providing critical sources of building materials, utilizing wood and other material that likely would be otherwise wasted and making the end products more easily recyclable.
Guiding Cicerones on the Cascade Campus
Unique Program Prepares Students For Outdoor Leadership
Skiing and snowboarding in the winter, white-water rafting and hiking in the summer, beachcombing, rockhounding, and bird-watching all year (not to mention winery touring and microbrew testing)—such attractions draw thousands of tourists to Oregon each year. Whether in search of adventure, culinary delight, additions to a life list, or just a quiet time in the forest, tourists support an $8.3 billion industry in the state, according to the Oregon Tourism Commission. The industry is expected to grow nearly 4% annually in the next few years, and skilled practitioners will be needed to support it.

A unique program at the OSU-Cascades Campus, now in its sixth year, offers preparation for careers in this growing industry. The Tourism and Outdoor Leadership program (TOL), led by Kreg Lindberg and housed in the Forest Ecosystems and Society department of the College of Forestry, provides myriad possibilities to students, practitioners, and others who wish to excel as leaders in tourism, commercial recreation, and outdoor education. The program, originally named Outdoor Recreation Leadership and Tourism, has been growing steadily, from four upper-division majors in 2003 to some 40 in fall of 2008. Graduates have similarly increased, from one in 2005 to nine in 2008 (with five of the nine achieving academic distinction). The program also is available as a minor and for post-degree students. The rapid growth and demand for the program are reflected in the recent hiring of a new instructor, Mike Gassner, who specializes in outdoor education and covers the outdoor leadership part of the degree.

Many graduates may in fact follow careers as cicerones (better known as guides), but other opportunities in the tourism industry are plentiful. Resorts need marketers and managers who are familiar with the special demands of tourism. Experienced specialists in outdoor experiential education and adventure therapy are in demand. Protected areas popular with ecotourists need skilled tourism managers. Whatever their specialty, graduates from the program are well grounded, not only in the skills specific to their chosen area, but also in what they need to know to run a creative, ethical, and successful business that sustains natural resource values. As Lindberg observes, “Sustainability is an important issue both for students and the Deschutes National Forest that borders Bend; in the TOL program, students learn practical skills, such as Leave No Trace techniques, and the concepts and theory of sustainability.”

Majors spend their first two years at Central Oregon Community College (COCC), building a foundation in business, communication, experiential, and leadership skills, as well as expanding their breadth of knowledge. They spend the second two years at OSU-Cascades, which is on the same Bend campus.

Students choose an option in Tourism and Commercial Recreation Management, International Ecotourism, or Outdoor and Experiential Education and do advanced work in business, recreation and tourism management and policy, and theory and practice in a specialty. The Tourism and Commercial Recreation Management option focuses on developing and managing a business related to outdoor recreation or tourism. International Ecotourism focuses on the special aspects of nature-based tourism in foreign countries, as well as managing domestic recreation resources for international visitors. Students in this option develop language skills and gain international experience during their internship. In the Outdoor and Experiential Education option, students learn skills relating to education theory, outdoor and adventure education, environmental education and interpretation, and adventure therapy.

The Bend campus is an ideal place for such a program. All students must do a practicum and an internship, and the campus is convenient to many of the recreational sites and businesses that offer such opportunities. Many will also find careers in the Bend area after graduation. Students enjoy the small classes and are never at a loss for weekend recreation.

The internship, spent working for a tourism company or agency, is a key feature of the program; it provides work experience and allows students to test the waters of an area where they might want to work after graduation. Students have interned with public agencies, such as the USDA Forest Service and the Bureau of Land Management, with private guiding and outfitter businesses, and with adventure therapy programs. Their internships have taken them as far away as Australia and Patagonia and as close to home as Mt. Bachelor. Many local businesses and agencies also participate in the program as guest lecturers and in job fairs. “The Tourism and Outdoor Leadership program is absolutely an integral program for us,” says Dave Nissen, founder of the ecotourism company Wanderlust Tours. “We’ve been lucky to attract top guides, and OSU-Cascades enhances that ability tremendously. It is so timely to develop a program of this discipline in Central Oregon.”
Synergy through Synthesis
New Center Draws Silvicultural Resources Together
It’s weird.” This is how Doug Maguire, the director of the Center for Intensive Planted-forest Silviculture (CIPS), describes one of the newest endeavors in the College of Forestry. “It’s unique, and there’s nothing like it in the region.”

CIPS is, as Maguire describes it, “not like anything we’ve ever had before.” The Center works to promote collaborations among research programs, particularly the silvicultural research cooperatives (co-ops) in the College, that have a narrower focus. Members choose to join a co-op on the basis of its focus. The co-ops work with their partners to gather new information about a certain topic. For instance, the Hardwood Silviculture Cooperative focuses on hardwood research, primarily the silviculture of red alder (*Alnus rubra*). Others specialize in vegetation management, nursery technology research, genetics and tree improvement, and forest health. All of these co-ops have been gathering information over years of research. So, instead of going out and doing new experiments to answer research questions, CIPS synthesizes this information to draw a more comprehensive picture of management options.

The idea for a center grew out of seven years of regional dialogue among co-op members and universities. “We came to a point where a lot of the companies and agencies that were supporting various research co-ops realized that silvicultural research was very fragmented,” says Maguire. The six major silvicultural research co-ops in OSU’s College of Forestry have developed large databases and very well-designed field studies and are very effective at answering basic questions about their specialties. Results from all of this research, however, were not being used as effectively as they could be.

The sheer amount of information available can overwhelm and frustrate land managers trying to weigh an almost infinite number of management options. Co-op members were looking for a way to synthesize information into a decision-making tool or suite of tools that would allow forestland managers to choose the combination of intensive silvicultural activities that would meet their specific objectives. CIPS was the answer. Instead of managers having to go to several information sources and trying to interpret the research, CIPS can integrate information into more comprehensive decision-making tools. For example, if a company must decide how to allocate capital set aside for investment in silviculture optimally, synthesized information from CIPS can provide a key resource for evaluating alternatives. The company can use this information to assess the tradeoffs for a wider range of silvicultural options than was possible before. For Oregon companies and federal and state land managers, this can mean saving money, improving economic efficiency, and remaining competitive in a global market.

“The College is all about practicing better forestry,” says Maguire. That means finding ways to produce and harvest timber in a sustainable way. CIPS is helping people to do just that. Through research and collaboration, CIPS can aid in balancing what Maguire calls “the unavoidable conflict between the demand for wood and fiber products and maintaining environmental quality.” The more we understand about the “trade-offs between meeting society’s needs and maintaining pristine environments, says Maguire, “the better decisions we can make about those trade-offs, the more intelligent we can be about those choices.”

Many companies are having a hard time competing in the timber and wood products industry, globally as well as here in Oregon. Maguire sees it this way: “If companies here in Oregon can’t make a profit from managing land for forest use, then that land gets bought by someone else, land may not stay in forest use; much of it may be developed.”

Maguire wants the Center to contribute to environmentally sound and economically viable management of Oregon timberlands. Oregon is one of the most productive regions in the world for timber production. Maguire believes that we here in Oregon have “a lot to contribute worldwide, particularly given the level of US consumption, and we should be leading the way in doing it. We have some of the strictest environmental laws; if we can do it here while adhering to these restrictive laws, it can be done anywhere.”

The “weird” Center for Intensive Plantation Silviculture began its first projects on January 1, 2009. “It’s tough putting it all together,” says Maguire, but with the launch of the CIPS, managing forestland in an environmentally and economically sound way has just gotten a lot easier.
Return on Investment

As part of Oregon’s Land Grant University, the College of Forestry is committed to educating tomorrow’s forestry and forest products leaders and providing Oregonians with timely and pertinent research, extended education and training, technical assistance, service, and policy advice. This commitment is exemplified by the following activities and achievements.

Contributing to Oregon’s Economy

- Externally funded grants and contracts (including cooperatives) generated $13,056,886 in FY07 and $12,110,970 in FY 2008. Much of this funding went directly into Oregon’s economy as salaries and purchases of goods and services.

Encouraging Innovation

- New, formaldehyde-free adhesives with superior strength, developed and patented by Kaichang Li, are revolutionizing the interior wood-based panel industry, and improving public safety.
- Joseph Karchesy developed and patented a new wood chemistry-based method for controlling pests of public health concern, such as mosquitoes, fleas, termites, cockroaches, and ticks.
- The log value recovery initiative continued to develop. Weyerhaeuser, Roseburg Forest Products, John Deere, Pape Machinery, Waratah, and OSU are collaborating to develop a prototype harvesting head that contains acoustic technology for sampling wood strength. Appropriate bucking and sorting of high-strength trees may yield 50–100% increases in end product value.

