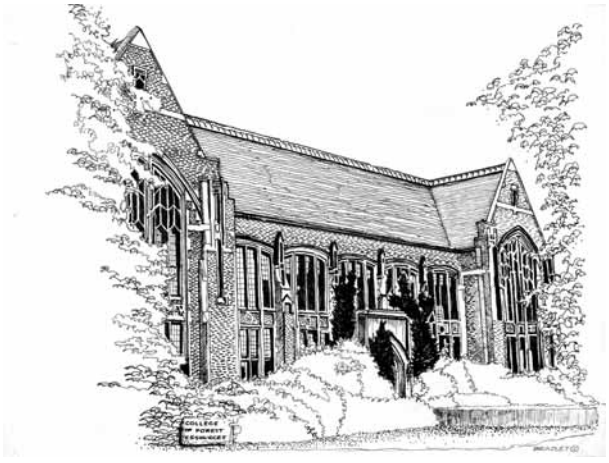
University of Washington

College of Forest Resources

Society of American Foresters Accreditation Review



Self-Evaluation

March 2006

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Standard 1: Forestry Program Mission, Goals, and Objectives

Development of the Forestry Program within the University

The mission of the University of Washington is to create, preserve, and disseminate knowledge; to develop and protect an intellectual environment conducive to development and free exchange of ideas and the mastery of academic and professional skills; and to provide academic leadership in the arts, sciences, and professions through excellence in teaching and research. The University of Washington offers undergraduate, graduate, and professional education, develops knowledge through research, and extends knowledge through continuing education and numerous public services to the citizens of Washington State and the region.

As the leading research and teaching university in the Pacific Northwest, the University of Washington offers a broad array of programs in the arts and sciences and a number of professional fields. The University is committed to maintaining basic strengths in all of its schools and colleges and strives for excellence in all of its programs.

As one of the oldest professional colleges in the University, the College of Forest Resources has long helped the University fulfill its purposes through programs in undergraduate and graduate education, research and continuing education.

Educational and research programs in the College of Forest Resources have evolved in response to the development of the University and the changing needs of forestry professionals and specialized knowledge in the Pacific Northwest. These programs have recently been reshaped to meet existing and anticipated demands for professional knowledge and practitioners. When the College of Forest Resources was founded in 1907, the forests of the Northwest seemed limitless and long-term management of resources was only beginning to be recognized by institutions of higher education. The Northwest had become the center of the lumber producing industry, and Washington led the nation in lumber production by 1910. Forestry education at the University of Washington was begun in response to the growing recognition of the need to conserve forests and provide for future needs.

In 1894, predating the College, the University offered a forestry course on the biological aspects of forests in the Department of Natural Sciences, and soon followed with a two-quarter course sequence in the Department of Terrestrial Physics and Geography. By 1897, Professor Edward S. Meany, later to become University President, had been appointed as "Lecturer in Forestry." In 1901, forestry was listed as a department in the College of Liberal Arts. In 1905, Professor Meany initiated a course for public school teachers in recognition of the need for public outreach that has grown steadily over the years.

On September 18, 1907, the School of Forestry opened with eight freshman and two graduate students. The formal graduate program began when a Master of Science in Forestry degree was approved for the 1908-1909 academic year. A Doctor of Philosophy for graduate students studying forestry was approved in 1933, and the first Ph.D. in Forestry was awarded in 1936. The name was changed from the School of Forestry to the College of Forest Resources in 1967.

During the early years of the College, the purposes of the University and the needs of the region were met by grouping professional interests into Forest Management, Forest (logging) Engineering, and Forest Products. This breadth of programs continued until the 1960s, and addressed the management of land and related resources, the operations of producing products from the forest, and the conversion of timber into the growing variety of products useful to society.

Over the last 30 years the College has reshaped its programs to provide professional leadership, knowledge, and practical expertise for addressing the changing needs of Washington State and the Pacific Northwest. Additionally, the College adapted its programs to address problems in the international realm of forest products, forest conservation, and development. Forests remain as important to the state as they were when the College was founded. Approximately half of the state's area, or twenty-one million acres, is classified as forest land. Sixteen million acres are commercial forests. These lands support a large industry contributing $10 billion or 18 percent of Washington's annual business income and more than 50,000 direct and 150,000 indirect jobs. Wood production is second only to aerospace in its economic significance to the state.

Regional population growth, when coupled with increasing regional and national concern over environmental protection, has made national parks, wilderness, natural areas, and preserves important parts of forest management in the Pacific Northwest. Currently, forest lands in general provide a multitude of products and services in addition to wood. Water, fisheries, wildlife, and recreation opportunities, together with additional amenity and scientific values, are highly valued by society as a whole. Collectively, these are the most significant values of forests for many of the state's residents, and rival timber in their contribution to the economy—making the uses of forests a central feature of Northwest lifestyles and creating substantial and protracted political conflict over forest land use and management. The demands for broader environmental services and protection will continue to intensify in the years ahead as the population of the Pacific Northwest grows and continues to urbanize, and as more land is converted from forests to other uses. The need for professionals capable of addressing these problems will increase as we move into the future.

The growing population will also create new demands on higher education. After a decade of decline, the college-age population (18 to 24 years old) is projected to increase by 19% from 2005 to 2009. Higher education enrollment is predicted to increase 14% over the same time period, or from 14.4 to 16.3 million[1]. This new population of college graduates will find the greatest job opportunities in the fast growing occupations of computer science (computer engineers, data base administrators, etc.), physical therapy, occupational therapy, and secondary school teaching[2].

Unfortunately, these same graduates will encounter more limited employment opportunities in natural resources. Employment for foresters and conservation scientists is expected to grow only as fast as the average for all occupations through the year 2006. This growth will be concentrated in state and local governments due to increasing emphasis on environmentally-sound development. Research and testing firms that employ conservation scientists are expected to continue hiring, though at a slower rate than in the last decade. Fewer opportunities will exist in the Federal Government, partly due to budgetary constraints.[3]

The University of Washington and Its Growth

The college-age population growth that is occurring at the national and state level is also occurring in Puget Sound. Predicted population increase and enrollment demands will create a larger and more diverse student body, spread across a University of Washington that grew from one to three campuses in the 1990s. The University will attempt to provide access to an additional 20,691 students by 2010, distributed roughly equally over the three campuses: Seattle (UWS), Tacoma

[1] National Center for Education Statistics, 1999). Projection of Education Statistics to 2009. Chapter 2: Higher Education Enrollment. http://nces.ed.gov/.
[2] Bureau of Labor Statistics, 1999. 1998-1999 Occupational Outlook Handbook. http://stats.bls.gov/ocohome.htm.
[3] Ibid

(UWT), and Bothell (UWB). Total enrollment will rise from 32,919 AAFTEs (Annual Average Full-Time Equivalents) to 52,500; enrollment at the Seattle campus will rise from 31,297 AAFTEs to 39,000[4].

The expansion of the UWT and UWB campuses will require addressing curricular development with the aim of complementing, rather than competing with, programs between campuses. At UWB, the Science, Technology, and Environment concentration currently has two full-time and four shared or part-time faculty. Plans are underway at UWB to offer a B.S. degree in Environmental Science, which would replace the current B.A. degree. Between four or five new faculty positions will be added over the next five years. Larger plans are being discussed at UWT, which currently has 4 full-time environmental science faculty and tentative plans to hire 17 faculty in interdisciplinary sciences over the next 10 years. On the Seattle campus, the demise of the Institute of Environmental Studies in the early 1990s, and the emergence of the Program on the Environment (POE) in the late 1990s, broadened the environmental ties across campus and should encourage more interdisciplinary education within and between the UW campuses.

Forestry Curricula in the 1990s at the College of Forest Resources

Within this setting, the College of Forest Resources fulfills the University's mission by educating future managers and scientists and by conducting research in the many biological, physical, economic, and human dimensions of forest management and protection. The College is also responsible for updating practicing managers and scientists on the latest issues and technology, and developing practical knowledge about trees, fish, water, wildlife, recreation, and their relationships. In recent years, the College has also assumed responsibility for urban forest resource issues and opportunities and related urban and environmental horticulture problems.

In response to a changing environment and student population, the College has diversified more in the 1990s than in any other decade of the 20th century. In the mid-1980s, there were four undergraduate curricula: Pulp and Paper Science, Wood Technology, Logging Engineering, and Forest Resources Management. Over the next decade, Wood Technology was placed on hold due to a lack of majors, and the others changed their names: Pulp and Paper Science to Paper Science and Engineering, Logging Engineering to Forest Engineering, and Forest Resource Management to Forest Management. Three new undergraduate curricula emerged: Wildlife Science (formerly an undergraduate program but eliminated due to a budget cut in 1981), Conservation of Wildland Resources, and Urban Horticulture and Forestry. In 1999, Urban Horticulture and Forestry was revised to Environmental Horticulture and Urban Forestry, and a new curriculum, Sustainable Resource Science was adopted.

In 1996, the College was one of the first at the University to initiate a strategic planning process; it continues at present. A College mission has been defined, within which its undergraduate curricula are nested:

> *The College of Forest Resources is dedicated to generating and disseminating knowledge for the stewardship of natural and managed environments and the sustainable use of their products and services through teaching, research, and outreach.*

The associated program goal for education is to provide students with a premier educational and training experience in integrated natural resource management, utilization, and environmental

[4] President's Task Force on Enrollment

sciences and stewardship. Current themes in the College are "ecosystem management in an urbanizing world," and "sustainable forest enterprises." A 1999 College retreat resulted in a list of desired outcomes for graduates of the College of Forest Resources:

- understanding sustainability/scarcity
- ethics/values
- reasoning and communication skills
- creativity/innovation
- fundamental knowledge
- system design
- project management
- tradeoffs
- interface linkages in science/policy
- ability to function on interdisciplinary teams

Forestry at the College of Forest Resources in the New Millennium

The University began to more closely scrutinize the undergraduate programs within the College early in the first decade of the new millennium. Our students were taking longer to complete their degrees, some of the curricula were not successful in attracting students, and class sizes were small. Other programs on campus were more flexible and offered much of the same educational opportunities (although more in an elective sense than through a required set of courses).

The greater flexibility under the Arts and Sciences programs (Botany, Zoology, and POE, for example) drew some students interested in natural resources issues but wishing to have greater efficiency and control of their program of study (Figure 1). The College curricula most affected were Forest Management, Conservation of Wildland Resources, Wildlife Science, and Environmental Horticulture and Urban Forestry. The reality is that the diverse offerings in engineering and the natural sciences outside of the College have continued to attract students at levels equal to or greater than allied programs within the College (Figure 2). This helped explain why College students had such long time-to-degree programs at the University (Figure 3). The long time-to-degree at the College was reflected in the low Graduation Efficiency Indices for many programs (Figure 3). This index is a measure of the number of extra credits students acquire in addition to the program's major requirements (after accounting for transfer credits).

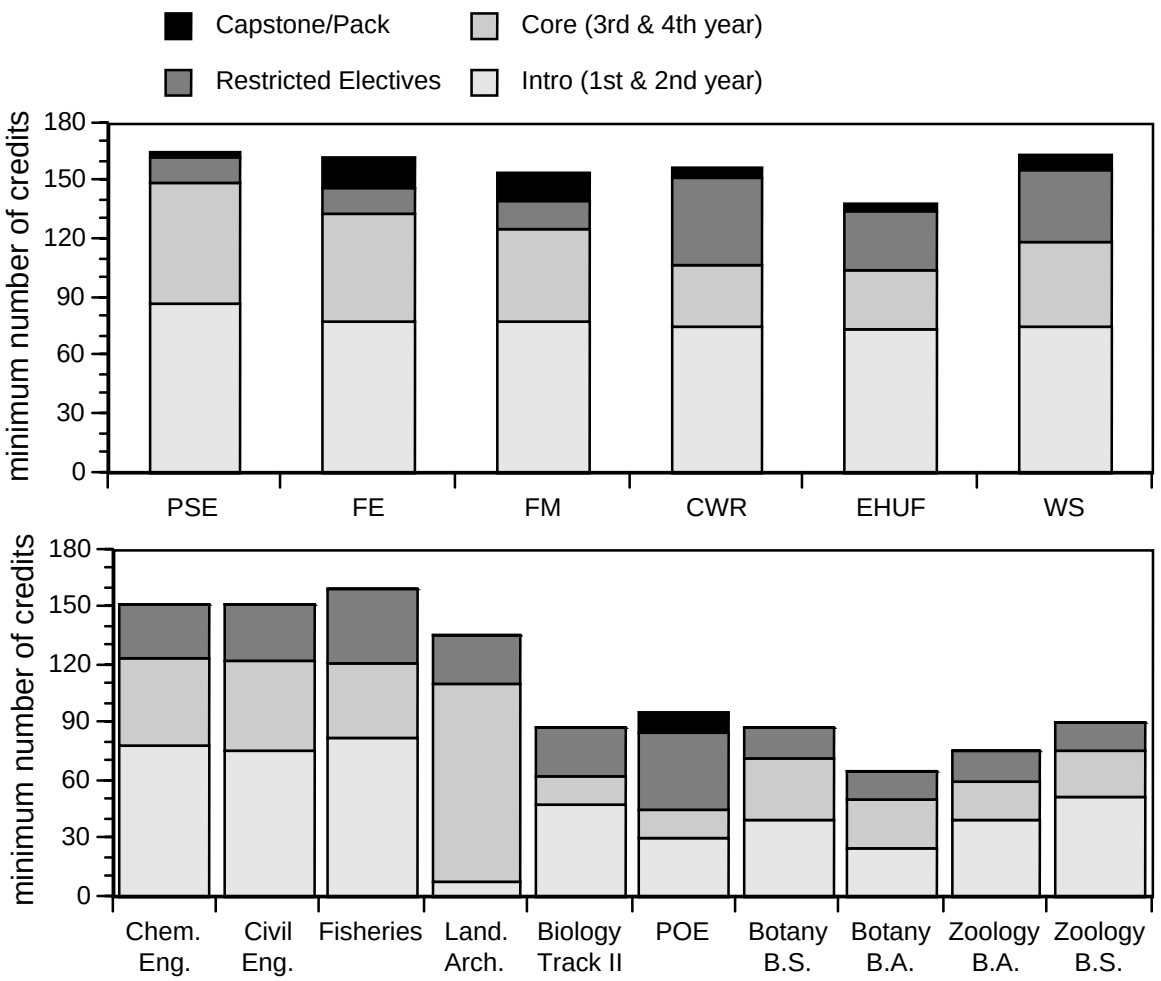


Figure 1. Course requirements in former College of Forest Resources programs and at complementary and competing departments. The "intro" and "core" categories comprise all courses, which are required for the degree. The "restricted elective" category comprises courses which students have a choice from a list of courses if those courses are not specified in the degree requirements. The university "areas of knowledge" requirements are not included. Note: Landscape Architecture is a professional five-year program and only admits ~20 students/year. *Source*: course information sheets and Web pages.
PSE = Paper Science and Engineering, FE = Forest Engineering, FM = Forest Management, CWR = Conservation of Wildland Resources, EHUF = Environmental Horticulture and Urban Forestry, WS = Wildlife Science