Strengthening the Scientific Foundations of Forestry

- The College hosted a major conference on Forests and Climate Change at LaSells Stewart Center, cohosted with Oregon Forest Resources Institute and the Oregon Department of Forestry. More than 250 people attended.
- Steve Fitzgerald was co-author on a paper, Understanding and Defining Mortality in Western Conifer Forests, that was named the “Best Paper of the Year” for 2007 by the Western Journal of Applied Forestry.
- Five of the “25 most significant empirical studies” on public involvement in Forest Service policymaking (W.D. Leach, Journal of Forestry, Vol. 104, No. 1) were authored by College faculty and graduate students.
- Three of the eight awards made by the USDA National Research Initiative Competitive Competitive Grants Program for Bio-based Materials and Products for FY2008 are to College faculty. This unprecedented success in a highly competitive national program reflects the quality of the science proposed by John Simonsen, John Nairn, Kaichang Li, and Lech Muszyński.
- The Watershed Research Cooperative continues to gain national visibility and credibility. The Alsea Watershed “revisited” study is also gaining visibility. The interdisciplinary work by this cooperative is unique in North America in its focus on physical and biological aspects of watershed function and response to harvesting.
- A study carried out by Bill Ripple and Bob Beschta, “Wolf Reintroduction, Predation Risk and Cottonwood Recovery in Yellowstone National Park”, was recognized by Elsevier Press as one of the “Top 10 most cited” articles between 2003 and 2008 in the journal Forest Ecology and Management.
- OSU was ranked as number 1 in the US for research productivity in the field of conservation biology in 2007 on the basis of the number of literature citations over a recent 5-year period.
- Forestry students Daniel Donato and Cristina Eisenberg were awarded the first OSU Mason Prize for Integrity and Moral Courage for their work on effects of delayed logging on the recovery of burned forests and the significance of wolves to healthy ecosystems, respectively.
- Glenn Howe became the OSU site director for a new “Center for Advanced Forestry Systems” (CAFS), a multi-university center funded through the National Science Foundation (NSF) Industry University Research Center program. A key focus will be studies linking knowledge of genes, genomes, and physiological processes to silvicultural performance and value in forest stands.
- Bev Law has received nearly $1 million for AmeriFlux and $457K from DOE for work on understanding the effects of disturbance and climate on carbon storage and gas exchange of conifer forests in the Pacific Northwest.
- Matt Betts has published research showing that songbirds have more complex communication abilities than previously thought and that “social cues” can be at least as important as physical environment in attracting birds to nesting sites.
- Simulation modeling by Mark Harmon and graduate student Steve Mitchell has shown that thinning can reduce fire severity but leads to lower stores of carbon on the landscape in the long run than allowing fires to burn. Such thinning must be intensive and removes more carbon from sites than wildfire would release.

Becoming a Global Leader and Contributor

- Faculty participated in 14 international research programs with grants totaling $1.4 million this year; eight faculty
or students received Fulbright or other international awards. As an outcome of their studies, they coauthored six international books and more than two dozen international articles.

- College faculty serve on more than 30 international panels and commissions, many of them related to carbon cycle and climate change research. They also serve as editors and associate editors on numerous international journals.

- Jeff McDonnell has been serving as Chair of the International Association of Hydrological Sciences Decade on Prediction in Ungauged Basins (PUB), coordinating the 65 member countries and 3500 IAHS members.

- Robin Rose has been advising the Jane Goodall Institute in Shanghai on tree planting in Inner Mongolia.

- The Forest Engineering department hosted the triennial 13th Pacific Northwest Skyline and IUFRO-cosponsored International Mountain Logging Symposium in April 2007 with about 185 participants.

- The second program under the banner of the International Forest Engineering Institute (IFEI) was held in July 2006, in collaboration with the University of Idaho. The group included about 20 participants from Korea, China, and Japan.

- Olga Krankina leads the NASA project “NELDA: Monitoring and Validating the Distribution and Change in Land Cover across Northern Eurasia.”

- Mark Harmon continues a 5-year research project that includes a Long Term Ecological Research (LTER) site in Taiwan.

- Fourteen faculty members serve as officers or working group leaders in international organizations such as International Union of Forest Research Organizations (IUFRO) and the Climate Change Working Group.

- Jeff Morrell served as the first American president of the International Research Group for Wood Preservation.

- Wood Science and Engineering sponsored the 2006 World Conference on Timber Engineering in Portland, attended by more than 500 scientists and engineers.

- Eric Hansen is PI on a project, Enhancing the Economic and Environmental Sustainability of Mexico’s Forest Sector, that includes three Mexican universities, two research institutes, the national forest service, and two indigenous communities.

- Marv Pyles led the effort to secure a new home for the International Journal of Forest Engineering with the Forest Products Society, thereby maintaining a key outlet for international scholarship in the forest engineering and operations area.

Enhancing Instruction

- Led by Ed Jensen, the College cohosted the 7th Biennial Conference on University Education in Natural Resources with the College of Agricultural Sciences. Participants included nearly 200 educators from throughout the world.

- The new undergraduate degree program in Forest Operations Management was approved by the State Board of Higher Education in May 2006 and has been accredited by the Society of American Foresters.

- The new Recreation Resource Management curriculum was implemented, and revisions designed to streamline the degree program and increase student success continued.

- Ongoing partnerships with Traverse PC, Tripod Data Systems (TDS), and PPI Group provided access to state of art technology and software for student education in geomatics. The partnerships also provide access to corporate technical staffs for assistance in student training and classroom instruction.

- The Forest Engineering partnership with Triad Equipment and Link Belt Manufacturing entered its second year.

The original log loader was swapped for a new one and successfully sold. This gift helps promote application of classroom principles into work practice via the latest technology.

- Forest Engineering established the Rick Strachan Foundation Undergraduate Research Awards to promote engagement of undergraduate students in departmental research programs. Five awards were given in 2007 and four in 2008.

- The on-line Sustainable Natural Resource Graduate Certificate Program has been initiated.

Cooperating with Stakeholders

- Doug Maguire is the Director of the new Center for Intensive Planted-Forest Silviculture (CIPS), which has 19 dues-paying members representing industry and state and federal agencies.

- Chal Landgren was hired as statewide Extension Specialist in Christmas Trees, a position newly funded by the Legislature.

- Robin Rose revived and serves as managing editor of Tree Planters’ Notes.


- Three significant Extension publications were produced in 2007: “Ties to the Land: Your Family Forest Heritage”, “Guide to Reforestation in Oregon”, and “Understanding Eastside Forests”.

- Forest Engineering maintains an active working relationship with the State Board of Engineering Examiners (OSBEELS), including providing service for development and grading of the professional forest engineering licensing examination.

- Under the direction of Jeff Morrell, the Utility Pole Research Cooperative expanded its membership to 19 electrical utilities, the highest in 20 years.
The research agenda is designed to keep wood poles a cost-effective way to deliver electric power to consumers. Research on pole bending strength helped to protect this major market for Oregon timber growers and wood treaters.

- The Nursery Technology Cooperative, headed by Robin Rose and the oldest cooperative in Forest Science at 25 years, conducted its 4th Pacific Northwest Native Plants Conference with ~200 attending.
- Doug Maguire’s work for the Swiss Needle Cast Cooperative has produced diameter and height growth modifiers for the growth model ORGANON that allow better prediction of bole volume productivity of stands infected by Swiss needle cast.
- Under Jeff Morrell’s leadership, the Oregon Wood Magic Program educational outreach program expanded to include a Road Show. Dr. Leslie McDaniel, the traveling Wood Magician, traveled over 60,500 miles and made 779 presentations at 299 schools, engaging over 23,000 students, teachers, and parents. Wood Science and Engineering faculty, staff, and students hosted over 4,200 students, teachers, and parents in Corvallis and at the World Forestry Center in Portland.
- John Bailey revised and implemented modules on “Inventory/Modeling and Decision Support Training for Silviculturists in the Forest Service” as part of a new USFS national silviculture certification program, the National Advanced Silviculture Program.
- John Bell offered the 51st year of the Variable Probability Sampling short course.
- Dave Shaw and Paul Oester have created a new program, “Pest Scene Investigators (PSI)”, which trains Master Woodland Managers and other woodland owners to help local forestry agents in sick tree calls.
- Clackamas Country Tree School, led by Mike Bondi, had 565 participants attending 72 classes during the 1-day event in 2008; 605 participants attended in 2007.
- Scott Leavengood and Chris Knowles of the Oregon Wood Innovation Center (OWIC) have expanded the web-based Forest Industry Directory, completed an educational needs assessment, developed several short courses and a monthly electronic newsletter with almost 1000 subscribers, and conducted several technical assistance and market assessment projects for small Oregon businesses.
- Jeff Wimer led a 1-day symposium on timber harvesting, cosponsored by Forest Engineering, Associated Oregon Loggers, and the Western Region Council on Forests Engineering, for more than 150 participants in January 2008. Loren Kellogg led a similar event in 2007.