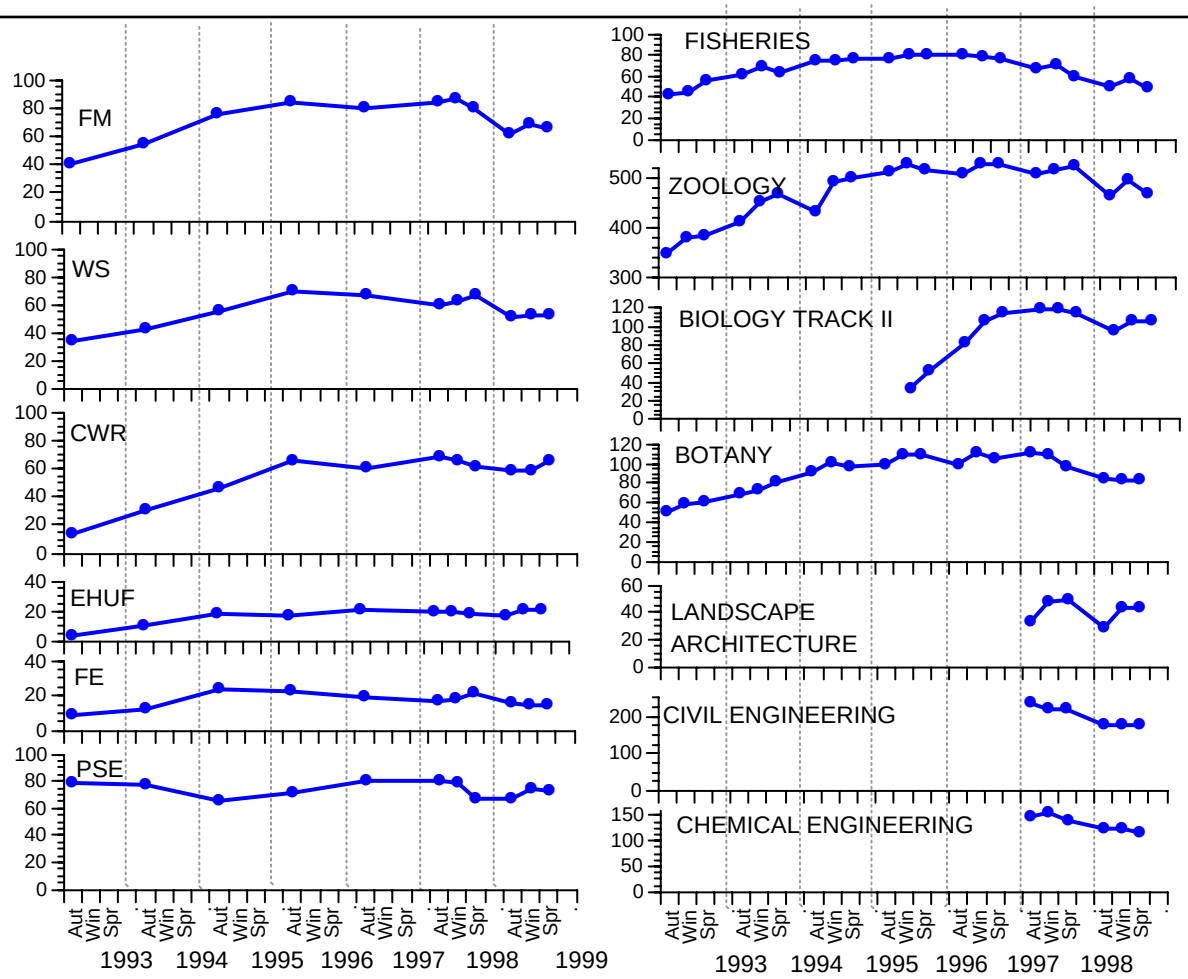


Figure 2. Enrollment levels in former College of Forest Resources undergraduate programs and at complementary and competing departments. An increase in enrollments in the natural sciences and natural resources during the early 90s has leveled off or decreased in the last three years. The Program on the Environment has a B.A. program that grew in its first year (1998-99) from zero to forty students.

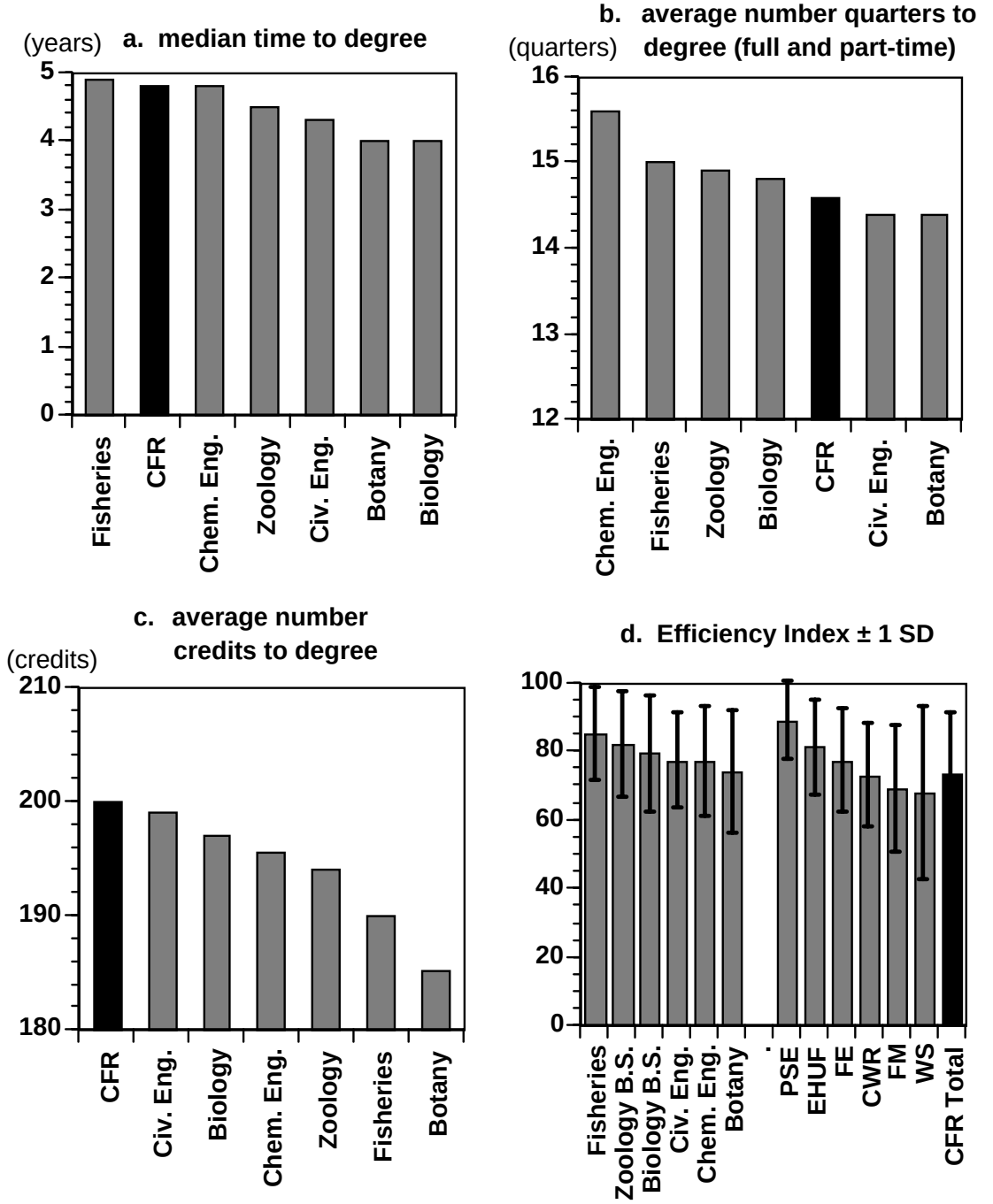


Figure 3. Selected statistics describing the efficiency of past College of Forest Resources programs versus complementary and competing programs.

a: median time from first enrollment to graduation (non-transfer students only).

b: average number of quarters to degree (full and part-time, non-transfer students).

c: average number of credits to degree (non-transfer students only).

d: Graduation Efficiency Index (GEI) for both transfer and non-transfer students. GEI is calculated as (Minimum Required Credits for Degree - Transfer Credits) / Sum of Enrollment Census Day Credits. A GEI of 100 indicates no extra credits were taken beyond the degree requirement.

Sources: a-c: 1999 Academic 1999 Academic Profiles, Office of Institutional Studies; d: 1998 Office of Institutional Studies Electronic Reports.

In 2000, the faculty began a reassessment of the undergraduate curricula with a faculty-produced "Futures Report." Subsequent planning committees involving students, staff, and faculty produced a plan to condense the seven undergraduate curricula to two: Paper Science and Engineering (PSE), and Environmental Science and Resource Management (ESRM). In 2004, the College completed its University review process, known as RCEP (Reduction, Consolidation, and Elimination of Programs), and these two curricula are the only ones into which new undergraduate students are being admitted.

The ESRM curriculum is the closest of the College's curricula to the recently eliminated (and currently SAF-accredited) Forest Management curriculum. Although students graduating with the ESRM degree will qualify for Federal Civil Service status as Forester, the College believes that the new ESRM program will not be suitable for SAF accreditation. This intent was communicated to SAF Associate Director Terrance Clark by Dean Bruce Bare on April 27, 2004. The new curriculum includes:

Bachelor of Science in Environmental Science and Resource Management

Introductory Course Requirements
Written Communication: 12 credits
- English 131 (5) English Composition
- TC 231 (5) Technical Writing
- TC 333 (4) Advanced Technical Writing

Visual Literary & Performing Arts: 10 credits
- Communication 220 (5) Introduction to Public Speaking
- Visual Literary and Performing Arts (5) (from VLPA list)

Biology and Soils (13-14 credits)
- Biology 161 (5) General Biology
- Biology 162 (5) General Biology
- ESC 210 (4) Introductory Soils

Chemistry (10 credits)
- Chemistry 120 (5) Principles of Chemistry
- Chemistry 220 (5) Introduction to Organic Chemistry

Quantitative and Symbolic Reasoning (20 credits)
- QSCI 291 (5) Analysis for Biologists I (or Math 124 or 144)
- QSCI 292 (5) Analysis for Biologists II (or Math 125-145)
- QSCI 381 (5) Introduction to Probability and Statistics (or equivalent)
- CFR 250 (5) Introduction to Geographic Information Systems

Major Course Requirements
Core Courses (20 credits)
- CFR 301 (5) Maintaining Nature in an Urban and Urbanizing World
- CFR 302 (5) Sustainability in Production Lands
- CFR 303 (5) Preserving and Conserving Wildlands
- CFR 304 (5) Environmental and Resources Assessment

Restricted Electives (35 credits)
- 35 Credits in CFR courses 300 and greater
- 15 credits 400 or greater

Free Electives (59-60 credits)

We believe that the new ESRM curriculum, and similar programs from other universities, constitute an excellent preparation for a SAF-accredited Master of Forest Resources program, the degree program we are now proposing for accreditation.

Master of Forest Resources Program Goals

The goals of our Master of Forest Resources program are to educate, train, and prepare graduate professionals in forest land management who can serve public agencies, non-governmental organizations, and the industrial and non-industrial private sector. This will be accomplished by screening applicants so that admission is limited to those individuals who have adequate natural resources undergraduate preparation, and by offering a 45-credit professional Master's degree.

The degree program is designed to create:

- a curriculum that integrates knowledge and skills from technical disciplines with those from policy and management subjects in ways suitable for professional leadership in the public, nongovernmental, and private sector;
- a collaborative and interdisciplinary learning environment that develops team approaches, skills, and experience needed for complex decision-making; and
- future managers capable of addressing the complex issues facing society and industry in the forest resources arena.

The Master of Forest Resources (Forest Management) degree program was designed around the Society of American Foresters' Accreditation Standards. The College is committed to continue providing an accredited degree program to its students and being a leader in forest and natural resource management in Washington and throughout the world.

College of Forest Resources Self-Evaluation

As evident by the curricula changes undergone by the College since its inception, the College of Forest Resources is adept at evaluating and revising academic and research programs to meet the needs of the changing society and environment. The College has an ongoing strategic planning process, which reviews the programs and research areas offered through the College on an annual basis. Last year the Dean of the College, B. Bruce Bare, appointed faculty, staff, and students to an ad hoc CFR Directions Steering Committee, whose mission was to examine the goals and objectives of the College and how to recruit and retain quality students, staff, and faculty. The committee facilitates dialogue among the faculty and the rest of the College community (i.e., staff and students), and helps the College revise programs as necessary. The committee produced a final report in November 2005, which is provided on the following pages as one example of the outcome of an in-house assessment of the College's goals and vision.

November 30, 2005

TO: B. Bruce Bare, Dean
College of Forest Resources

FROM: *Ad hoc* CFR Directions Steering Committee

Brian Boyle, Advisor to the Dean
Gordon Bradley, Vice-Chair and Professor
Robert Edmonds, Associate Dean and Professor
Richard Gustafson, Chair and Professor
John Marzluff, Professor
Cecilia Paul, Communications Director
Michelle Trudeau, Director, Student and Academic Services
Stephen D. West, Associate Dean and Professor (Committee Chair)

RE: Final Report of the CFR Directions Steering Committee

The previous set of strategic goals and objectives for the College covering the years 2002-2005 were adopted on 27 September 2002 at the Strategic Planning Retreat at the Center for Urban Horticulture. On 14 March 2005 Dean Bruce Bare asked the above group to facilitate the College's re-examination of its 3-year goals and objectives for the years 2005-2008. Our charge:

1. Review existing performance criteria and benchmarks for continuing relevance as indicators of our overall success.
2. Perform an assessment of where the College is at this point and identify some things we might do to improve. In the process, identify activities that may contribute to a thematic-presence for the College.
3. Convene an open meeting with the College community to seek their input and feedback of these preliminary ideas. The purpose will be to seek their thoughts on future direction and how to move the College to achieve these goals. This presentation, based on a broad set of indicators, will also indicate how we intend to involve the CFR community in this comprehensive examination.
4. The output from this discussion will be presented to the College's Visiting Committee. We might devote an entire meeting to the discussion, encouraging full participation from the group. We could also invite people who participated in the Working Forest Forum or others from industry, agencies, and NGOs. All of this will help convey that we take discussions about our future direction seriously and that we continue to think about the direction of the College and wish to bounce ideas off of them.
5. Refine all of this into something called "some preliminary considerations for future directions" and use it as a way to continue discussions with the broader College community (faculty, staff, and students). This could be the focus of our fall meeting, given that steps 1-4 may be scheduled over the spring and summer quarters. At this stage (or perhaps earlier) we may also want to enlist the services of the two facilitators who helped in the retreat a couple of years ago.

At organizational meetings on 7, 12, 15, and 22 April 2005, the Committee consolidated information on past goals and objectives and supporting planning documents on the College's intranet at http://www.cfr.washington.edu/internal/committees/committees/CFRDirections.htm (Committee website). Subsequent presentations and products of the Committee were placed on the website as well.

The Committee called a brief All-College meeting on April 26 to update the College community on the committee's activities and tentative plans. A PowerPoint Presentation of the Committee's approach (CFR All College Meeting April 26, 2005, Committee website) was followed by general discussion. As the first step in the planning process, the Committee sent out a brief online questionnaire that afternoon, fashioned after the similar successful effort 3 years previously. The questionnaire was in three parts:

- What is currently going well at CFR? (3-5 items)
- What is currently not going well at CFR? (3-5 items)
- Identify 5 goals for CFR to accomplish in the next 1-3 years and how you would measure their achievement

The Committee collected responses to the questionnaire through May 9, collated the results, and posted them on the Committee website (Results of the 2005 CFR Survey Questionnaire, Committee website).

There were 62 responses, which after collation and identification of themes, yielded the information in Table 1.

Table 1. Thematic areas from the questionnaire

1	UG programs	11	Enrollment	21	Staff
2	ESRM core	12	Research	22	Strategic planning
3	Grad programs	13	UW-wide linkages	23	Infrastructure
4	College culture	14	Centers	24	College name
5	Leadership	15	Development	25	Inter-/multi disciplines
6	Communications	16	Program quality/rigor	26	Diversity
7	Website	17	Program assessment	27	Placement
8	Outreach	18	$ resources	28	Faculty support
9	Recruitment	19	Student funding	29	International
10	Faculty hires	20	Advising		

At the next Committee meeting on 20 May, further inspection of these data revealed clusters of associated themes (below). On May 24 the Committee identified and charged College focus groups with developing goals and objectives within their thematic areas (Goal Request to Focus Groups, Committee website):

Grouped Themes from Questionnaire	**College Focus Groups**
Undergraduate programs and core courses (especially categories 1, 2)	Undergraduate students and TAs (Trudeau, lead)
Faculty hires and research issues (especially categories 3, 10, 12, 16, 19, 28)	Elected Faculty Council (Johnson, Chair)
Workplace quality issues (especially categories 4, 6, 21)	Staff members (Paul, lead)
Stakeholder perceptions of CFR (especially categories 4, 5, 8, 15, 17)	Visiting Committee (Boyle, Chair)
Recruitment and infrastructure (especially categories 9, 23)	CFR Directions Steering Committee (West, Chair)

On May 25 the Committee Chair met with the College's Visiting Committee to explain the approach to planning and their charge. Focus groups reported their draft goals and objectives at the All-College meeting on June 3 (CFR All College Meeting June 3, 2005, Committee website). The CFR Directions Steering Committee collated and refined the draft goals and objectives for consideration at the fall All-College retreat (Goals, Committee website). The next meeting of the CFR Steering Committee was on September 9, when planning for the All-College retreat began in earnest. The Committee decided on a half-day format, formulated a draft agenda, and contracted with Ms. Chris Wooten to facilitate the meeting. The Committee finalized the agenda and made preparations for the retreat with assistance from Sally Morgan during the week of September 19 (Agenda, Committee website).

The All-College retreat was held from 8 am—1 pm on September 20 at the Lake Washington Rowing Club. With facilitation from Chris Wooten, the assembled discussed the draft goals and objectives at length, and produced a modified set of goals and objectives. Chris Wooten collated the material and provided the meeting record to the Committee on the afternoon of September 20.

The Committee Chair met with the College's Visiting Committee to discuss the general outcome of the retreat at the Center for Urban Horticulture on October 10, 2005. The last meeting of the Committee on 21 October 2005 finalized the goals and objectives which were sent that afternoon to the Dean and the Elected Faculty Council.

The six goals and associated objectives for 2005-2008 are presented below in no particular order of importance:

Goal: Recruit, mentor, and retain the highest quality students, faculty, and staff

- Design and implement a comprehensive recruitment plan for undergraduate and graduate students with metrics for success
- Ensure that faculty hires over the next three years increase CFR faculty diversity including cultural and disciplinary backgrounds
- Encourage collaboration and communication among students, faculty, and staff within CFR
- Meet College staffing needs
- Provide training opportunities for staff
- Establish a faculty mentoring plan
- Increase grants and endowed fellowships for graduate students
- Seek scholarships to improve student diversity
- Investigate use of TAs for recruitment

Goal: Provide highest quality educational programs

- Assess and revise ESRM and PSE curricula including experiential learning and linkages to other UW programs
- Develop ESRM learning outcomes and outcome assessment methods
- Establish the Master of Forest Resources (Forest Management) and obtain accreditation (SAF)
- Fully implement new graduate program

Goal: Build and upgrade facilities, incorporating innovative design, technology, and sustainability features

- Seek upgrades for CFR-managed facilities
- Seek funding for new facilities:
  - Learning Center in Bloedel Hall
  - Northwest Environmental Forum Building
  - Lodge and other facilities at Pack Forest
  - "Bridge" Building at main campus to enhance federal presence
  - Facilities per master plan for UWBG

Goal: Increase financial support for the College's strategic transformation

- Develop strategic funding plans for each center and research program area
- Increase visibility of CFR's fundraising plan with Dean's Council and faculty review
- Involve faculty in fundraising efforts
- Seek endowed support for new faculty positions and existing faculty needs
- Task a "New Money" group with finding untapped funding sources

Goal: Conduct internationally renowned research

- Charge a "New Initiatives Team" to define interdisciplinary research areas of growth, foster their institutional base, and compete for a large research center at the College
- Effectively communicate research activities and achievements to position CFR for research resources
- Provide incentives for faculty to submit more research proposals

Goal: Provide an environment for collaborative problem solving, research, and intellectual debate

- Promote high visibility outreach efforts such as the Denman and Alumni Lecture series
- Enhance the visibility and influence of the Northwest Environmental Forum
- Encourage active on-site participation in our research programs by local, state, and federal agencies

The Committee understands that these goals and objectives will be given to the CFR Planning Committee for implementation. The Planning Committee will assign responsibilities for the objectives and establish time lines for their accomplishment, and they will conduct periodic reviews of attainment progress.

Standard II: Curriculum

The curriculum for which accreditation is being sought is the Master of Forest Resources (MFR) in Forest Management. The curriculum will be discussed below; this section includes narrative materials and all required documentation (Documents A and B). It is expected that students will have fulfilled the Sustainable Forest Management (SFM) Pathway for the undergraduate degree in Environmental Science and Resource Management (ESRM) prior to enrolling in the MFR. For students who completed their undergraduate degree elsewhere, the expectation is that they will have earned a comparable education; each student will be carefully considered prior to their admission to the program. The admissions process is described in Standard III.

Overview

The MFR (Forest Management) degree option will fill the existing need to educate, train, and prepare graduate professionals who can serve public agencies, non-governmental organizations, and the private sector forest industries. A professional program, leading to a MFR (Forest Management) with accreditation by the Society of American Foresters (SAF), will provide the necessary skills and knowledge base to address such issues.

Curriculum Objectives

The curriculum is designed to integrate knowledge and skills from technical disciplines with those from policy and management subjects in ways suitable for professional leadership in the public, non-governmental, and private sectors; to create a collaborative and interdisciplinary learning environment that develops team approaches and leadership skills; and to present experiences needed for complex decision-making and create future managers capable of addressing the complex issues facing society and industry in the forest resources arena.

The objectives for the MFR (Forest Management) are to:

1. Ensure that students have essential knowledge and basic skills required for careers in sustainable forest management.

- 1a. Students will have knowledge of ecological, biometrical, policy, silvicultural, and management skills.
- 1b. Students will demonstrate the ability to use the techniques, skills, and modern technology necessary for a modern forest management profession.
- 1c. Students will understand the design and conduct of experiments, and be able to statistically analyze and interpret data.
- 1d. Students will have the ability to communicate effectively, both orally and written.

2. Develop students' ability to creatively solve problems and exercise sound professional judgment in complex land management decision-making.

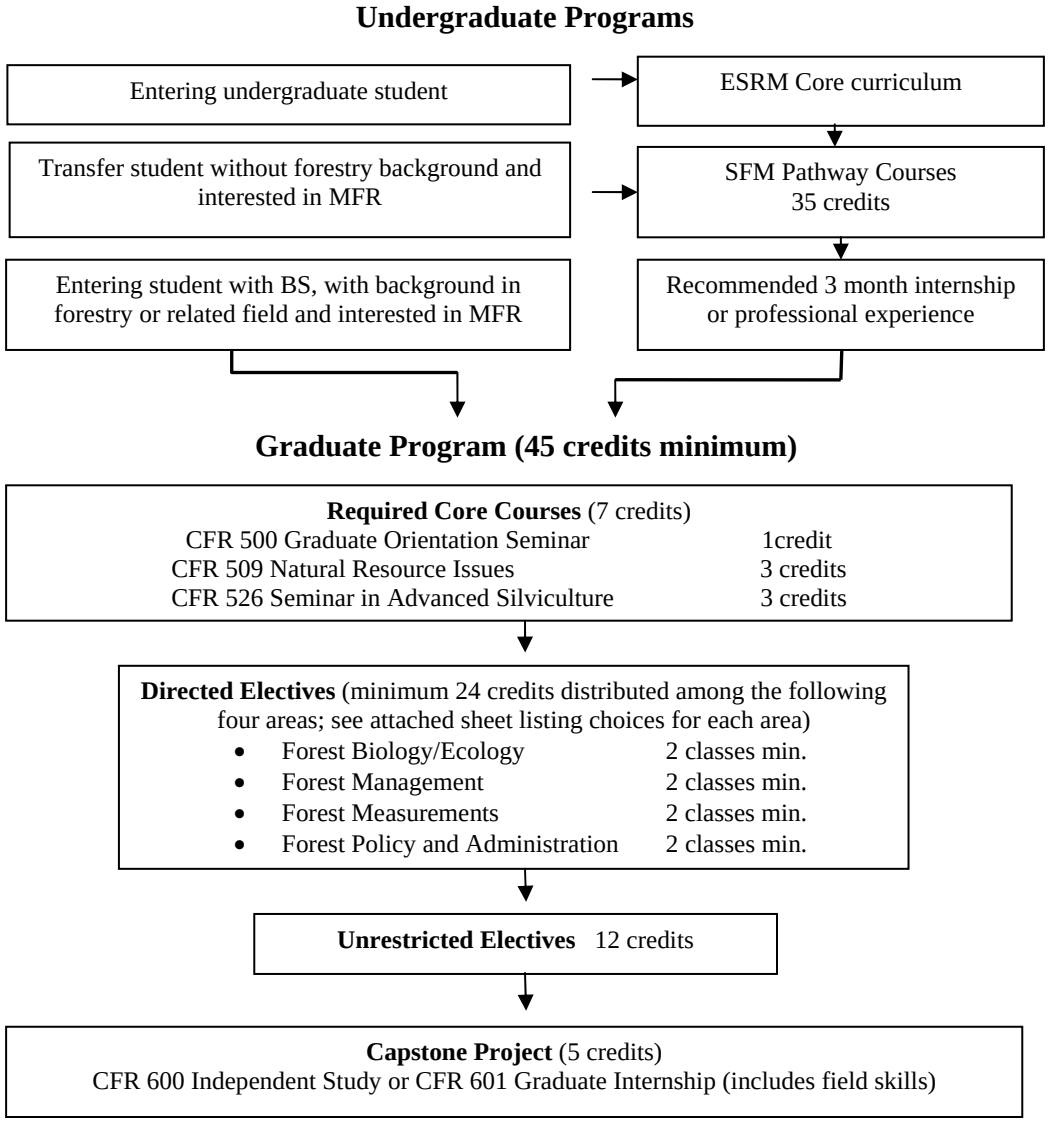
- 2a. Students will be able to pose well-defined, solvable problems from complicated and loosely-defined scenarios similar to those found in forest management.
- 2b. Students will be able to apply biological, managerial, and mensurational principles in open-ended projects, such as the design and implementation of land management plans.
- 2c. Students will be able to generate alternative solutions and designs, and then use sound professional judgment to choose between alternatives in open-ended projects.
- 2d. Students will be able to evaluate and communicate the results of completed tasks in open-ended projects.

3. Provide students with a broad education that will promote intellectual maturity and allow contributions to society.

3a. Students will have the ability to lead interdisciplinary teams.
3b. Students will have an understanding of professional and ethical responsibilities.
3c. Students will understand the impact of land management decisions and policy in a global and societal context.
3d. Students will have knowledge of contemporary regional, national, and international issues relevant to forest management.
3e. Students will recognize the value of life-long learning as a necessity for continued professional competency.