Providing Public Service

- John Sessions was recognized by the Oregon Department of Forestry with an Award for Outstanding Service and continues to serve as Senior Advisor to the International Selection Committee for the Wallenberg Prize.
- Hal Salwasser serves on the boards of the Institute for Forest Biotechnology, National Commission for Science on Sustainable Forestry (past chair), World Forestry Center, National Academies Board on Agriculture and Natural Resources, Pacific Forest Trust, and the National Association of University Forest Resources Programs (president elect).
- Steve Hobbs completed a 4-year term as chair of the Oregon Board of Forestry. He continues to chair the Board’s Federal Forestlands Advisory Committee.
- John Bailey, Barbara Bond, and Mark Harmon served on a panel discussing “Definition, goals and principles of biodiversity conservation in a changing climate” at the Governor’s Oregon Biodiversity and Ecosystem Climate Change Preparation meeting in June 2007.

Addressing Regulatory and Environmental Concerns

- Kaichang Li and his team received the Presidential Green Chemistry Challenge Award from the EPA for their work on formaldehyde-free adhesives.
- Columbia Forest Products has adopted OSU technology in the manufacturing of formaldehyde-free products and converted all its plywood plants to the new adhesive, replacing more than 47 million pounds of the conventional adhesive and reducing emissions of hazardous air pollutants by 50–90%. The editors of Sustainable Industries Journal selected CFP’s PureBond Plywood, bonded with Kaichang Li’s adhesives, as the second-ranked Top Green Building Product of 2006.
- Jeff McDonnell has been working with Kennecott Greens Creek Mine in Alaska to help with reclamation efforts focused on developing hydrologically functional hill slopes for forest restoration.
- The Richardson Hall Quarantine Facility (USDA-APHIS certified) became operational in December 2006, with Darrell Ross as its first Director. The first project involves testing several insects from Asia for biological control of knotweed.
Finances

CoF Total Enterprise
FY 2007 $28.5 million

- Grants & Contracts 46%
- Endowments & Gifts 12%
- Oregon Harvest Tax 10%
- State General Funds (FRL) 10%
- State Education & General Funds 6%
- State General Funds (Extension) 6%
- College Forest Revenue 4%
- Federal Formula Funds 4%
- Outreach Education 2%
- CoF Scholarships & Fellowships from Gifts 12%

CoF Total Enterprise
FY 2008 $27.5 million

- Grants & Contracts 44%
- Endowments & Gifts 11%
- Oregon Harvest Tax 9%
- State General Funds 12%
- State Education & General Funds 7%
- State General Funds (Extension) 6%
- College Forest Revenue 4%
- Federal Formula Funds 4%
- Outreach Education 3%
- CoF Scholarships & Fellowships from Gifts 11%

CoF Education Funding

- General Endowments & Gifts
- College Forest Revenue & Forest Endowment
- State General Funds & Tuition
FRL Research Funding
FY 2008 $21 million

- Grants & Contracts 57%
- State General Funds (FRL Appropriation) 16%
- Oregon Harvest Tax 12%
- Endowments & Gifts 8%
- Federal Formula Funds (McIntire-Stennis) 4%
- College Forest Revenue 3%

FRL Grants & Contracts
FY 2008 $12.1 million

- USDA 31%
- Co-ops 16%
- DOE 15%
- NSF 9%
- Industry 9%
- USDI 6%
- State Agencies 5%
- Other 4%
- NASA 4%
- EPA 1%

FRL Total Research

<table>
<thead>
<tr>
<th>Year</th>
<th>Forest Revenue</th>
<th>Oregon Harvest Tax</th>
<th>Federal Formula Funds</th>
<th>State General Funds (FRL)</th>
<th>Endowments &amp; Gifts</th>
<th>Grants &amp; Contracts</th>
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<td>2008</td>
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</tbody>
</table>
Faculty and Staff Awards 2007-2008

External Awards and Recognition

Paul Adams and Jim Johnson, elected Fellows, Society of American Foresters

Steve Bowers, Silver Award for a Long Publication, Association of Natural Resource Extension Professionals (ANREP)

Max Bennett, Search for Excellence Award, OSU Extension

Matthew Betts, postdoctoral fellowship from the Natural Sciences and Engineering Research Council

Mike Bondi, OSU Vice-Provost and Director’s Award for Outstanding Achievement in Strategic Impact

Mike Bondi, Rick Fletcher, and Chal Landgren, Team Award, OSU Extension Association

Steve Fitzgerald, 2007 Team Award for an Oregon Family Nutrition Program Team, OSU Extension Association

Rick Fletcher, Agricultural Service Award, Benton County Fair Foundation

Rick Fletcher and Chal Landgren, Team Award, OSU Extension

Mark Harmon (FS), Harvard Forest Bullard Fellow, Harvard University

Olga Krankina served as a scientific expert on the Intergovernmental Panel on Climate Change, corecipient of the 2007 Nobel Peace Prize

Kaichang Li and his research group, Presidential Green Chemistry Challenge “Greener Synthetic Pathways” award, Environmental Protection Agency, for formaldehyde-free wood adhesives (with Hercules, Inc. and Columbia Forest Products)

Debbie Bird McCubbin, retired COF Head Advisor and Director of Student Services, OSU Woman of Distinction

John Nairn, George Marra Award, Society of Wood Science and Technology

Marv Pyles, Certificate of Appreciation, Oregon Board of Examiners for Engineering and Land Surveying

Jim Reeb, 2006 Awesome Force Award, OSU Extension service

Bill Ripple, 2008 Earl A. Chiles award, High Desert Museum

John Sessions, Recognition Award for Outstanding Service, Oregon Department of Forestry

Hal Salwasser, President-elect, National Association of University Forest Resources Programs, NASULGC’s forest division

Steve Strauss, 2008 OSU Distinguished Professor; appointed to two study panels of the National Academy of Science

David Turner, Cooperative Institute for Research in Environmental Sciences) Sabbatical Fellowship, Colorado State University

Nancy Weber, Award for Contributions to Amateur Mycology, North American Mycological Association

Viviane Simon-Brown, Extension Forester, 2007 Awesome Force Award, OSU Extension

Richard Waring, Gleden Scholarship, University of Western Australia

Michael Wing, LL Stewart Faculty Development Award, OSU

Steve Woodard (retired Extension Forester), 2007 Cooperator of the Year Award (with Brenda Woodard), Extension Forestry Program

The Forestry Media center (Jeff Hino, David Zahler, and Steve Cox), Gold Award from the Association for Communication Excellence; and first place for film and video in the 2007 National Association for Interpretation (NAI) National Workshop Interpretive Media Competition

Brad Withrow-Robinson, Chal Landgren, and the Ties to the Land team, 2008 Gold Award for Mixed Materials and 2008 Silver Award for Outstanding Team Project, Association of Natural Resource Extension Professionals
College of Forestry Awards and Honors

**Aufderheide Award** for excellence in teaching

*2007: John Bailey*  
*2008: Robin Rose*

**Xi Sigma Pi/Julie Kliwer Mentor Award** for excellence in mentoring

*2007: Clay Torset*  
*2008: Temesgen Hailemariam*

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**Dean's Awards** for Outstanding Achievement

**Service**

*2006: Centennial Open House Committee*  
(Sandie Arbogast, Gretchen Bracher, Steve Cox, Caryn Davis, Nathalie Gitt, Jeff Hino, Aleece Kopczenski, Rose Lacey, Debbie Bird McCubbin, Susan McEvoy, David Zahler)

*2007: Alison Moldenke*

**Research and Scholarship**

*2006: Cathleen Ma*  
*2007: Mark Needham*

**Extended and Continuing Education**

*2006: Nicole Strong*  
*2007: Leslie McDaniel*  
*Elissa Wells*

**Support Staff**

*2007: Denise Steigerwald*  
*2008: Cherylly Alex*  
*Kira Hughes*

**Faculty Research Assistant**

*2006: Tom Manning*  
*2007: Doug Bateman*  
*Rob Pabst*

**International**

*2006: Susan Morré*  
*2007: Olga Krankina*
Even as the College undertook reorganization, the existing departments recorded many accomplishments. The Return on Investment section of this report details many of their contributions to our teaching, research, and outreach missions. A sampling of others is recorded below.

**Forest Engineering**

**Accomplishments**

- John Sessions was named to the new Strachan Chair of Forest Operations Management.
- Glen Murphy was named to the Stewart Professorship in Forest Engineering.
- Marv Pyles was promoted to Professor and Michael Wing was promoted to Associate Professor, Sr. Research.
- FE received approval for the permanent course FE 314, Forest Engineering Recitation for Statistics 314. This recitation is intended to add forest engineering context to the material presented by the Statistics Department.
- Undergraduate enrollment increased 29% from spring 2007 to spring 2008. The cohort of women and minority students is growing. The Department also supports five Honors College students, reflecting the increasing number of high-achieving students in the department.
- FE successfully taught the full undergraduate and graduate curriculum in AY2008. This was especially challenging because of a sabbatical leave and increasing student enrollment. Fortunately, two capable temporary instructors added teaching support.
- The department hosted its traditional booth and alumni booth at the 2007 and 2008 Oregon logging conferences in Eugene and produced annual issues of *The Cable*, the departmental newsletter.