Program Description

The MFR (Forest Management) program is designed to be completed in one calendar year. It is a non-thesis program with emphasis on relevant course work to develop the technical and managerial skills required of today's professionals and a capstone experience to reinforce and apply the material learned in the earlier courses. The flow of the academic program is diagrammed below.



The program is structured into four broad categories:

I.	Common, required coursework	7 credits
II.	In-depth topical areas distributed among the four topic areas required for SAF accreditation	24 credits
III.	General education, unrestricted electives	12 credits
IV.	Common capstone course where students with different backgrounds and education work as an interdisciplinary team to develop a natural resources project with an outside client such as a landowner.	5 credits
		Minimum 45 credits

All entering students are required to take the graduate orientation seminar (CFR 500), Natural Resource Issues (CFR 509), and Seminar in Advanced Silviculture (CFR 526) for a total of seven credits. Students must take at least two classes in each of the following four topic areas that coincide with those required for SAF accreditation:

1. Forest Biology/Ecology
2. Forest Management
3. Forest Measurements
4. Forest Policy and Administration

Students will choose relevant course work with the approval and under the supervision of a designated faculty advisor. Each topic area has a list of courses that has been approved by the faculty.

In addition, students take 12 unrestricted credits to add depth and breadth to their education.

To round out their educational experience, the students will collaborate in a capstone project class (5 credits) where they bring their different skill sets to bear on a real-life project in collaboration with an outside client. They will act as an interdisciplinary team. This capstone course is seen as the crowning experience, preparing them for real-life situations they will encounter after graduation. Example capstone projects are given in Appendix II-A.

Forest Management, though it is the name of one of the four topic areas, is also a general enough term to be the appropriate title for the MFR program. There is no "program area" within the option that has the same name. There are four areas of course selection, one of which is called forest management, but the MFR in Forest Management includes requirements in all four topic areas to remain professionally accredited.

General Education

Courses within the general education requirements are expected to have been fulfilled at the undergraduate level. This section describes the anticipated backgrounds of students enrolled in the program.

Oral and Written Communication Skills

Students entering the MFR program are required to have fulfilled significant prior work in oral and written communication skills development; those who have taken the Sustainable Resource Management Pathway at the College will have taken a minimum of 22 credits in writing, communication, and public speaking. Courses for this component are listed on document A-1. This work focuses on developing effective writing skills, methods, and principals of organizing,

developing, and writing technical information. Students learn how to create report forms and rhetorical patterns common to scientific and technical disciplines. Technical writing courses focus on the presentation of technical information to various audiences. Students develop skills in the style of writing required for proposals, reports, and journal articles. Oral presentation principles, including use of visuals, as well as organizing and presenting an effective talk are also developed in these courses. Oral communication courses are designed to increase competence in public speaking and the critique of public speaking.

Science and Mathematics

Students entering the MFR program are required to have fulfilled significant prior work in science and mathematics; those who have taken the Sustainable Resource Management Pathway at the College will have taken a minimum of 39 credits in science and mathematics. Courses for this component are listed on document A-1. Courses in this category focus on biology, chemistry, and quantitative sciences. Biology courses inform students about living systems at the subcellular and community levels, emphasizing the diversity, functioning, and interaction of whole organisms. Topics include cell structure and function, energy, genetics, animal physiology and development, plant and animal diversity, plant structure and function, general ecology, and evolution.

Elementary chemistry courses cover matter and energy, chemical nomenclature, chemical reactions, stoichiometry, modern atomic theory, chemical bonding, gases/liquids/solids, solutions, acids and bases, equilibrium, oxidation-reduction, electrochemistry, organic compounds, hydrocarbons, aromaticity, and stereochemistry. An introductory soils course covers the physical, chemical, and biological properties that affect distribution and use patterns of this important ecosystem component, including soil morphology and genesis, plant nutrition and nutrient cycling, soil water, microbiology, and application of soil properties to environmental concerns.

Quantitative sciences courses provide an introduction to differential and integral calculus, emphasizing the development of basic skills, promoting an understanding of mathematics and applications to modeling and solving biological problems. Examples promote understanding of mathematics and applications to modeling and solving biological problems. Introductory probability and statistics courses provide applications to biological and natural resource problems stressing the formulation and interpretation of statistical tests. Students are also exposed to the processes of measuring, monitoring, and assessment, as illustrated in diverse environmental and resource case studies. These courses focus on exploring the scientific method, hypothesis testing, sampling, and experimental designs, the role of questionnaires and polling techniques, remote sensing techniques, and population measurements.

Social Science and Humanities

Students entering the MFR program are required to have fulfilled significant prior work in social sciences and humanities; those who have taken the Sustainable Resource Management Pathway at the College will have taken a minimum of 20 credits in social sciences and humanities. Courses for this component are listed on document A-1. Courses within this category provide students with a background in understanding the unique challenges surrounding conservation, restoration, and management of nature in highly human-impacted environments. Teams of students work on real Pacific Northwest problems with stakeholders and experts to understand patterns, processes, and drivers of these systems. They also learn about the role of farming, forestry, grazing, dams, water extraction, and fishing, and their ecological and environmental effects, and the remediation and restoration of negative impacts. These courses utilize field trips, studios, and problem-solving exercises to understand, integrate, and generalize processes and issues across diverse production

systems. Students learn about the importance and often contentious nature of stewardship of pristine terrestrial environments. These courses cover topics such as pollution, invasive organisms, mining, burning, grazing, logging, hunting, and skiing to understand patterns, structure, processes, and drivers of these terrestrial environments.

Computer Literacy
It is expected that students entering the MFR will have some baseline background in computer literacy. There are no significant computer literacy requirements of undergraduate students. Students will have fulfilled at minimum an introductory Geographic Information Systems (GIS) course. This introductory course covers the fundamentals of GIS systems: data sources, preprocessing, map analysis, output, remote sensing as a source of GIS data, image analysis, and classification. This 5-credit course emphasizes GIS as a source of management and technical information requests.

Professional Education

Courses within the professional education requirements are expected to be fulfilled in the MFR program. This section describes the anticipated skills and knowledge that courses will provide to students enrolled in the program.

Ecology and Biology
Students must take a minimum of 7 – 10 credits in courses addressing issues covering ecology and biology. The courses students may select from cover a broad range of ecological and biological issues; many of these courses contain significant field components, providing students with the appropriate opportunity for field application. Courses in this field require students to understand taxonomy and have an ability to identify forest and other tree species, and understand their distribution and associated vegetation and wildlife.

Courses in wildlife ecology and conservation cover advanced principles of wildlife ecology, such as habitat selection, population viability, and landscape ecology, and illustrate how these principles apply to wildlife conservation problems with terrestrial, aquatic, and marine wildlife. Other ecology courses address community ecology of forest ecosystems, fire ecology, and stream and river ecology. These courses demonstrate quantitative methods of community description, the role of limiting factors, competition and disturbance in determining community composition, structure, and stability; they also provide an introduction to forest ecosystem productivity and history and application of successional theory. Fire regime concepts are described as they apply to ecology. Students are inculcated with an understanding of the methodology for fire history research and presented with the history and function of forest fire in the western United States with emphasis on the Pacific Northwest. Students learn characterizations of stream and river ecosystems from a watershed perspective; here the emphasis is on fundamental processes affecting the structure and dynamics of aquatic communities and the riparian zone. Issues in resource conflict and new technologies are also discussed. Courses in plant eco-physiology explore physiological mechanisms that underlie ecological observations.

Courses in soils, site productivity, and land use problems consider unique properties and processes occurring in forest soils throughout the world with emphasis on soils of the Pacific Northwest and aspects of forest soils that affect productivity. These courses describe environmental concerns of soils and how soil properties are related to land use. Factors controlling soil stability, hydrology, fertility, and movement of pollutants are addressed. Course work in advanced soil fertility and chemistry inform students about the chemical properties of soil, nutrient, and toxic elements is

included. Courses also address supply, retention, and loss of nutrients in soils, as well as utilization of geochemical and ecosystem models.

Measurement of Forest Resources

Students must take a minimum of 6 – 10 credits in courses addressing measurement of forest resources. These courses enable students to develop skills in identifying and measuring land areas and conducting spatial analysis; designing and implementing comprehensive inventories that meet specific objectives using appropriate sampling methods and units of measurement. Students will be able to analyze inventory data and project future forest, stand, and tree conditions. Courses address the use and application of aerial photos and remote sensing cover principles of photogrammetry, interpretation, and remote sensing as they apply to the management of natural resources and wildlands. Students may also take courses in GIS. Advanced forest biometry addresses classical problems in analysis of forest populations and growth theory, and principles of parametric analysis and estimation processes. Wildlife investigations are designed for the purposes of impact assessment and research. Resource management is integrated with estimation schemes and demographic models in a quantitative framework. Courses in statistical inference for applied research and experimental design have special focus on the application to biological problems. Ecological modeling and spatial analysis describe the principles of ecological modeling, and the theoretical and methodological issues involved in their design and implementation.

Management of Forest Resources

Students must take a minimum of 7 – 9 credits in courses addressing management of forest resources. These courses provide students with a background in developing and applying silvicultural prescriptions appropriate to management objectives, including methods of establishing and influencing the composition, growth, and quality of forests, and understanding the impacts of those prescriptions. Classes examine the biological, social, and economic links with forest practices around the world by focusing on examples of how forests and renewable resources are managed, with emphasis on how these resources can be sustainably managed. Entomology courses provide an historical perspective of the discipline, introduction to general entomology and taxonomy, forest insect ecology, and integrated pest management concepts. Wildland hydrology provides an introduction to the hydrologic cycle and basic hydrologic methods, particularly examining the effects of forest management activities on hydrologic processes. Ecosystem management provides a scientific and social basis for ecological forestry. Students are instructed in forest practices to achieve integrated environmental and economic goals based upon material models of disturbance and stand development including alternative harvesting methods, adaptive management and monitoring, and certification and global issues.

Students develop an ability to analyze the economic, environmental, and social consequences of forest resource management strategies and decisions, and develop management plans with specific multiple objectives and constraints. They will also have an understanding of the valuation procedures, market forces, processing systems, and transportation and harvesting activities that translate human demands for timber-based and other consumable forest products into the availability of those products. They will have an understanding of the valuation procedures and market and non-market forces that provide humans the opportunities to enjoy non-consumptive products and services of forests. Business courses focus on forest management and economics with basic concepts of timber harvest scheduling, sustained-yield models, contemporary analytical techniques, timber supply, and forest product markets. These courses enable students to gain an understanding of the administration, ownership, and organization of forest management enterprises.

Forest Resource Policy, Economics, and Administration
Students must take a minimum of 8 – 10 credits in courses addressing policy, economics and administration. Courses in this field cover topics in natural resource conflict management, natural resource policy administration and planning, conservation economics, forest products marketing, institutionalizing sustainable ecological practices, and environmental sociology. Through these courses, students will gain a nuanced understanding of forest policy, laws, and regulations in the context of historical and contemporary decision-making processes. In turn, they will have an integrated comprehension of the technical, financial, human resources, and legal aspects of public and private enterprises.

Distance Learning

There is no distance learning component to the program.

Document A-1: General Education Summary – Required Courses

Institution Name: UW College of Forest Resources Academic Year: 2005-06

Official Degree Program Title: Master of Forest Resources

Official Option Title: Forest Management

Required Courses: Number & Title	Total Credit Hours		
	Communications	Science and Mathematics	Social Science and Humanities
English 131: English Composition	5		
TC 231: Technical Writing	3		
TC 333 Advanced Technical Writing	4		
Communication 22: Introduction to Public Speaking	5		
Visual, Literary and Performing Arts	5		
Biology 161: General Biology		5	
Biology 162: General Biology		5	
ESC 210: Introductory Soils		4	
Chemistry 120: Principles of Chemistry		5	
Chemistry 220: Introduction to Organic Chemistry		5	
QSci 291: Analysis for Biologists I (or Math 124 or 144)		5	
QSci 292: Analysis for Biologists II (or Math 125 or 155)		5	
Qsci 381: Intro to Probability and Statistics (or Stat 311)		5	
ESRM 250: Introduction to Geographic Information Systems		5	
ESRM 301: Maintaining Nature in an Urban and Urbanizing World			5
ESRM 302: Sustainability in Production Lands			5
ESRM 303: Preserving and Conserving Wildlands			5
ESRM 304: Environmental and Resource Assessment			5
Total Credit Hours	**22**	**44**	**20**

Document A-2: General Education Summary – Restricted Electives

Institution Name: UW College of Forest Resources Academic Year: 2005-06

Official Degree Program Title: Master of Forest Resources

Official Option Title: Forest Management

Restricted Elective Courses: Number & Title	Total Credit Hours		
	Communications	Science and Mathematics	Social Science and Humanities
ESRM 321 Finance and Accounting		5	
ESRM 323 Silviculture		5	
ESRM 326 Silviculture and Wildlife Habitat		3	
ESRM 435 Forest Entomology		3	
ESRM 425 Ecosystem Management		5	
ESRM 426 Wildland Hydrology		4	
ESRM 328 Forestry-Fisheries Interactions		4	
ESRM 368 Natural Resource Measurements		4	
ESRM 430 Aerial Photos/Remote Sensing Natural Resources		3	
ESRM 420 Wildland Fire Management		5	
ESRM 468 Forest Operations		5	
ESRM 428 Principles of Silviculture and Applications		5	
ESRM 320 Marketing and Human Resources			5
ESRM 461 Forest Management and Economics			5
ESRM 422 Marketing of Forest Products			3
ESRM 465 Economics of Conservation			3
ESRM 400 Natural Resource Conflict Management			3
ESRM 470 Natural Resource Policy and Planning			5
ESRM 381 Management of Wildland Recreation and Amenities			3
ESRM 399 Internship	1	2	2
ESRM 495 Senior Project	1	2	2
Total Credit Hours	**2**	**55**	**31**
Minimum Credit Hours Required	**2**	**20**	**15**