  *Steve Tesch, Department Head*

**Forest Resources**

**Accomplishments**

- Viviane Simon-Brown was promoted to Professor and Ron Reuter was promoted to Associate Professor.
- FR further strengthened administration and delivery of the Natural Resources degree program, absorbed Natural Resources students from all other colleges into the College of Forestry, and began a strategic process of curriculum review and revision.

  *Darius Adams, Interim Department Head*
Forest Science

Accomplishments

- FS was very successful in raising dollars to support research and in scholarship. Contracts exceeded $8.3 million, making Forest Science the lead department in the University. Department records show a total of $9.3 million in research funding through May, including cooperative support.

- Nine of the 14 research/teaching faculty attracted grants/contracts exceeding $400K each, and 8 each published 5 or more refereed journal articles.

- Olga Krankina was promoted to Associate Professor, Sr. Research, and Becky Fasth and William Ritts were promoted to Senior Research Assistant.

- Matthew Betts, a wildlife biologist with training in landscape ecology, joined FS in February 2007. He will be closely affiliated with the Ecosystem Informatics Program and will also be a major contributor to the FRL's Fish and Wildlife in Managed Habitat Research Program.

- The FS Department taught two new courses and three special courses in AY2006–2007 and 2007–2008. One course had its third offering and will become a permanent course in AY2008–2009. Four courses were substantially revised.

- FS 599 (Ecological and Economic Impact of Invasive Forest Pests and Pathogens) was shared with other universities on invitation by the National Center for Ecological Analysis and Synthesis, Santa Barbara.

Tom Adams, Department Head

Wood Science and Engineering

Accomplishments

- Rakesh Gupta and John Simonsen were promoted to Professor.

- Three new graduate-level courses in WSE were developed and approved to serve strategic niches—two to strengthen the budding polymeric materials science research programs on campus and exploit our recent investment in new composite materials faculty and one to strengthen our program in wood quality and to support the College Planted Forests Research Initiative.

- Two WS&T students won Robert Dougherty Scholarship scholarships for AY2008. OSU is the only institution to have two undergraduate winners of this national scholarship, given by the Composite Panel Association. One WS&T undergraduate will receive this award in AY2009. OSU students have won this prestigious national prize in each of the past five years.

- The number of BS graduates in WSE increased to the highest level of the decade, continuing a 5-year trend. Fall 2007 undergraduate enrollment in Wood Science and Technology and Wood Science increased slightly over 2006, remaining at or near 10-year highs.

Tom McLain, Department Head
Four into Three—Our New Departments

Forest Engineering, Resources and Management (FERM)

Mission
To develop, communicate, and teach the science, knowledge, and engineering necessary for the sustainable management of forest, land, and water resources that will achieve economic, environmental, and social objectives

Faculty

<table>
<thead>
<tr>
<th>Faculty member</th>
<th>Former dept</th>
<th>Expertise</th>
</tr>
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<tbody>
<tr>
<td>Adams, Darius M</td>
<td>FR</td>
<td>Forest economics, modeling and analysis of national and regional forest products markets and timber supply; economics of sequestering carbon in forests, econometrics, forest policy; interim department head</td>
</tr>
<tr>
<td>Adams, Paul W</td>
<td>FE</td>
<td>Effects of timber harvesting and forest roads on erosion, riparian areas, and water quality and quantity; forest watershed management methods and planning</td>
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<tr>
<td>Bailey, John D</td>
<td>FR</td>
<td>Silviculture, fuels and fire management, adaptive ecosystem management, stand dynamics, post-fire restoration, climatic effects on forests and fire potential</td>
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<tr>
<td>Bennett, Max</td>
<td>FR</td>
<td>Silviculture, forest health, integrated management for forest health, fire hazard reduction (Extension)</td>
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<td>Boston, Kevin D</td>
<td>FE</td>
<td>Forest roads, supply chain planning, harvesting, spatial harvest scheduling</td>
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<td>Bowers, Steve</td>
<td>FE</td>
<td>Log marketing and evaluation, timber measurements (Extension)</td>
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<td>Fitzgerald, Steve</td>
<td>FR</td>
<td>Silviculture, fire ecology, uneven-aged forest management (Extension)</td>
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<td>Fletcher, Richard A</td>
<td>FR</td>
<td>Christmas tree genetics, fertilization, and disease management (Extension)</td>
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<tr>
<td>Temesgen, Hailemariam</td>
<td>FR</td>
<td>Forest biometrics and measurement, climatic effects on growth and yield</td>
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<td>Hann, David W</td>
<td>FR</td>
<td>Forest modeling</td>
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<td>Hobbs, Stephen D</td>
<td>FS</td>
<td>Forest ecology and silviculture, Executive Associate Dean and Associate Dean of Research</td>
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<tr>
<td>Huntington, Geoffrey M</td>
<td>FR</td>
<td>Natural resource policy and law</td>
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<tr>
<td>Johnson, Jim E</td>
<td>FR</td>
<td>Silviculture, forest soils, and Extension forestry; Associate Dean, Extended Education; Program Leader, Extension Forestry and International Research and Development; Sustainable Forest Partnership</td>
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<tr>
<td>Kellogg, Loren D</td>
<td>FE</td>
<td>Harvesting young stands, mechanized harvesting, alternative silvicultural systems, forest biofuels, climate change</td>
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<td>Kiser, James D</td>
<td>FE</td>
<td>GIS, GPS, photogrammetry, timber cruising and appraisal</td>
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<td>Landgren, Chal</td>
<td>FR</td>
<td>Pesticide application, forest business and finance, Christmas trees, reforestation (Extension)</td>
</tr>
<tr>
<td>Lysne, Dave H</td>
<td>FE</td>
<td>Director, College Forests</td>
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<tr>
<td>Maguire, Douglas A</td>
<td>FS</td>
<td>Regeneration under variable retention harvesting, quantitative silviculture, growth and yield, crown structure and dynamics, mechanistic models of tree growth, stand development, effects of Swiss needle cast on growth and crown dynamics, DEMO (Demonstration of Ecosystem Management Objectives); Director, Center for Intensive Planted-forest Silviculture</td>
</tr>
</tbody>
</table>
McDonnell, Jeffrey J  FE  Watershed science, hillslope hydrology, isotope tracing, runoff processes, hydrological modeling
Montgomery, Claire A  FR  Natural resource and forest economics, econometrics
Murphy, Glen E  FE  Production analysis; log scanning; value recovery, harvest scheduling and management; facilities planning; supply chain management
Parker, Bob  FE  Forest soils, forest regeneration, timber harvesting, forest measurements (Extension)
Punches, John  WSE  Product potential of small-diameter timber, the Internet as a forest products marketing and communications tool (Extension)
Pyles, Marvin R  FE  Slope failure mechanisms, road drainage, stream hydraulics and hydrology
Reed, A Scott  FR  Vice Provost, University Outreach, Engagement, and Extension
Rose, Robert W  FS  Forest regeneration, nursery management; Director, Vegetation Management Research Cooperative and Nursery Technology Cooperative
Sessions, Julian D  FE  Forest planning, harvest scheduling, transportation planning, international forestry
Shaw, David C  FS  Forest health; Director, Swiss Needle Cast Research Cooperative
Skaugset III, Arne E  FE  Hillslope failure mechanisms, management of landslide-prone forested terrain, forest road drainage, riparian-area management, dynamics of storm precipitation; Director, Watersheds Research Cooperative
Tesch, Steven D  FE  Forest engineering-silviculture interactions, ecology and management of interior mixed-conifer forests, Executive Associate Dean and Associate Dean of Research
White, Diane E  FR  Ecology
Wimer, Jeffrey A  FE  Manager, student logging crew; logging mechanics, logging safety, unit design and layout
Wing, Michael G  FE  GIS, remote sensing, precision measurement technology and application, forestry visibility analysis, spatial statistics

1FE, Forest Engineering; FR, Forest Resources; FS, Forest Science; WSE. Wood Science and Engineering

Cooperatives
Center for Intensive Planted-Forest Silviculture
Nursery Technology
Swiss Needle Cast
Vegetation Management Research
Watersheds Research

Campus-based Extension Programs
Forest Health
Forest Taxation and Estate Planning
Timber Harvesting
Watershed Management

Undergraduate Programs
BS in Forest Engineering
Double BS in Forest Engineering/Civil Engineering
BS in Forest Operations Management
BS in Forest Management

Graduate Programs
Forest Engineering
Forest Resources
Forest Science
Forest Ecosystems and Society (FES)

Mission
This department brings together biological and social scientists to seek integrative approaches to the sustainability of forests and the services they provide.