Document B-1: Forest Resources Education Summary – Required Courses

Institution Name: UW College of Forest Resources Academic Year: 2005-06

Official Degree Program Title: Master of Forest Resources

Official Option Title: Forest Management

Required Courses: # & Title	Credit Hours in SAF-Required Areas of Study				Course Contains Significant Content in (check all that apply):				Total Credit Hours
	Ecology and Biology	Measurement of Forest Resources	Management of Forest Resources	Policy, Economic and Administration	Field Work	Ethics	Oral and/or Written Communications	Integrated Resources Management	
CFR 500: Graduate Orientation Seminar						✓	✓		1
CFR 509: Natural Resource Issues			1	2		✓	✓	✓	3
CFR 526: Seminar in Advanced Silviculture		1	2		✓		✓	✓	3
CFR 601: Capstone Course	0.5	2	2	0.5	✓	✓	✓	✓	5
Total Required Credit Hours	**0.5**	**3**	**5**	**2.5**					**12**

Document B-2: Forest Resources Education Summary – Restricted Electives

Institution Name: UW College of Forest Resources Academic Year: 2005-06

Official Degree Program Title: Master of Forest Resources

Official Option Title: Forest Management

Restricted Elective Courses: # & Title	Credit Hours in SAF-Required Areas of Study				Course Contains Significant Content in (check all that apply):				Total Credit Hours
	Ecology and Biology	Measurement of Forest Resources	Management of Forest Resources	Policy, Economic and Administration	Field Work	Ethics	Oral and/or Written Communications	Integrated Resources Management	
ESRM 410: Forest Soils and Site Productivity	5				✓			✓	5
ESRM 450: Wildlife Ecology and Conservation	5							✓	5
ESRM 478: Plant Eco-Physiology	5							✓	5
CFR 501: Forest Ecosystems – Community Ecology	5				✓			✓	5
CFR 507: Soils and Land Use Problems	4							✓	4
CFR 514: Advance Forest Soil Fertility and Chemistry	4							✓	4
CFR 535: Fire Ecology	3							✓	3
CFR 547: Stream and River Ecology	5							✓	5
ESRM 461: Forest Management and Economics			4				✓	✓	4
ESRM 425: Ecosystem Management			4				✓	✓	4
CFR 528: International Forestry			3				✓	✓	3
CFR 545: Forest Entomology/Laboratory			5				✓	✓	5
ESRM 426: Wildland Hydrology			4		✓			✓	4
ESRM 422: Marketing of Forest Products			3				✓	✓	3
CFR 519: Conducting and Publishing an Industry Performance Review			3			✓	✓		3
CFR 590: Marketing and Management from a Forest Products Perspective			3			✓	✓		3
ESRM 430: Aerial Photos and Remote Sensing in Natural Resources		3			✓				3
CFR 564: Advanced Forest Biometry		3/5			✓				3/5
QSci 477: Quantitative Wildlife Assessment		5					✓	✓	5

QSci 482: Statistical Inference in Applied Research I		5					✓	✓	5
QSci 483: Statistical Inference in Applied Research II		5					✓	✓	5
QSci 486: Experimental Design		3					✓	✓	3
QERM 550: Ecological Modeling and Spatial Analysis		5					✓	✓	5
CFR 590 Graduate Studies (Section: Geographic Information Systems)		5					✓	✓	5
ESRM 400: Natural Resource Conflict Management				5		✓	✓	✓	5
ESRM 470: Natural Resource Policy and Planning				5		✓	✓	✓	5
ESRM 465: Economics of Conservation				3		✓	✓	✓	3
ESRM 460: Institutionalizing Sustainable Ecological Practices				5		✓	✓	✓	5
CFR 571: Resource Policy and Administration				5		✓	✓	✓	5
CFR 570: Seminar in Environmental Sociology				5		✓	✓	✓	5
Total Available Restricted Elective Credit Hours	**36**	**34-36**	**26+**	**28**					**100**
Minimum Credit Hours Required	**7-10**	**8-10**	**7-9**	**8-10**					**30-39**

Appendix II-A. Examples of MFR Capstone Projects

MFR capstone projects will cover a broad range of topics with the consistent theme of professional application rather than research. Examples of the types of projects that would fit under this umbrella include:

MFR Project: Creating Firesafe Forests in the Eastern Cascades

The dry forests of the eastern Cascades historically burned frequently, and fire acted as an agent of ecosystem stability. Selection harvest of large trees, grazing, and fire exclusion substantially changed the character of these forests, and these forests are now prone to severe fire. The MFR project dealing with these issues would develop feasible silvicultural prescriptions that would be demonstrated to reduce fire hazard while meeting other resource objectives, including ecological and economic issues. Future growth and fire conditions within stands could also be forecast using state-of-the-art tools that link forest growth to fire hazard and behavior. The project would also demonstrate the appropriate interpretations and limitations of these tools, recognizing and addressing uncertainty.

MFR Project: Economic and Environmental Tradeoffs with Wildlife from Timber Management

Public concern for sensitive species protection requires that forests be managed to meet habitat needs to ensure species viability. However, on private forest lands recent trends have shown that when regulatory costs are too high, lands are converted to more profitable commercial and residential uses. The lands most vulnerable to conversion are predictably at the urban interface and may provide important habitat and other social values. The challenge for policy-makers is to adequately protect species while allowing commercial forestry to remain profitable. Science and technology can help. Students will use real data with habitat indices tied to forest modeling and spatial analysis capabilities to assess the outcomes expected from simulated forest management alternatives to better understand the marginal economic and environmental trade-offs. Strategies to distribute changes in forest structure through time at different locations across the landscape towards minimizing unwanted impacts will be discussed.

MFR Project: Energy Cogeneration as a Solution to Fossil Fuel Consumption

Forest fires, slash burns, and incineration of manufacturing wastes result in release of carbon to the atmosphere with implications for contribution to climate change. Fossil fuels (oil, natural gas, and coal) provide for most of the energy consumed by Washington citizens yet are considered the main cause of climate change. National and state policies have placed high priority on increased use of renewable fuels to reduce reliance upon fossil fuels towards lowering carbon emissions. Woody biomass can be used to generate clean electricity with very low carbon emissions. Students will use forestry modeling and spatial analysis software with current forest inventory data and records of past harvest and process activities to estimate the potential volume of sustainable woody biomass available to potential cogeneration sites within a 50 mile haul distance constraint. Students will estimate costs of producing electricity from wood as compared to fossil fuels and discuss implications for energy policy.

MFR Project: Fish-Forest Interactions and Appropriate Timber Management Strategies at the Watershed Level to Enhance Riparian Habitat Conditions

Timber is harvested to produce economic returns from forest lands, but it also impacts the environment. Forestry operations are often viewed as a tradeoff between economic benefits and environmental impacts, in which any additional environmental protection is seen as reducing economic returns. In exploring the economic and environmental costs of forest harvest and roading however, it is common to find that options for improving the economics can often improve the environmental impacts as well. An understanding of the operational considerations of logging and roading and their interaction with streams and riparian zones is the first step for identifying options for improving economic and environmental returns from the forest. Working with a landowner students develop a watershed resource and transportation strategy for a forested area with extensive exposure to computer technology, environmental assessment methods, and forest operation design tools.

MFR Project: Designing and Analyzing a Monitoring Program

The design, application, and analysis of a Continuous Forest Resource Inventory (CFRI) system, or monitoring program, is a central idea in assessing and evaluating sustainable forestry practices. Typically, designing a monitoring scheme involves developing answers to the non-trivial questions of what to measure, how often, where sample areas should be located, and what fraction of the population should be sampled. Certainly, inventory objectives drive the answers to these questions, but require balancing the precision and accuracy requirements between all natural resources found on a project parcel for which the multi-resource, multi-objective monitoring program is desired. If prior measurements from an existing program are available, emphasis would be placed on calibrating a regional forest growth and yield model to local conditions for the purposes of removing some of the typical limitations inherent in forest stand dynamics forecasting tools.

Standard III: Forestry Program Organization and Administration

College Administration

The College of Forest Resources has been under the leadership of Dean Bruce Bare since 2001. The College of Forest Resources is one of 17 colleges and schools within the University of Washington, all directed by Deans or Acting Deans. All Deans report to the President and Provost.

University of Washington's Colleges and Schools

College of Architecture and Urban Planning: Fritz Wagner, Dean
College of Arts and Sciences: David Hodge, Dean
Business School: James Jiambalvo, Dean
School of Dentistry: Martha J. Somerman, Dean
College of Education: Patricia A. Walsey, Dean
College of Engineering: Mani Soma, Acting Dean
College of Forest Resources: B. Bruce Bare, Dean
The Graduate School: Suzanne Ortega, Vice Provost and Dean
Information School: Harry Bruce, Dean
School of Law: W.H. "Joe" Knight, Jr., Dean
School of Medicine: Paul G. Ramsey, Dean
School of Nursing: Nancy Fugate Woods, Dean
College of Ocean and Fishery Sciences: Arthur Nowell, Dean
School of Pharmacy: Sidney Nelson, Dean
Daniel J. Evans School of Public Affairs: Sandra O. Archibald, Dean
School of Public Health and Community Medicine: Patricia W. Wahl, Dean
School of Social Work: Lewayne Gilchrist, Acting Dean

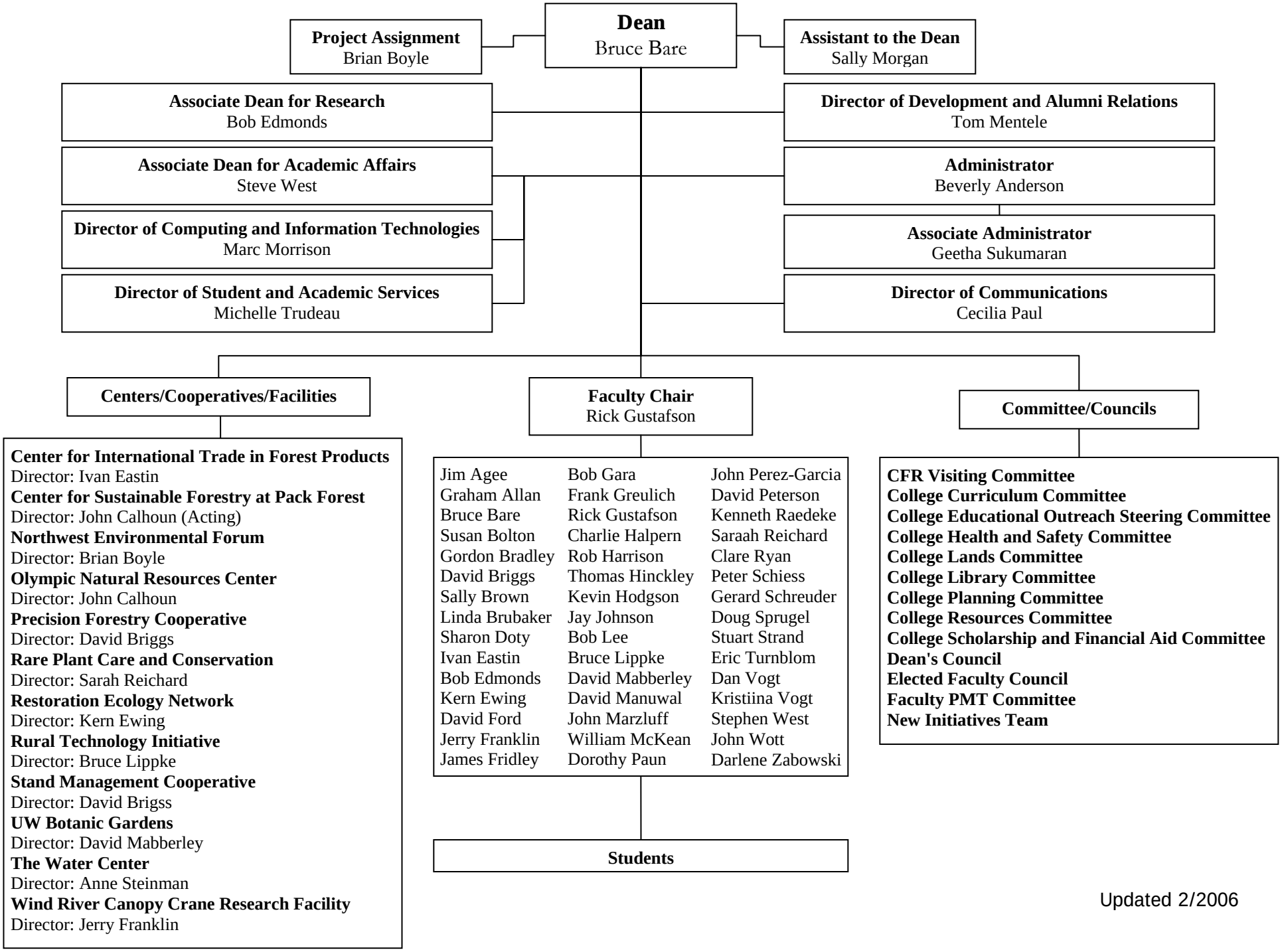
College Staff Resources

Noninstructional staff vary in duties ranging from central support to dedicated research. The College currently has 121 (headcount) staff, 109.6 FTE, supporting the administrative, instructional, research, and outreach functions of the College. The table below displays current permanent or long-term noninstructional staff and their FTE, grouped by primary function. In addition to these positions, the College employs many more temporary and hourly positions. It is important to note that although staff numbers seem large, many are dedicated to special enterprises. The erosion of general College support staff caused by earlier reductions in state support has not been resolved. Efforts continue to make more efficient use of staff resources through technology, but the fact remains there is always much more to do than time available, and it is often difficult to meet even the basic needs.

The Office of the Dean

The Office of the Dean provides support to the Dean in meeting the responsibilities of the executive officer of the College, including College-level coordination of undergraduate and graduate instruction, coordination of the College research program, administration of research funds, administration of College lands, and administration of support services. To accomplish these administrative responsibilities 17.0 staff FTE are assigned to the Dean's Office, including the Director of Student and Academic Services and the Director of Information Technology, two offices that provide direct support to the instructional function.

University of Washington College of Forest Resources Organizational Chart



Updated 2/2006

The Director of Student and Academic Services, Michelle Trudeau, administers the Office of Student and Academic Services (3.0 FTE), which is charged with assisting both undergraduate and graduate students in the College in all aspects of advising, including interpretation of College and University requirements and assistance in course registration to meet graduation requirements, in obtaining summer employment while in school and permanent employment upon graduation, in establishing mentoring relationships, and, in collaboration with the College Administrator, with administering the College Scholarship and Financial Assistance Program. Three full-time staff members, including a Director, Graduate Counseling Services Coordinator, and Undergraduate Counseling Services Coordinator, work to plan academic programs, set policies, petitions, and exceptions, answer scholarship and fellowship questions, track curricula and enrollment, manage student databases, process forms and applications, maintain student email lists and the College job list, provide information about concurrent degree information, organize an Annual Career Fair, general undergraduate and graduate advising, and coordinate the College Career Corner.