Faculty

<table>
<thead>
<tr>
<th>Faculty member</th>
<th>Former dept</th>
<th>Expertise</th>
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<tbody>
<tr>
<td>Adams, W Tom</td>
<td>FS</td>
<td>Forest genetics; interim department head</td>
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<td>Ahrens, Glenn R</td>
<td>FS</td>
<td>Ecology and management of hardwoods, riparian area silviculture and vegetation management; Clatsop County Extension Chair</td>
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<tr>
<td>Albers, Heidi Jo</td>
<td>FR</td>
<td>Natural resource economics, forest and land conservation, resource management decision analysis, integrated ecosystem-economic models</td>
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<td>Anzinger, Dawn L</td>
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<td>Tree and shrub identification, natural resource issues</td>
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<td>Betts, Matthew G</td>
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<td>Forest wildlife landscape ecology</td>
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<td>Bliss, John C</td>
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<td>Private forest policy, forest-based rural development, natural resources sociology</td>
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<td>Bond, Barbara J</td>
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<td>Forest tree physiology, ecohydrological processes and cold-air drainage systems in small watersheds, climate change</td>
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<tr>
<td>Bondi, Mike</td>
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<td>Christmas tree fertilization, long-term productivity, and genetics; uneven-age and even-age management of Douglas-fir; natural and artificial regeneration systems; Clackamas County Extension Chair</td>
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<tr>
<td>Cox, Steve</td>
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<td>Multimedia production with a focus on natural resource topics (Forestry Media Center)</td>
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<td>Doescher, Paul S</td>
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<td>Restoration of native plant communities, fire ecology, ecological and physiological dynamics of plant species</td>
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<td>Ganio, Lisa M</td>
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<td>Statistics, biometrics, study design</td>
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<td>Harmon, Mark E</td>
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<td>Forest ecology, log and snag decay processes, nutrient cycling, carbon stores, ecosystem modeling, climatic effects on ecosystems</td>
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<td>Hibbs, David E</td>
<td>FS</td>
<td>Community ecology, silviculture, climatic effects on forests; Director, Hardwood Silviculture Cooperative</td>
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<td>Howe, Glenn T</td>
<td>FS</td>
<td>Forest genetics, genomics, gene conservation, tree improvement, adaptation to climate change; Director, Pacific Northwest Tree Improvement Research Cooperative</td>
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<td>Jayawickrama, Keith J</td>
<td>FS</td>
<td>Genetic improvement of productivity, wood quality, and product value; breeding and testing strategies; production of genetically improved planting stock; adaptation to climate change; Director, Northwest Tree Improvement Cooperative</td>
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<td>Jensen, Edward C</td>
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<td>Forestry education; Associate Dean for Academic Affairs, CoF</td>
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<td>Johnson, K Norman</td>
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<td>Forest planning, harvest scheduling, public land forest policy</td>
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<td>Johnson, Rebecca L</td>
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<td>Vice Provost for Academic Affairs &amp; International Programs, OSU</td>
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<td>Krankina, Olga N</td>
<td>FS</td>
<td>Forest management, forest ecology, woody detritus, carbon cycling, climatic effects on ecosystems, Russian forestry, nontimber forest products</td>
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<td>Law, Beverly E</td>
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<td>Ecophysiology, ecosystem processes, climate change</td>
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<td>Lindberg, Kreg A</td>
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<td>Visitor price responsiveness and economic impact of nature/ecotourism, inter-visitor conflict in natural areas, economic and social impacts of tourism generally</td>
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<td>Needham, Mark D</td>
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<td>Natural resource-based recreation management, social psychology of natural resources, human dimensions of wildlife, norms and standards for resource management, carrying capacity and crowding, specialization, risk, trust, conflict, tourism, survey and quantitative methods</td>
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<tr>
<td>Oester, Paul</td>
<td>FS</td>
<td>Forest pest management, silviculture, family forestland management (Extension)</td>
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<tr>
<td>Puettmann, Klaus J</td>
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<td>Silviculture, forest ecology, climatic effects on forests</td>
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<tr>
<td>Reed, Mark D</td>
<td>FR</td>
<td>Educational technology, natural resource education, environmental interpretation, and nature-based tourism</td>
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<tr>
<td>Reuter, Ronald J</td>
<td>FR</td>
<td>Soilscape, pedology, wetland soils, landscape ecology</td>
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<tr>
<td>Ripple, William J</td>
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<td>Wolf, ungulate, and aspen ecology, trophic cascades, remote sensing of vegetation, fire ecology, geographic information systems, wildlife habitat analysis, landscape ecology, biodiversity, historical ecology</td>
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<td>Rosenberger, Randall</td>
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<td>Recreation economics, environmental and resource economics</td>
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<td>Ross, Darrell W</td>
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<td>Forest entomology, integrated forest protection</td>
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<td>Salwasser, Hal J</td>
<td>FS</td>
<td>Policy effects of climate change; Dean of the College</td>
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<tr>
<td>Shelby, Bo</td>
<td>FR</td>
<td>Sociology of natural resources, crowding and carrying capacity, resource allocation, norms and standards for resource management, stream flows and resource values</td>
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<tr>
<td>Shindler, Bruce A</td>
<td>FR</td>
<td>Social values of natural resources, public agency-community interactions, social aspects of wildland fire management, communication strategies</td>
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<tr>
<td>Simon-Brown, Viviane</td>
<td>FR</td>
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</tr>
<tr>
<td>Strauss, Steven H</td>
<td>FS</td>
<td>Forest genetics biotechnology adaptation to climate change; Director, Tree Genomics and Biosafety Research Cooperative; Director, Outreach in Biotechnology Program</td>
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<tr>
<td>Turner, David P</td>
<td>FS</td>
<td>Biogeochemistry, remote sensing and modeling to monitor land surface processes, carbon budgets, climate change</td>
</tr>
<tr>
<td>Tynon, Joanne F</td>
<td>FR</td>
<td>Qualitative and quantitative inquiry into natural resource-based recreation and tourism issues; sociology of leisure and outdoor recreation; recreation planning and management; wilderness management; crime and violence on public recreation lands</td>
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<tr>
<td>Withrow-Robinson, Brad</td>
<td>FS</td>
<td>Native woodland management, intergenerational planning for family forest landowners (Extension)</td>
</tr>
<tr>
<td>Zahler, David</td>
<td>FR</td>
<td>Computer-based multimedia in natural resource instruction and communication (Forestry Media Center)</td>
</tr>
</tbody>
</table>

1FE, Forest Engineering; FR, Forest Resources; FS, Forest Science; WSE, Wood Science and Engineering

Undergraduate Degree Programs
- BS in Recreation Resources Management
- BS in Natural Resources
- BS in Tourism and Outdoor Leadership

Graduate Degree Programs
- Forest Resources
- Forest Science
- Sustainable Natural Resources (Graduate Certificate)
Wood Science and Engineering

Mission
To advance science, engineering, and business that help society produce and use renewable wood-based products that sustainably enhance human life and enable Oregon’s industry to be successful in a global market

Faculty

<table>
<thead>
<tr>
<th>Faculty member</th>
<th>Expertise</th>
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<tbody>
<tr>
<td>Brunner, Charles</td>
<td>Sawmill simulation, optical scanning, operations research</td>
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<tr>
<td>Gupta, Rakesh</td>
<td>Timber mechanics, structural engineering, mechanical properties</td>
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<tr>
<td>Hansen, Eric</td>
<td>Forest products marketing, environmental marketing, innovation management and new product development, corporate responsibility</td>
</tr>
<tr>
<td>Kamke, Fred</td>
<td>Heat and mass transfer in wood and wood-based products; emphasis on adhesion science, modeling, and manufacture and performance of wood-based composite materials</td>
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<tr>
<td>Karchesy, Joe</td>
<td>Forest products utilization, natural products chemistry of polyphenols and terpenoids, discovery of new bioactive compounds from forest resources for use in agriculture, medicine, and protection of human health</td>
</tr>
<tr>
<td>Knowles, Chris</td>
<td>Forest products marketing, Oregon Wood Innovation Center</td>
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<tr>
<td>Lachenbruch, Barbara</td>
<td>Quality and process control, wood technology, underutilized species development; Director, Oregon Wood Innovation Center</td>
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<tr>
<td>Leavengood, Scott</td>
<td>Wood anatomy and quality</td>
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<td>Li, Kaichang</td>
<td>Wood adhesives, wood and wood-plastic composites, wood chemistry</td>
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<tr>
<td>McLain, Thomas</td>
<td>Timber engineering, structural mechanical connections</td>
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<td>Milota, Michael</td>
<td>Wood drying and physical properties, air emissions from processing wood</td>
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<td>Morrell, Jeff</td>
<td>Wood preservation, biodeterioration, and pathology</td>
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<td>Muszynski, Lech</td>
<td>Composite materials, mechanics</td>
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<tr>
<td>Nairn, John</td>
<td>Modeling of deformation and fracture of wood and wood composites, effects of residual stresses, failure of coatings, interfacial adhesion</td>
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<td>Reeb, James</td>
<td>Optimization techniques for wood products manufacturers (Extension)</td>
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<td>Simonsen, John</td>
<td>Nanocomposite materials, wood protection, wood-plastic composites</td>
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<tr>
<td>Smith, David</td>
<td>Undergraduate courses in wood products manufacturing and wood technology; undergraduate advising; support for Oregon Wood Innovation Center</td>
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Cooperatives
Utility Pole Research Cooperative

Campus-based Extension Programs
Oregon Wood Innovation Center

Undergraduate Degree Programs
BS in Wood Science and Technology

Graduate Degree Programs
Forest Products (Master of Forestry)
Wood Science
Undergraduate Education

Student Services (Clay Torset, Director)

The Student Services Office focuses on recruiting and retaining undergraduate students who, on graduation, will be able to help meet the global demand for jobs in forestry and natural resources. Student Services strives to respond to the needs of students and faculty in meeting the College and university goals for student success.