The College of Forest Resources has an internal Information Technologies team (CFRIT), under the direction of Director Marc Morrison, 4.0 FTE total. Three support staff, a Network Administrator, Desktop Support Staff, and Computer Lab Manager, manage all the College's server, computer, and technology needs; ordering and installing equipment, maintaining and upgrading existing equipment, and solving daily security and network issues. This includes serving field sites located throughout western Washington. CFRIT also interfaces with campus IT groups, providing an important link between University computing initiatives and local activities.

Marivic Jimenez coordinates the pre- and post-award grant function, which financially benefits both undergraduate and graduate students. Four FTE staff provide fiscal services for the entire College.

The Faculty Office

Organizationally, the College has moved relatively recently from a multi-division structure to a single faculty unit headed by a faculty chairperson, Professor Richard Gustafson, and an elected vice-chair, Professor Gordon Bradley, who will move into the chair position upon completion of the current chair's term, 6/15/2006. Although the College is a non-departmentalized college, the Faculty Office functions as a department under the policies and rules of the University as set forth in the Faculty Handbook. The new organization continues a long-term philosophy in the College that undergraduate curricula should be the primary determinant for College faculty organization. This premise is based on a number of principles:

1) As organizational drivers, graduate education and research, although important College missions, probably do not require the same basic level of administrative coordination and cohesion. Graduate "interest groups" and research areas are both more diverse and much more flexible in terms of faculty interest and participation and require less formal program management;

2) Undergraduate education requires strong consensus of viewpoint, consistent allocation of teaching and support resources, active support of constituencies, and greater faculty teamwork; and

3) The single faculty office more closely reflecting undergraduate curricula does not detract from the College's capability to effectively support graduate education and research programs.

The faculty of the College is collectively responsible for maintaining undergraduate and graduate curricula. The functions of the faculty office are to: recommend standards of academic programs and administer curricula; govern student recruitment, advising, grading and graduation; conduct faculty searches and vote on recruitment of faculty; recommend on promotion, merit, and tenure; administer faculty teaching and workload assignments; participate in program development; and recommend on development and allocation of facilities.

At present, the faculty office is supported by one administrative assistant, supplemented by hourly help. The Assistant to the Chair position is currently vacant; it is expected to be filled prior to the end of spring quarter. There are also 3.0 FTE lab positions supporting two separate laboratories.

The College houses a number of interdisciplinary research and education centers and cooperatives, whose presence adds to the academic experience. These units require a large number of staff to carry out their respective missions.

The table on the following pages lists all permanent and long-term staff of the College, as well as their titles and affiliations.

Permanent/long-term College of Forest Resources Staff as of 2/1/2006

Name	FTE	Job Class Title	Area
MORGAN, SALLY	1.00	ASSISTANT TO THE DEAN	**Dean/Admin support**
ANDERSON, BEVERLY J	1.00	ADMINISTRATOR	**Dean/Administration**
BOYLE, BRIAN	0.70	ASSISTANT DIRECTOR	**Dean/Administration**
PAUL, CECILIA	0.80	MANAGER	**Dean/Communications**
COSTON, BRAD W	1.00	SENIOR COMPUTER SPECIALIST	**Dean/Computing**
GROVE IV, CHARLES H	1.00	SENIOR COMPUTER SPECIALIST	**Dean/Computing**
KRAUSE, SHANE T.	1.00	SENIOR COMPUTER SPECIALIST	**Dean/Computing**
MORRISON, MARC A.	1.00	DIRECTOR-DEPARTMENTAL COMPUTING	**Dean/Computing**
MENTELE, TOM	1.00	DIRECTOR	**Dean/Development**
DAVIS, NANCY	1.00	ASSISTANT DIRECTOR	**Dean/Development**
VACANT	1.00	ADMINISTRATIVE COORDINATOR	**Dean/Development**
SCOTT, SANDRA K	1.00	FISCAL SPECIALIST 1	**Dean/Financial Services**
SHIPMAN, JOHN	1.00	WEB COMPUTING SPECIALIST	**Dean/Financial Services**
SUKUMARAN, GEETHA	1.00	MANAGER	**Dean/Financial Services**
VO, MONG-TRINH T.	1.00	FISCAL SPECIALIST 1	**Dean/Financial Services**
JIMENEZ, MARIVIC U.	1.00	ASSISTANT TO THE DEAN	**Dean/Grant coordination**
VACANT	0.75	OFFICE ASSISTANT 3	**Dean/Reception**
WILT, JANET	0.75	PROJECT APPOINTMENT	**Dean/Search coordination**
AKEN, JEFFREY M.	1.00	COUNSELING SERVICES COORDINATOR	**Dean/Student & Academic Services**
SALAS-HAYNES, DEBRA TERESA	1.00	COUNSELING SERVICES COORDINATOR	**Dean/Student & Academic Services**
TRUDEAU, MICHELLE M.	1.00	ACADEMIC SERVICES-DIRECTOR	**Dean/Student & Academic Services**
	17.00		
DAVIS, AMANDA L	1.00	ADMINISTRATIVE ASSISTANT A	**Chair/Administration**
VACANT	1.00	ASSISTANT TO THE CHAIR	**Chair/Administration**
XUE, DONGSEN	1.00	RESEARCH COORDINATOR	**Chair/Analytical Services**
LEWIS, MARK S.	1.00	MANAGER OF PROGRAM OPERATIONS	**Chair/Paper Science & Engineering Lab**
WETZEL, MICHAEL C.	1.00	RESEARCH TECHNOLOGIST 3	**Chair/Paper Science & Engineering Lab**
	5.00		

Name	FTE	Job Class Title	Area
CONE, CARRIE M	1.00	ADMINISTRATIVE ASSISTANT B	**UW Botanic Gardens**
MERCIER, BRETT C.	1.00	BUILDING SERVICES COORDINATOR	**UW Botanic Gardens**
GIBBLE, WENDY J	1.00	CONTINUING EDUCATION COORDINATOR	**UW Botanic Gardens**
KUHLMANN, ELLEN E	0.50	CONTINUING EDUCATION COORDINATOR	**UW Botanic Gardens**
ZUEGE, SHAWNA	1.00	CONTINUING EDUCATION COORDINATOR	**UW Botanic Gardens**
THOMPSON, BRIAN R	1.00	CONTINUING EDUCATION SPECIALIST 1	**UW Botanic Gardens**
CHINN-SLOAN, PATRICIA	1.00	FISCAL SPECIALIST 1	**UW Botanic Gardens**
MYER, FRANCES A.	0.60	FISCAL SPECIALIST 1	**UW Botanic Gardens**
HEDBERG, DARRIN J	1.00	GARDENER 1	**UW Botanic Gardens**
BILOTTA, ANNEMARIE	0.50	GARDENER 2	**UW Botanic Gardens**
BONHAM, NEAL	1.00	GARDENER 2	**UW Botanic Gardens**
GARRISON, RYAN R.	1.00	GARDENER 2	**UW Botanic Gardens**
STUBECKI, LOU M.	1.00	GARDENER LEAD	**UW Botanic Gardens**
ZUCKERMAN, DAVID	1.00	GROUNDS & NURSERY SERVICES SPECIALIST 5	**UW Botanic Gardens**
FERGUSON, MARTHA E.	0.80	LIBRARY & ARCHIVES PARAPROFESSIONAL 4	**UW Botanic Gardens**
MEHLIN, TRACY L.	1.00	LIBRARY & ARCHIVES PARAPROFESSIONAL 4	**UW Botanic Gardens**
HOYT, FREDERICK C	1.00	MANAGER	**UW Botanic Gardens**
PREUSS, KAREN L.	1.00	MANAGER OF PROGRAM OPERATIONS	**UW Botanic Gardens**
CHUBB, HEATHER R.	0.50	OFFICE ASSISTANT 2	**UW Botanic Gardens**
JETER, STEPHANIE P.	0.75	OFFICE ASSISTANT 2	**UW Botanic Gardens**
VACANT	0.50	OUTREACH DIRECTOR	**UW Botanic Gardens**
SELEMON, BARBARA A.	1.00	PLANT TECHNICIAN 3	**UW Botanic Gardens**
HITCHIN, RANDALL C.	1.00	PRESERVATION & MUSEUM SPECIALIST 3	**UW Botanic Gardens**
SANPHILLIPPO, LISA D.	0.75	PROGRAM ASSISTANT	**UW Botanic Gardens**
YOUNGMAN, JENNIFER S.	0.60	PROGRAM ASSISTANT	**UW Botanic Gardens**
JOHNSON, REBECCA W.	0.80	PROGRAM COORDINATOR	**UW Botanic Gardens**
ROBINS, JEAN	1.00	PROGRAM COORDINATOR	**UW Botanic Gardens**
WOLF, KATHLEEN L.	0.50	RESEARCH SCIENTIST/ENGINEER 4	**UW Botanic Gardens**
WYLLIE-ECHEVERRIA, SANDY	0.50	RESEARCH SCIENTIST/ENGINEER-SENIOR	**UW Botanic Gardens**

Name	FTE	Job Class Title	Area
	24.30		
HALVERSON, DALE	1.00	BUILDING AND GROUNDS SUPERVISOR A	**Center for Sustainable Forestry**
BOWLES, SUSAN	0.80	CUSTODIAN LEAD	**Center for Sustainable Forestry**
PITZL, DEBORAH L.	1.00	FISCAL SPECIALIST 1	**Center for Sustainable Forestry**
MCCAULEY, TERESA A.	1.00	MANAGER OF PROGRAM OPERATIONS	**Center for Sustainable Forestry**
DOMICI, SANDRA	1.60	PROGRAM ASSISTANT	**Center for Sustainable Forestry**
CROUCHET, GEORGIANN M.	0.85	PROGRAM COORDINATOR	**Center for Sustainable Forestry**
SHARPE, ALVIN N.	1.00	WOODS UTILITY LEAD	**Center for Sustainable Forestry**
EMMONS, DUANE	1.00	CONTINUING EDUCATION COORDINATOR	**Center for Sustainable Forestry**
ROBBINS, ALICIA	1.00	CONTINUING EDUCATION SPECIALIST 2	**Center for Sustainable Forestry**
	9.25		
MATHENY, ELLEN	1.00	CONTINUING EDUCATION SPECIALIST 2	**Olympic Natural Resources Center**
CALHOUN, JOHN	1.00	DIRECTOR	**Olympic Natural Resources Center**
SANTMAN, THERESA A.	1.00	FISCAL SPECIALIST 2	**Olympic Natural Resources Center**
KETTEL, DERIC	1.00	MAINTENANCE MECHANIC 2	**Olympic Natural Resources Center**
HEURING, KATHLEEN P.	1.00	MANAGER OF PROGRAM OPERATIONS	**Olympic Natural Resources Center**
WECKER, MIRANDA S.	0.80	MANAGER OF PROGRAM OPERATIONS	**Olympic Natural Resources Center**
BENNETT, KEVEN E.	0.50	RESEARCH CONSULTANT	**Olympic Natural Resources Center**
CROSS, JASON C.	1.00	RESEARCH COORDINATOR	**Olympic Natural Resources Center**
COMNICK, JEFFREY M.	1.00	RESEARCH SCIENTIST/ENGINEER 2	**Olympic Natural Resources Center**
GREVSTAD, FRITZI S.	1.00	RESEARCH SCIENTIST/ENGINEER 3	**Olympic Natural Resources Center**
ODELL, ANTHONY	1.00	RESEARCH TECHNOLOGIST 2	**Olympic Natural Resources Center**
ALCOCK, TERESA Z	1.00	SENIOR COMPUTER SPECIALIST	**Olympic Natural Resources Center**
	11.30		
ANDERSEN, HANS-ERIK	1.00	RESEARCH SCIENTIST/ENGINEER 4	**Precision Forestry Cooperative**
COLLIER, RANDOL	1.00	SENIOR COMPUTER SPECIALIST	**Precision Forestry Cooperative**
OSHEA, MEGAN	1.00	ADMINISTRATIVE SPECIALIST	**Precision Forestry Cooperative**
	3.00		
BRADEN, ROSEMARIE	1.00	RESEARCH CONSULTANT	**CINTRAFOR**

Name	FTE	Job Class Title	Area
BURNETT, CLARA L.	1.00	ADMINISTRATIVE SPECIALIST	**CINTRAFOR**
	2.00		
ERICKSON, ARA K.	1.00	RESEARCH CONSULTANT	**Rural Technology Initiative**
MCCARTER, JAMES B.	1.00	RESEARCH SCIENTIST/ENGINEER 4	**Rural Technology Initiative**
ROGERS, LUKE W.	1.00	RESEARCH SCIENTIST/ENGINEER 4	**Rural Technology Initiative**
ZOBRIST, KEVIN W.	1.00	RESEARCH SCIENTIST/ENGINEER 4	**Rural Technology Initiative**
MASON, CHARLES L.	1.00	RESEARCH SCIENTIST/ENGINEER-SENIOR	**Rural Technology Initiative**
CEDER, KEVIN R.	1.00	SENIOR COMPUTER SPECIALIST	**Rural Technology Initiative**
NELSON, CHRISTOPHER E.	1.00	SYSTEMS PROGRAMMER	**Rural Technology Initiative**
MCLAUGHLIN, MATTHEW R.	1.00	WEB INFORMATION SPECIALIST	**Rural Technology Initiative**
	8.00		
WHITENER, ADRIENNE	0.20	FISCAL SPECIALIST 2	**Wind River Canopy Crane Research Facility**
HENDRIX, LYNNE	0.75	OFFICE ASSISTANT 3	**Wind River Canopy Crane Research Facility**
HAMILTON, ANNETTE	1.00	PROGRAM COORDINATOR	**Wind River Canopy Crane Research Facility**
BIBLE, KENNETH	1.00	RESEARCH SCIENTIST/ENGINEER 4	**Wind River Canopy Crane Research Facility**
CREIGHTON, MARK J.	1.00	TOWER CRANE OPERATOR-RESEARCH 4	**Wind River Canopy Crane Research Facility**
	3.95		
GONYEA, ROBERT WM.	0.50	PROGRAM MANAGER	**Stand Management Cooperative**
HASSELBERG, BERT A.	1.00	RESEARCH TECHNOLOGIST 3	**Stand Management Cooperative**
HAUKAAS, JOHN H.	1.00	RESEARCH CONSULTANT	**Stand Management Cooperative**
	2.50		
EVANS, SHELLEY A.	1.00	RESEARCH COORDINATOR	**Research/Halpern**
DOVCIAK, MARTIN	1.00	RESEARCH SCIENTIST/ENGINEER 2	**Research/Halpern**
JONES, CHAD C.	0.50	RESEARCH SCIENTIST/ENGINEER 2	**Research/Halpern**
NELSON, CARA R.	1.00	RESEARCH SCIENTIST/ENGINEER 2	**Research/Halpern**
	3.50		
CARSON, KENDALL A.	0.75	ADMINISTRATIVE SPECIALIST	**Research/IGERT**
	0.75		
VACANT	0.50	PROGRAM MANAGER	**Cooperative Ecosystem Studies Unit**

Name	FTE	Job Class Title	Area
VANDE KAMP, MARK	1.00	RESEARCH CONSULTANT	**Cooperative Ecosystem Studies Unit**
DEUR, DOUGLAS E.	0.65	RESEARCH COORDINATOR	**Cooperative Ecosystem Studies Unit**
SWANSON, JANE E.	0.60	RESEARCH COORDINATOR	**Cooperative Ecosystem Studies Unit**
	2.75		
OBRIAN, KELLY S.	1.00	MANAGER OF PROGRAM OPERATIONS	**Fire & Mountain Ecology Lab**
TJOELKER, MICHAEL I.	1.00	RESEARCH SCIENTIST/ENGINEER - ASSISTANT	**Fire & Mountain Ecology Lab**
RAYMOND, CRYSTAL L.	1.00	RESEARCH SCIENTIST/ENGINEER 2	**Fire & Mountain Ecology Lab**
NORHEIM, ROBERT A.	1.00	RESEARCH SCIENTIST/ENGINEER 4	**Fire & Mountain Ecology Lab**
	4.00		
EAGLE, PAIGE	0.65	RESEARCH CONSULTANT	**Forest Service Lab**
ANDREU, ANNE G.	0.65	RESEARCH SCIENTIST/ENGINEER 2	**Forest Service Lab**
KELLOGG, LARA-KARENA B.	1.00	RESEARCH SCIENTIST/ENGINEER 2	**Forest Service Lab**
PRICHARD, SUSAN J.	1.00	RESEARCH SCIENTIST/ENGINEER 4	**Forest Service Lab**
ALVARADO-CELESTINO, ERNESTO	1.00	RESEARCH SCIENTIST/ENGINEER-SENIOR	**Forest Service Lab**
CAMPBELL JR, PAUL W.	1.00	SENIOR COMPUTER SPECIALIST	**Forest Service Lab**
	5.30		
OAKLEY, ANGELA T.	1.00	RESEARCH CONSULTANT	**NW Fisheries Science Center**
SLOVER, SANDY H	1.00	RESEARCH CONSULTANT	**NW Fisheries Science Center**
	2.00		
DVORNICH, KAREN	1.00	CONTINUING EDUCATION COORDINATOR	**Research/Fisheries**
KNIGHT, TIM	0.50	INFORMATION SPECIALIST 1	**Research/Fisheries**
	1.50		
HANBY, JOHN E.	0.50	MANAGER OF PROGRAM OPERATIONS	**WA Pulp & Paper Foundation**
	0.50		
FTE	109.60		
Headcount	121		

Commitment to Quality Instruction

The College of Forest Resources is committed to recruiting and retaining quality instructors, as evident by an inclusive and thorough hiring process, a detailed promotion and merit-pay process, and using student evaluations and recognition events to document high-quality faculty.

Faculty

Faculty Appointments

When a faculty position is vacant, or a need for a new position is realized, the College undergoes an intensive faculty hiring process. First, a position is defined by the College and accepted by the University. Once the position is defined, a faculty committee is appointed by the Dean to serve until the position is filled. An international search is launched, with the position advertised in journals, higher education materials, and on-line employment pages. The committee reviews the applications and decides on three or four applicants to invite to the College for a two-day interview process. The applicants meet with numerous College and University faculty, staff, and students, and are required to present a seminar relevant to the position; occasionally, the visiting candidates are asked to be a guest instructor in a course of their expertise. Feedback from staff, faculty, and students is submitted to the committee, and included as part of the review process. After the visits, the committee makes a recommendation to the entire faculty, followed by a faculty-wide vote on whether the candidate is acceptable or unacceptable and who is the top candidate (if any). The recommendations from the committee and the faculty, along with an additional recommendation from the Faculty Chair, are passed on to the Dean, who makes the final decision in the hiring process.

Faculty Evaluation and Recognition

The College has two main paths for evaluating and recognizing faculty: promotion and merit-pay increases. Both promotion and merit-pay issues are dealt with by the Promotion, Merit, and Tenure (PMT) Committee. Members of the PMT Committee are nominated by each interest group within the faculty and voted on by all faculty; members serve a two-year term. The PMT Committee meets in the spring of each year to review assistant and associate professors in their 6th year of service or who could be eligible for promotion earlier. The committee works with the faculty member to put together a dossier (an example is provided in Appendix III-A) of all of his or her teaching, research, and service into a complete and standardized form. This dossier is sent to five or six outside reviewers, both academics and other researchers. The PMT Committee incorporates the outside reviewers' comments into their own assessment and provides a recommendation to the faculty. The Faculty Chair takes the PMT Committee's recommendation and the faculty vote to the Dean, who makes an informed decision about the promotion. The Dean's final decision is passed on to the Provost, who has the final authority over all promotions from junior professor to full professor.

Tenured professors also have opportunities for recognition, in the form of merit-pay increases. Based on research productivity and publications, student credit hours and evaluations, and service to the College, University, and outside communities, the PMT Committee decides which faculty members should be considered highly meritorious, meritorious, and non-meritorious. These recommendations are presented to the entire faculty, who vote on colleagues below them in rank (Professors – Assistant Professor – Associate Professor). The faculty votes are passed to the Faculty Chair, who does a thorough evaluation of each faculty member and recommends a merit-level and pay increase for each individual. The Dean takes the Faculty Chair's recommendations and works with his or her support staff to provide the merit-pay to meritorious and highly-meritorious faculty.

Standardized student evaluations are the College's main form of evaluating instructional quality and relevance. A sample of the evaluation used University-wide is provided in Appendix III-B. These

evaluations are pertinent to both faculty promotion and merit-pay increases. Although the College had occasional peer-evaluations in the past, both faculty and administrators were unhappy with the process and actual implementation. The Faculty Chair is planning to work with the Center for Instructional Development and Research (a University group dedicated to helping faculty and colleges plan and implement quality instruction) to develop a meaningful and successful peer-evaluation process.

In addition to promotion and merit-pay, faculty are recognized with professorships, chairs, and sabbatical opportunities. Each year, the College hosts a College-wide recognition event, where the outstanding teaching and outstanding research faculty are presented with a small financial reward and recognized for their valuable contributions to the College. These awards are informally decided based on research dollars, student evaluations, and faculty and staff input.

Student Admission and Evaluation
Students interested in the MFR in Forest Management degree may come from different academic backgrounds (see Figure 1 in Standard II). Students who have an adequate background in natural or forest resources can proceed directly into the program. Undergraduate students enrolled in the Environmental Sciences and Natural Resource Management (ESRM) curriculum are advised to follow the Sustainable Forest Management (SFM) pathway if they wish to apply to the program. Students without the requisite background would take additional course work as described in the SFM undergraduate emphasis area.

Sample pages from the supplemental application, required by all applicants to CFR graduate programs, are provided on the following pages; reference to application standards and procedures are highlighted in grey.

These following criteria are applied during the application process to the University's Graduate School. The MFR program coordinator (which will rotate among faculty over time; Professor J.K. Agee will serve in academic year 2006-2007) will receive the application from the Office of Student and Academic Services, and circulate it to two other selected faculty. We expect, and will require, applicants to have a substantial natural resources background. A flow chart explaining that background and any makeup requirements is shown as Appendix II-B in Standard II. In addition to the usual Graduate School criteria (GRE scores, GPA >3.0), which is a first cut at acceptability, the reviewers are asked to rate the candidate in one of three categories: (1) insufficient natural resources background to proceed in a timely manner through the MFR program; (2) minor deficiencies that could be remedied with a couple of courses (which would not count towards the MFR degree); or (3) sufficiently complete background. Students completing the undergraduate SFM pathway in the College of Forest Resources would fall into Category 3 since the pathway is designed to feed directly into the MFR.

At the conclusion of the review of an applicant's package, the program coordinator collates the reviews and assigns a 1, 2, or 3 to the file. Applicants in Category 1, although they may meet other Graduate School requirements, are denied entry into the MFR program. They may be encouraged to enroll as 5th year undergraduates to obtain the necessary background. Applicants in Category 2 will be admitted with a requirement that minor deficiencies be addressed, and that these deficiencies are in addition to all other program requirements. Applicants in Category 3 will be admitted without reservation. Recommendations are returned to the Student Services Office, which processes that decision and informs the applicant.

University of Washington
College of Forest Resources
Box 352100
Seattle, WA 98195-2100
Student and Academic Services

Dear Applicant:

Thank you for requesting application materials for the College of Forest Resources gradu
We offer Master of Science, Master of Environmental Horticulture, Master of Forest Resources, a
Philosophy degrees.

Founded in 1907, the College holds a position of national and international leadership in i
research. Its location in a growing urban area in one of the world's largest forested regions provid
opportunities for field classes and research, as well as awareness of resource use issues in urban a
landscapes. Students enjoy small classes and close association with faculty, as well as the diversit
facilities of a research extensive university.

The College integrates its programs through the key unifying concept of sustainability usi
sustainable forest enterprises, and sustainable land and ecosystem management in an urbanizing w
Sustainability brings an interdisciplinary set of social, biological, and physical sciences and skills
understanding, managing (including restoring and preserving), and using the products and ameniti
wildlands, and urban and suburban ecosystems so that they are maintained in a healthy, productiv
long term.

Please note that the deadline for applications is January 15th, and we only admit students
autumn quarter. It usually takes about 4-6 weeks after the January 15th deadline to make admissio
you will be notified by mail.

For the most current information about our faculty, programs, and the College, visit our w
http://www.cfr.washington/edu. If you have questions or are in need of assistance, feel free to co
at cfradv@u.washington.edu or by telephone at (206) 543-7081.

Thank you for considering us for your graduate education!

Sincerely yours,

Michelle Trudeau
Director, Student and Academic Services

University of Washington
College of Forest Resources

ADMISSION CRITERIA

The following items are taken into consideration when applications are reviewed by the College of Forest Resources (CFR) Faculty Review Committees:

1. **Evidence of academic readiness for the program.**
   - Minimum GPA of 3.00 in last 60 semester or last 90 quarter hours.
   - Type and level of courses completed (generally, students are not admitted if their academic performance has been below average or they do not have sufficient course background in their intended program of study).
   - Scores on the GRE (550-Verbal, 600-Quantitative, 5.0 Writing recommended).
   - INTERNATIONAL APPLICANTS ONLY: Minimum TOEFL score of 580 (237 for computer based test).
2. **Evidence of knowledge of the intended area of study.**
   - Clearly-written statement of objectives in pursuing further education.
   - Work or field experience in the planned area of study.
   - Publications written by the student related to the planned area of study.
3. **Supporting evidence from reference persons.**
   - Recommendation from references familiar with applicant's academic ability and potential.
   - Letters of recommendation from employers in field related to applicant's educational goals.

As with all CFR's graduate programs, applicants to the MFR in Forest Management must show evidence of academic readiness and knowledge of the intended area of study.

ADDITIONAL INFORMATION

1. The requirements listed above are considered minimum requirements. Typically, academic and professional materials for admitted students exceed these minimums.
2. Only the most highly qualified applicants will be recommended for admission to the Graduate School after their credentials have been considered by CFR Faculty Review Committees. Admission to CFR graduate programs is dependent upon space available within specific interest areas.
3. A recommendation for admission does not imply that financial assistance will be given upon entrance to CFR or for the duration of the student's program of study. Students are encouraged to investigate all sources of funding, including external loaning/financial institutions.
4. CFR welcomes students who have varied cultural experiences of educationally or economically disadvantaged backgrounds that will contribute to the College's intellectual and social enrichment. Applicants wishing to have these factors included in the review of their applications should provide a statement concerning personal history, family background, and influences on intellectual development. This statement should include cultural and educational opportunities (or lack thereof), social and economic disadvantages that had to be overcome, and the effects of these experiences on the applicant.

University of Washington, College of Forest Resources

University of Washington
College of Forest Resources

GRADUATE APPLICATION CHECKLIST

Use this checklist to complete your application: **Note: You must apply to the College of Forest Resources as well as to the UW Graduate School to be admitted.**

(1) Submit to the College of Forest Resources Office of Student and Academic Services, of Washington, Seattle, WA 98195-2100):

Domestic Graduate Applicants:

- ❑ GRE Scores (unofficial is fine). Subject tests not required.
- ❑ Official college transcripts from all schools attended (in the original sealed envel
- ❑ 3 Letters of recommendation (in the original sealed envelopes).
- ❑ A copy of the on-line Application for Admission the UW Graduate School.
- ❑ College of Forest Resources Supplemental Application Form.
- ❑ Statement of Purpose (300-500 words).
- ❑ Resume or Curriculum Vitae with professional experience/memberships.
- ❑ Writing samples (optional).
- ❑ Assistantship and Fellowship Awards Application (optional).

International Graduate Applicants must also submit:

- ❑ TOEFL Score (unofficial is fine).
- ❑ To obtain a Teaching Assistantship, submit a Test of Spoken English (TSE) score

(2) Submit to the University of Washington Graduate Admissions Office:

Domestic Graduate Applicants:

- ❑ Online application to the Graduate School (www.grad.washington.edu). There is online. All processing is done on-line. There is no need to mail anything to Grad

International Graduate Applicants:

- ❑ Online application to the Graduate School. (www.grad.washington.edu). There is online.
- ❑ Official college transcripts (in the original sealed envelopes). Send to the Univers Graduate Admissions Office, PO Box 84808 Seattle, WA 98124-6108.