Student Demographics (Fall)

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<thead>
<tr>
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Degree Programs

The College of Forestry offers undergraduate degrees in eight areas: Forest Engineering (FE), Forest Engineering/Civil Engineering (FE/CE); Forest Management (FM); Forest Operations Management (FOM); Recreation Resource Management (RRM; formerly Forest Recreation Resources, FRR); Natural Resources (NR); Tourism and Outdoor Leadership (TOL; formerly Outdoor Recreation Leadership and Tourism, ORLT); and Wood Science & Technology (WST).

Scholarships

The College of Forestry has a generous scholarship program, thanks to many alumni and other donors. Undergraduate students were awarded $552,333 for the 2006–2007 academic year and $469,300 for 2007–2008.
### Degrees Awarded

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<td>9</td>
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<td>&amp; Tourism</td>
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<td>Wood Science and Technology</td>
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<tr>
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</table>

The CoF monitors teaching effectiveness in every class taught, using the university’s SET process. Overall, 84% of undergraduates and 94% of graduate students rated their courses as Good to Excellent, and 87% of undergraduates and 96% of graduate students rated their instructors’ efforts in that range.
Graduate Education

Fellowships

The College of Forestry has a generous fellowship program, thanks to many alumni and other donors. Graduate students were awarded $452,442 for the 2006–2007 academic year and $388,363 for 2007–2008. Students also received aid through teaching and research assistantships.

Graduate Student Extramural Awards and Recognition

- **Holly Barnard** [FS and FE (Hydrology)], Horton Research Grant, American Geophysical Union
- **Laura Dlugolecki** (FR), 2008 Oregon Society of Soil Scientists Scholarship
- **Dan Donato** (FS) and Christina Eisenberg (FS), Mason prize for Integrity and Moral Courage, OSU
- **Chris Gabrielli** (WSE), third place, student poster competition, 50th Annual Society for Wood Science and Technology convention
- **Glenn Kohler** (FS), 1st place, student poster competition, Entomological Society of America
- **Tara Hudiburg** (FS), fellowship to the National Center for Atmospheric Research (NCAR) Graduate Student Visitor Program, summer (2008)
- **Nicole Younger** (FR), 3rd place, poster session, Society of American Foresters, national convention

Student Demographics (Fall)

<table>
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<th>Major</th>
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<td>New</td>
<td>Oregon</td>
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<table>
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<tr>
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<tr>
<td>Forest Engineering</td>
</tr>
<tr>
<td>Forest Resources</td>
</tr>
<tr>
<td>Forest Science</td>
</tr>
<tr>
<td>Wood Science and Engineering</td>
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Research

Oregon Forest Research Laboratory

Research at the College of Forestry is conducted through its research arm, the Oregon Forest Research Laboratory (FRL). The research mission of the College of Forestry is to conduct well-coordinated, problem-solving research that provides knowledge for the integrated management of forest resources for multiple values and products that meet society’s needs, with special attention to social and economic benefits. Research is conducted by the College’s departments in five general areas: forest regeneration; forest ecology, culture, and productivity; protecting forests and watersheds; evaluating forest uses and practices; and wood processing and products performance. Important research issues being addressed by forestry and forest products scientists include ensuring the sustainability of forest resources, understanding the complex structure and function of forest systems, and ensuring that forest operations and wood products manufacturing are environmentally and socially acceptable and economically feasible.

Oregon law provides that the State Board of Higher Education shall “institute and carry on research and experimentation to develop the maximum yield from the forestlands of Oregon, to obtain the fullest utilization of the forest resource, and to study air and water pollution as it relates to the forest products industries. The purpose of the research is “to aid in the economic development of the State of Oregon” (ORS 526.215, 1961). This research is to be carried out under the auspices of a Forest Research Laboratory at Oregon State University, and the Board of Higher Education is directed to “cooperate with individuals, corporations, associations and public agencies wherever and whenever advisable to further the purposes of ORS 526.215, and may enter into any necessary agreements therefore” (ORS 526.225).

Today all research by College of Forestry faculty is under the umbrella of the Oregon Forest Research Laboratory. College research brought in about $25 million in grant and contract funding in FY’s 2007 and 2008, engendering many cooperative and interdisciplinary research projects. Total research funding from all sources over the two years was $43 million.

FRL Advisory Committee 2008

Jerry Brodie
Managing Director of Operations, Campbell Group

Marvin Brown
State Forester, Oregon State Forestry Department

Rick Brown
Defenders of Wildlife, Northwest Office

Bov Eav
Director, Pacific Northwest Research Station

Gary Hartshorn
President, World Forestry Center

Dave Ivanoff
Vice President of Resources, Hampton Affiliates

Ray Jones
Vice President of Resources, Stimson Lumber Company

Catherine M. Mater, Chair
President, Mater Engineering, Ltd. Senior Fellow, The Pinchot Institute

Lee Miller
CEO, Miller Timber Services

Jennifer Phillippi
Rough & Ready Lumber

Hal Salwasser
Director, Forest Research Laboratory, Oregon State University

Ed Shepard
State Director, Bureau of Land Management

Barte Starker
Executive Vice President, Starker Forests, Inc.

Mary Wagner
Regional Forester, US Forest Service

Carol Whipple
Owner/Manager, Rocking C Ranch, LLC

Rich Wininger
Weyerhaeuser Company

Retired from the Board in FY 2007:

Russ McKinley, Chair, Boise Corp;
Linda Goodman, USFS Regional Forester; Bettina Von Hagen, Forestry Ecotrust.
Research Agreements, Contracts, and Grants

The wide-ranging research interests of our faculty are described in our brochure, Current Research 2009 (www.cof.orst.edu/cof/research/CR2009.pdf; also available from Forestry Communications, 280 Peavy Hall, Oregon State University, Corvallis, OR 97331-5704). The excellence of their research is reflected in the extramural funding they receive through agreements, contracts, and grants from federal and state agencies, cooperatives, industry, and other sources.

<table>
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<tr>
<th>Department</th>
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<th>2008 ($)</th>
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<td><strong>TOTAL</strong></td>
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<td>12,110,970</td>
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Research and Service Cooperatives

**CIPS—Center for Intensive Planted-forest Silviculture (Doug Maguire)**

Research synthesis and technology transfer program on intensive and sustainable management of planted forests for wood production, with emphasis on Douglas-fir. Members are the USDI-Bureau of Land Management, The Campbell Group, Cascade Timber Company, Forest Capital Partners, Lone Rock Timber Company, Longview Fibre, Oregon Department of Forestry, Plum Creek, Port Blakely Tree Farms, Rayonier, Roseburg Forest Products, Seneca-Jones, Starker Forests, Washington Department of Natural Resources, and Weyerhaeuser Company. (www.fsl.orst.edu/cips/)

Primary accomplishments in FY 2007 and 2008 include
- establishing the Center
- development of a Strategic Plan and a Strategic Framework
- initiating synthesis of information on young stand development in collaboration with the Vegetation Management Research Cooperative

**HSC—Hardwood Silviculture Cooperative (Dave Hibbs)**

Research and technology transfer program on the ecology, reforestation, and stand management of Northwest hardwood species, especially red alder. Members are British Columbia Ministry of Forests, Bureau of Land Management, Forest Capital Partners, Goodyear-Nelson Hardwood Lumber Co., Inc., Oregon Department of Forestry, Oregon State University, Siuslaw National Forest, Trillium Corporation, Washington Department of Natural Resources, USFS Olympia Forestry Sciences Laboratory, and Washington Hardwood Commission. (www.cof.orst.edu/coops/hsc/)

Primary accomplishments in FY 2007 and 2008 include
- compiling and cleaning a huge managed-stand alder data base
- beginning analysis for a managed alder version of ORGANON
- completing 17-year measurements of two variable density installations (5 are now 17+ years old), and one 12-year measurement (23 are now 12+ years old)
NC—Nursery Technology Cooperative (Robin Rose, Diane Haase)

Focuses on nursery management and seedling production and performance, emphasizing reforestation planting systems. Members are Forest Capital Partners; Hood Canal Nurseries; Lava Nurseries, Inc.; Lone Rock Timber Co.; Microseed Nursery; Oregon Department of Forestry, D.L. Phipps Nursery; Pacific Reforestation Technologies; Plum Creek Timber Co.; Roseburg Forest Products; Starker Forests; Swanson Group; USDA Forest Service, Pacific Northwest Region, National Forests and the J.H. Stone Nursery; USDA Bureau of Land Management, Oregon Districts; Washington Department of Natural Resources, L.T. Mike Webster Nursery; Weyerhaeuser Co.; and the Yakama Nation. (ntc.forestry.oregonstate.edu/)

Primary accomplishments in FY 2007 and 2008 include
- evaluating plant date, nursery dormancy induction, and the use of tree shelters on several OR and WA sites
- testing the effects of various media amendments on the growth and development of container-grown seedlings
- examining interactions among chilling hours, photoperiod, calendar date, cold hardiness, dormancy, and storage as they affect Douglas-fir seedling stress resistance and growth

NWTIC—Northwest Tree Improvement Cooperative (Keith Jayawickrama)


Primary accomplishments in FY 2007 and 2008 include
- developing a standardized data analysis protocol combining first-generation and second-generation data and using Best Linear Unbiased Prediction
- finishing 20 complete analyses and reports on first-generation breeding programs, 6 complete analyses and reports on second-generation breeding programs
- publishing two peer-reviewed publications

OWIC—Oregon Wood Innovation Center (Scott Leavengood)

The Oregon Wood Innovation Center (OWIC) links university-based research with the needs and opportunities of Oregon's forest industry. OWIC works to improve the competitiveness of Oregon's wood products industry by fostering innovation in products, processes, and business systems. (owic.oregonstate.edu)

Primary achievements in FY 2007 and 2008 include
- working with a multiagency group to develop an economic development strategy for the State's forest cluster. The governor and legislature will rely on this strategy in decisions regarding forestry and forest industry policies.
- offering nine workshops, including three new offerings, for more than 500 participants
- providing technical assistance to entrepreneurs and established members of the wood products industry. Those receiving such assistance have credited it with improving the quality and greatly enhancing sales of their products.
PNWTIRC—Pacific Northwest Tree Improvement Research Cooperative (Glenn Howe)


Primary accomplishments in FY 2007 and 2008 include

- completing a field and laboratory study of the genetics of Douglas-fir wood stiffness, which found that field-based acoustic tools can be used in operational breeding programs to improve wood stiffness, one of the most important characteristics of structural lumber and veneer
- continuing a long-term study of miniaturized seed orchards for Douglas-fir
- beginning genomics research to identify candidate genes for Douglas-fir wood properties
- conducting studies of early flowering and crown management to assist seed orchard managers in managing Douglas-fir miniaturized seed orchards

SNCC—Swiss Needle Cast Cooperative (Dave Shaw)


Primary achievements for FY 2007 and 2008 include

- completing the 2007 aerial survey, which detected 338,761 acres of Douglas-fir forest with obvious symptoms of SNC, the second highest number in 11 years of aerial survey. The disease appears to be ebbing and flowing with annual cycles of weather and is favored by warm winters and wet spring/summers.
- developing a suite of silviculture and planning tools with our collaborators to aid decision making. These include an ORGANON growth model subroutine that estimates effects of SNC on tree volume growth, a stand assessment tool that allows a forester to quantify the growth of a given stand and compare that to predicted growth, and a geographic disease severity prediction model based on elevation, climate, and aspect that produces maps of predicted needle retention.
- finding that ectomycorrhizal (symbiotic root fungi) density and species richness declined with decreasing needle retention, indicating that below-ground biology is being effected by SNC also

TBGRC—Tree Biosafety and Genomics Research Cooperative (Steve Strauss)

Studies tree genetics and breeding through gene-transfer-based biotechnology. Members are ArborGen LLC, Mondi, Potlatch, and Weyerhaeuser. (wwwdata.forestry.oregonstate.edu/tgbb/)

Primary accomplishments in FY 2007 and 2008 include

- obtaining a USDA APHIS permit for field trials of flowering poplars and sweetgums genetically engineered with several types of genes
- participating in US National Research Council Committees on GMO (genetically modified organisms) Ecological Issues for Wildlands and Future of Plant Genomics and in other national and international regulatory-biosafety activities
- obtaining funding from Resources for the Future to study “Environmental Regulation of Tree Biotechnology for Wood and Bioenergy: Effect of USDA and EPA Regulations”
organizing and obtaining funds for a symposium on "Physiological Sculpture of Plants: New Visions and Capabilities for Crop Development" in September 2008

obtaining strong results in several research projects: a field study of yield and competition in semi-dwarf trees produced by inhibiting gibberellic acid; strong growth effects in the greenhouse from inserting native poplar GA genes; excellent survival and growth in a field study of transgenic sterile sweetgum; continued strong pollen reduction in 12-year-old male-sterile transgenic trees; and marked changes in wood quality and growth in a field trial of trees genetically engineered for modified lignin production

**UPRC—Utility Pole Research Cooperative (Jeff Morrell)**


Primary accomplishments in FY 2007 and 2008 include

- completing testing and evaluation of through-boring for Douglas-fir poles and moving the data for consideration in the national pole standards
- developing data on migration of preservatives from poles in storage and preparing guidelines for proper storage
- establishing a large field trial to assess all internal remedial treatments used in North America

**VMRC—Vegetation Management Research Cooperative (Robin Rose, Eric Dinger)**


Primary accomplishments for FY 2007 and 2008 include

- evaluating soil moisture, xylem water potential, vegetation community development, and Douglas-fir seedling growth in response to common vegetation management regimes on a study site in Washington
- establishing three new sites as a part of the “Delayed planting of Douglas-fir to improve chemical site preparation efficacy” project
- producing the publication "Response of coast Douglas-fir and competing vegetation to repeated and delayed weed control treatments during early plantation development", a collaborative effort among the VMRC, Doug Maguire, and Doug Mainwaring

**WRC—Watersheds Research Cooperative (Arne Skaugset)**

Studies the environmental effects of contemporary forest management on hydrology, water quality, fisheries, and aquatic habitat. The pilot project was the Hinkle Creek Paired Watershed Study and Demonstration Area. Currently the WRC is the administrative home for three paired watershed studies: the Trask Paired Watershed Study, the New Alsea Paired Watershed Study and the pilot project, the Hinkle Creek Paired Watershed Study and Demonstration Area. Current members include Associated Oregon Loggers, Bureau of Land Management, Cow Creek Tribe, Dan Newton, Douglas County, Douglas Timber Operators, Forest Capital Partners, Friends of Paul Bunyan Foundation,
Primary accomplishments for FY 2007 and 2008 include:

- initiating the second harvest entry in the Hinkle Creek Paired Watershed Study. The entry consists of four harvest units covering roughly 400 acres; all are adjacent to main stem or tributaries fish-bearing streams. Harvest activities should be completed by May 2009.
- planning the first harvest entry in the Alsea Watershed Study. The entry will consist of approximately 70 acres of forestland in the headwaters of Needle Branch, a fish-bearing stream.

Other Cooperative Research Programs

**AmeriFlux Research Network (Beverly Law)**

A coordinated network of ~100 long-term research sites in the Americas for quantifying and understanding the role of the terrestrial biosphere in global climate change. The AmeriFlux Science Chair, research synthesis group, and site intercalibration group are located at Oregon State University; the data management group is at Oak Ridge National Laboratory. ([http://public.ornl.gov/ameriflux/](http://public.ornl.gov/ameriflux/))

**CFWUR—Center for Wood Utilization Research (Tom McLain, Steve Tesch)**

A USDA-funded research center focused on improving wood utilization, developing new wood products, enhancing processing and harvesting systems, and other strategies to add value to the western forest resource. ([woodscience.oregonstate.edu/USDAspecialgrant.php](http://woodscience.oregonstate.edu/USDAspecialgrant.php))

**CLAMS—Coastal Landscape Analysis and Modeling Study (Norm Johnson, Tom Spies)**

A cooperative program with the USDA Forest Service Pacific Northwest Research Station. Its scientists develop tools to understand patterns and dynamics of ecosystems such as the Oregon Coast Range and to analyze the consequences of forest policies of landowners in the region. ([www.fsl.orst.edu/clams/](http://www.fsl.orst.edu/clams/))

**ERSAL—Environmental Remote Sensing Applications Laboratory (Bill Ripple)**

Develops and applies remote sensing and geographic information systems (GIS) technology for the study of forestlands and related natural resource problems, including landscape ecology, remote sensing of plant cover, forest landscape patterns, and wildlife habitat. ([www.cof.orst.edu/cof/fr/ersal.php](http://www.cof.orst.edu/cof/fr/ersal.php))

**Fish and Wildlife Habitat in Managed Forests (Steve Tesch)**

Provides new information about fish and wildlife habitat within Oregon's actively managed forests through research, technology transfer, and service. Current priorities favor those that contribute to the scientific information base that supports the Oregon Forest Practices Act. ([www.cof.orst.edu/coops/fishandwildlife/](http://www.cof.orst.edu/coops/fishandwildlife/))
LARSE—Laboratory for Applications of Remote Sensing in Ecology (Warren Cohen)

Conducts basic remote sensing research, translates remotely sensed data into mapped ecological information, and fills the gap between remote sensing and ecological sciences. LARSE is a cooperative program with the USDA Forest Service Pacific Northwest Research Station. (www.fsl.orst.edu/larse/)

Leopold Project (Bill Ripple)

Continues the work Aldo Leopold started on topics that intersect forestry and wildlife science and ecosystems putting formal emphasis on the multidisciplinary approach to the study, wise use, and conservation of natural resources. (www.cof.orst.edu/leopold)

LTEP—Long-term Ecosystem Productivity Program (Bernard Bormann)

A 200-year program of research in the Pacific Northwest and Alaska that seeks understanding of processes that control the long-term productivity of the land—including timber, other commodity and noncommodity resources, and biodiversity—to support sustainable ecosystem management. (www.fsl.orst.edu/ltep/)

LTER—Long-Term Ecological Research (Barbara Bond)

A long-term program of research at the H.J. Andrews Experimental Forest, LTER is discovering fundamental ecological relationships in managed and natural forests and incorporating them into forest management strategies. (www.fsl.orst.edu/lt er/)

SFP—Sustainable Forestry Partnership (Jim Johnson)

A program integrating social and biological aspects of forestry research into strategies for the long-term sustainable management of forests for a multiplicity of values. (www.cof.orst.edu/org/sfp/)

TERRA-PNW (Beverly Law)

A long-term program of research throughout Oregon and California on the ecological responses of terrestrial ecosystems to natural and human-induced changes. The research is funded by multiple agencies including NASA, the US Department of Energy, NOAA, and USDA. The understanding of mechanisms controlling ecosystem processes is being incorporated in process models that are applied at the landscape to regional scale using multiple scales of observations. (terraweb.forestry.oregonstate.edu/)

Trophic Cascades Program (Bill Ripple)

A research and educational program with the purpose of investigating the role of predators in structuring ecological communities. (www.cof.orst.edu/cascades)

WPG—Watershed Processes Group (Gordon Grant)

An interdisciplinary research group studying linkages among physical and biological processes and human activities, with particular focus on the steep, forested landscapes of the Pacific Northwest (www.fsl.orst.edu/wpg)
International Programs

(James Johnson, Associate Dean for International Programs and Forestry Extension)

The mission of International Programs is to lead and coordinate College efforts to increase awareness of global events, trends, and forestry issues that affect Oregonians and our forests; develop and maintain excellence in international educational, research, and outreach activities; and establish the Oregon State University College of Forestry as a global leader in forestry with strong linkages with international institutions and networks.

Extended Education, Outreach, and Support

Extended education, outreach, and support functions of the College are accomplished by faculty and staff in the following units:

- College Forests, Dave Lysne, Director (www.cof.orst.edu/cf/)
- Forestry Extension Program, James Johnson, Program Leader (www.cof.orst.edu/cof/extended/extserv/)
- Oregon Natural Resource Education Program, Susan Sahnow, Program Coordinator, (www.cof.orst.edu/cof/extended/onrep/)
- Forestry Media Center, Roger Admiral, Director (fmc.cof.orst.edu)
- Forestry Communications Group, Roger Admiral, Director (fcg.cof.orst.edu)
- Forest Computing Group, Kathy Howell, Director (wwwdata.forestry.oregonstate.edu/helpdesk/)
- Forestry Business Office, Penny Wright, Business Manager (www.cof.orst.edu/cof/account/)
- Forestry Maintenance and Project Support (Rand Sether, Director)
Over the last 100 years, the College of Forestry has produced generations of groundbreaking leaders and supporters, from one of the College’s first graduates, T.J. Starker, an early innovator in sustainable forestry practices, to Abigail Kimbell, the first female chief of the US Forest Service. The College has educated influential leaders in industry, academia, government, and nongovernmental organizations. Of equal importance are the thousands of graduates who have used their education to run their own small woodlands; manage forest operations for industry or agencies; provide manufacturing expertise in wood products companies; manage recreation programs; utilize science to advance the knowledge of forest ecosystems, practices and processes around the world; and become educators for college students, as well as the interested public. Oregon’s environment, economy, and communities have continuously benefited from the efforts of such people.

The successes achieved by many of these people have been the direct result of gifts provided by graduates, people employed in forest related industries, landowners, and citizens who value well-educated people involved in forestry and natural resources. We are grateful to report that donations of over $7.6 million in 2008 are being invested to help educate future forestry leaders, and to develop the research to best manage and sustain Oregon’s forests.

Part of this funding will be directed toward endowed chairs and professorships. Endowed faculty are proven catalysts for research and educational excellence. Funds allow the recruitment and retention of world-class scholars who generate multidisciplinary solutions to emerging issues. Professorships tend to support younger teachers and researchers. Investment in these rising stars allows them the opportunities to forge new collaborations or engage students in leading-edge activities.

Donations will also support a competitive proposal process from current faculty. Those with innovative ideas for classroom instruction or needing some ‘seed-money’ to pursue new research initiatives will find such funds invaluable for moving programs forward. Talented professors are then able to leverage their efforts to win grant funding from external sources, and recruit exceptional graduate students.

A critical use for these donations is student support. OSU’s most important contribution to the future remains, as it has always been, its graduates. Scholarships and fellowships help recruit and retain tomorrow’s talented foresters, wood products experts, and ecosystems scientists. Many of the College’s current students and recent graduates could not have started or completed their degrees without donor support. They would have been denied the opportunity to become what one of our industry partners has described as “the most technically skilled, most adaptive, and hardest working of our employees.”

Private giving provides the College extra resources to support students and pursue innovative programs that might not otherwise happen. The University’s Capital Campaign continues, and we hope it will generate additional meaningful and consequential investments for the missions of the College, the Forest Research Laboratory, and Oregon.

Jennifer Niedermeyer
Director of Development, College of Forestry
OSU Foundation
Jennifer.niedermeyer@oregonstate.edu
503-533-3409
My friends quite often ask of me,  
Why does an old man plant a tree?  
It grows so slow it will not pay,  
A profit for you anyway.  
Then why in storm and winter cold,  
Do you plant when you're so old?

The answer seems hard to define,  
When muscles ache and they are mine.  
But I just cannot stand to see,  
A space where there should be a tree.  
So that in part as years unfold,  
Is why I plant when I'm so old.

I know that animals, bugs and things,  
Love trees, and so do such as go on wings.  
So creatures wild that benefit,  
Is one more reason I can't quit  
From planting trees while I can hold,  
My planting hoe, though I'm so old.

They say that those retired from labor,  
Should fish and play and talk to neighbor.  
They say also that folks in leisure,  
Should do the things which give them pleasure.  
And so the thought on which I'm sold,  
I'll plant some trees though I'm so old.

As time goes on my trees will grow.  
So tall and clean and row on row.  
The furry folk will have a home,  
The birds can nest, and kids can roam.  
And all of this as I have told,  
I planted trees though I'm so old.

And then there is my family,  
Young folks who will follow me.  
I'd like to leave them with some land,  
Stocked with trees and looking grand.  
These gifts I value more than gold,  
So I plant some trees though I'm so old.

And taxes too for schools and roads,  
With jobs and lumber for abodes.  
I won't see these things, I won't be here.  
But to my mind it's very clear.  
The words of some who could be polled,  
Might thank a man who is so old.

Man should be proud of what's his own,  
And how he's managed what he's grown.  
But management must be begun,  
By planting seedlings one by one.  
And so my pride I shall uphold,  
I'll plant some trees though I'm so old.

So when my friends ask of me,  
Why does and old man plant a tree?  
Perhaps the lines above explain,  
How aching back and limbs in pain,  
May by commitment be controlled,  
To plant my trees though I'm so old.

Robert H. Mealey  
Oregon State College, School of Forestry  
Class of 1936

“Sustainable” was not a common term used by foresters in 1936, but the concept was part of their training and mindset. Forests were managed for the environment, and for the people. Those ideas remain today as our scientists combine their knowledge to create new solutions and for future forests.