University of Washington
College of Forest Resources

SUPPLEMENTAL APPLICATION FOR GRADUATE STUDY

This is a supplemental application form used by the College of Forest Resources (CFR) to further determine eligibility for its programs. Attach a separate sheet if necessary.

1. NAME _____ DATE_____

2. DEGREE SOUGHT (NOTE: STUDENTS MUST HAVE A MASTERS DEGREE TO ENTER THE PHD PROGRAM):

- ☐ DOCTOR OF PHILOSOPHY (PHD)
- ☐ MASTER OF SCIENCE (MS)
- ☐ MASTER OF ENVIRONMENTAL HORTICULTURE (MEH)
- ☐ MASTER OF FOREST RESOURCES (MFR)
- ☐ MASTER OF FOREST RESOURCES (MFR) IN FOREST MANAGEMENT ← Will be added to application once program is approved by graduate school

3. HONORS AND AWARDS

_____

_____

4. LIST ALL CFR FACULTY WITH WHOM YOU HAVE CORRESPONDED.

_____

_____

5. EMPLOYMENT AND PROFESSIONAL EXPERIENCE, INCLUDING ALL SIGNIFICANT PROFESSIONAL ACTIVITIES AND MEMBERSHIPS. (Please enclose a copy of your current resume or curriculum vitae.)

6. OPTIONAL: PUBLICATIONS AND PROFESSIONAL PAPERS. (Enclose an example of recent work. Submitted examples will not be returned to the applicant.)

7. NAMES OF RECOMMENDERS:

_____

_____

As an example of students who would be fully qualified, accepted with requirements to fulfill a few additional courses, and unacceptable for the MFR in Forest Management, sample transcripts are provided in Appendix III-C. The first transcript is from a student who completed his or her undergraduate curriculum at an already SAF-accredited program, thus the courses would easily meet the prerequisites of the MFR, as discussed in Standard II. The second transcript is from a student who has significant natural resource professional background and whose coursework would meet the prerequisites of the program. The third transcript is from a student currently enrolled in the ESRM (Environmental Science and Resource Management) degree program, but who is not taking the recommended courses in the Sustainable Forest Management Pathway; this student would not meet the prerequisites of the MFR and would not be admitted to the program.

Planning and Reviewing Academic Programs

The College uses numerous avenues to review existing and plan for new academic programs. As evidenced by the formation of the new ESRM degree program, and the phasing out of the previous undergraduate programs, the College is dedicated to providing high-quality academic programs that meet the current demands of the natural resource and management industries and professions. For example, during the planning stage of the ESRM program, a work group of ten professionals from state agencies and industry came together to provide feedback on the type of student they are looking for in new applicants. This provided the College with valuable information about the ideal student background when planning the new curriculum.

The College has a standing Curriculum Committee, composed of the Associate Dean of Academic Affairs, four faculty members, the Faculty Chair, and the Director of Student and Academic Services. This committee is responsible for overseeing the undergraduate and graduate programs of the College and reviews and approves all planned changes to courses and programs before those requiring faculty action are brought before the faculty for a final decision.

Assessing Educational Outcomes

The Paper Science and Engineering program is the only program in the College that has a systematic method for assessing educational outcomes, as required by the Accreditation Board for Engineering and Technology (ABET). Although there is not a systematic method for assessing outcomes from the newly established ESRM or MFR (Forest Management) programs, the College does employ techniques to assess a variety of educational outcomes.

The most widely used review systems are the course evaluations filled out by students at the completion of each course. These evaluations are reviewed by the course instructors and College administration to assess curriculum content and instructor quality. These forms are standardized across the University, and as such are comparable across disciplines and courses. As examples, the educational outcomes and student comment forms are provided in Appendix III-B of this section.

An additional outcome assessment technique used by the College is an exit survey administered at the completion of each student's undergraduate or graduate program. While this survey provides valuable input to the College regarding course content, faculty instruction, and the College community, it is voluntary, and thus is not representative of all students. A sample exit survey is provided in Appendix III-D of this section.

A technique that is less common, but projected to be used more frequently as more students take part in the SFM pathway of the ESRM degree program, is an employer evaluation completed after students participate in the summer internship program. Completed by the forestry professionals who worked with students during the summer, these evaluations are extremely valuable in assessing

individual students and the outcome of their educational background while at the University. An example of the most recent summer internship evaluation is provided in Appendix III-E of this section.

The final educational outcome assessment that will be used in the Master of Forest Resources (Forest Management) is the capstone project required for each student enrolled in the program. The capstone project will incorporate the students' knowledge and understanding of techniques and ideas taught in their courses, as well as experience from their professional and internship opportunities. In order for students to successfully complete the capstone project, they must demonstrate an expertise in forest management, including sampling techniques, policy and societal issues, and ecology and biological functions of forest and other natural systems. This outcome assessment will be extremely useful in the first few years in determining the MFR's ability to meet the goals of the program.

Appendix III-A: Sample Faculty Information Used for Merit Evaluation

A.1a Teaching - Graduate and Undergraduate Instruction — Lecture

Instructor	Academic Year	Qtr	Course	Sec	Title	Cr	Req	%	Enroll	SCH	Sdt Eval
Bradley											
	2000										
		winter	F M 377	A	Environmental Impact Assessment and Regulation	3	No	100	17	51	4.38
		spring	EHUF 470	A	Urban Forest Landscape	5	Yes	100	23	115	
		spring	F M 496	A	Forest Management Case Studies	5	Yes	100	7	35	
		autumn	CFR 592	A	Environmental Policy Processes	3	No	100	6	18	
		autumn	F M 371	A	Forest Land Use Planning	3	Yes	100	17	51	4.67
		autumn	F M 573	A	Forest Environmental Resource Planning	3	No	100	14	42	3.29
					Yr CFR-Reqd Cr:	**13**			**Yr SCH:**	**312**	**Avg 4.11**
	2001										
		winter	F M 377	A	Environmental Impact Assessment and Regulation	3	No	100	15	45	4.03
		spring	EHUF 470	A	Urban Forest Landscape	5	Yes	100	27	135	
		autumn	F M 371	A	Forest Land Use Planning	3	Yes	100	24	72	4.36
					Yr CFR-Reqd Cr:	**8**			**Yr SCH:**	**252**	**Avg 4.19**
	2002										
		winter	F M 481	A	Management of Wildland Recreation and	3	Yes	100	12	36	4.28
		spring	EHUF 470	A	Urban Forest Landscape	5	Yes	100	25	125	
		spring	F M 495	A	Senior Project in Forest Management	5	No	100	1	5	
		spring	F M 496	AA	Forest Management Case Studies	5	Yes	100	3	15	
		autumn	CFR 470	A	Natural Resource Policy and Planning	5	Yes	100	34	170	3.60
		autumn	CFR 474	A	Problem Analysis in Urban Ecology	5	No	100	5	25	
		autumn	CFR 574	A	Problem Analysis in Urban Ecology	5	No	100	13	65	
		autumn	CFR 580	A	Advanced Urban Ecology	5	No	100	4	20	
					Yr CFR-Reqd Cr:	**18**			**Yr SCH:**	**461**	**Avg 3.94**
					3Yr CFR-Reqd Cr:	**39**			**3Yr SCH:**	**102**	**Avg: 4.08**

A.1b Teaching - Graduate and Undergraduate Instruction — Independent Study

Instructor	Academic Year	Quarter	Course	Title	Enrollment	SCH
Bradley						
	2000					
		winter	CFR 700	Master's Thesis	3	17
		winter	F M 572	Graduate Studies in Forest Resource Planning	1	3
		spring	CFR 600	Independent Study or Research	1	2
		spring	CFR 700	Master's Thesis	2	12
		summer	CFR 700	Master's Thesis	2	17
		summer	ENVIR 491	Capstone Experience II	1	4
		autumn	CFR 600	Independent Study or Research	1	1
		autumn	CFR 700	Master's Thesis	3	10
		autumn	ENVIR 491	Capstone Experience II	1	3
					Yr SCH:	**69**
	2001					
		winter	CFR 600	Independent Study or Research	2	9
		winter	CFR 700	Master's Thesis	2	12
		winter	F M 300	Professional Forestry Internship	1	5
		winter	F M 572	Graduate Studies in Forest Resource Planning	2	8
		winter	URBDP 700	Master's Thesis	1	2
		spring	CFR 600	Independent Study or Research	1	10
		spring	CFR 700	Master's Thesis	2	10
		spring	F M 490	Undergraduate Studies	1	3
		autumn	CFR 600	Independent Study or Research	2	10
					Yr SCH:	**69**
	2002					
		winter	CFR 600	Independent Study or Research	1	2
		winter	F M 572	Graduate Studies in Forest Resource Planning	2	3
		spring	CFR 600	Independent Study or Research	1	1
		spring	CFR 700	Master's Thesis	3	11
		spring	EHUF 495	EUHF Senior Project	1	5
		summer	CFR 700	Master's Thesis	2	15
		summer	CFR 800	Doctoral Dissertation	1	2
		autumn	CFR 600	Independent Study or Research	1	2
		autumn	CFR 700	Master's Thesis	3	24
					Yr SCH:	**65**
					3Yr SCH:	**203**

Thursday, May 15, 2003

A.2a Teaching - Graduate Supervision

PhD

Instructor	AcademicYear	PhD Graduate	Chair	Major	Date Graduated
Bradley					
	2000				
		Donnelly, Roarke	No	Wildlife Sciences	December 19, 2002
		Greenberg, Josh	No	Ecosystems Analysis	June 9, 2000
		Hornbaker, Margaret	No	Public Affairs	
		McCarter, James	No	Silviculture & Forest Protection	December 20, 2001
		McDonald, Kimberly	No	Social Sciences	December 14, 2000
		McLain, Rebecca	No	Social Sciences	December 14, 2000
		Powers, Thomas	No	Education	
		Robinson, Lin	No	Social Sciences	
		Rombold, John	No	Forest Ecosystem Analysis	
		Zientek, Jan	No	Social Sciences	
		Yr PhD Chair/Graduated Student Total:	**0**	**Yr PhD Grad Committee Membership Total:**	**10**
	2001				
		Donnelly, Roarke	No	Wildlife Sciences	December 19, 2002
		Hornbaker, Margaret	No	Public Affairs	
		McCarter, James	No	Silviculture & Forest Protection	December 20, 2001
		Powers, Thomas	No	Education	
		Robinson, Lin	No	Social Sciences	
		Rombold, John	No	Forest Ecosystem Analysis	
		Zientek, Jan	No	Social Sciences	
		Yr PhD Chair/Graduated Student Total:	**0**	**Yr PhD Grad Committee Membership Total:**	**7**
	2002				
		Robinson, Lin	No	Social Sciences	
		Walmsley, Jesse	No	Social Sciences	
		Zientek, Jan	No	Social Sciences	
		Yr PhD Chair/Graduated Student Total:	**0**	**Yr PhD Grad Committee Membership Total:**	**3**
		3 Yr PhD Chair/Graduated Student Total:	**0**	**3 Yr PhD Grad Committee Membership Total:**	**20**

Thursday, May 15, 2003

A.2b Teaching - Graduate Supervision MS

Instructor	AcademicYear	MS Graduate Student	Chair	Major	Date Graduated
Bradley					
	2000				
		Allison, Nancy	No	Silviculture & Forest Protection	December 20, 2001
		Barber, Pamela	No	Social Sciences	March 16, 2001
		Bratton, Nicholas	No	Social Sciences	
		Buffington, Stephen	No	Social Sciences	
		Cohen, Alex	No	Urban Planning	June 14, 2002
		da Luz, Michelle	Yes	Social Sciences	
		Jensen, Sara	No	Social Sciences	August 18, 2000
		Klug, Jacqueline	No	Social Sciences	June 8, 2001
		Landsman, David	Yes	Social Sciences	August 18, 2000
		Pavey, Scott	Yes	Social Sciences	June 8, 2001
		Rohila, Christina	No	Wildlife Sciences	December 19, 2002
		Russell, Camille	Yes	Urban Planning	June 14, 2002
		Sanchez, Veronica	Yes	Urban Horticulture	
		Stephanson, Sheri	No	Social Sciences	
		Tilt, Jenna	No	Social Sciences	June 8, 2001
		Waldron, Kimberly	No	Social Sciences	December 20, 2001
		Wallin, Jeanne	Yes	Social Sciences	December 14, 2000
		Winger, Shannon	Yes	Urban Planning	March 16, 2001
		Zwiebel, Brian	Yes	Social Sciences	
		Yr MS Chair/Graduated Student Total:	**2**	**Yr MS Grad Committee Membership Total:**	**19**
	2001				
		Allison, Nancy	No	Silviculture & Forest Protection	December 20, 2001
		Barber, Pamela	No	Social Sciences	March 16, 2001
		Bratton, Nicholas	No	Social Sciences	
		Buffington, Stephen	No	Social Sciences	
		Cohen, Alex	No	Urban Planning	June 14, 2002
		da Luz, Michelle	Yes	Social Sciences	
		Kim, Sooyoung	Yes	Social Sciences	
		Klug, Jacqueline	No	Social Sciences	June 8, 2001
		Nichols, Morgan	Yes	Social Sciences	
		Pavey, Scott	Yes	Social Sciences	June 8, 2001
		Rohila, Christina	No	Wildlife Sciences	December 19, 2002
		Russell, Camille	Yes	Urban Planning	June 14, 2002
		Sanchez, Veronica	Yes	Urban Horticulture	
		Stephanson, Sheri	No	Social Sciences	
		Tilt, Jenna	No	Social Sciences	June 8, 2001

	Waldron, Kimberly	No	Social Sciences		December 20, 2001
	Winger, Shannon	Yes	Urban Planning		March 16, 2001
	Zwiebel, Brian	Yes	Social Sciences		
	Yr MS Chair/Graduated Student Total:	**2**	**Yr MS Grad Committee Membership Total:**		**18**
2002					
	Beevers, Michael	Yes	Forest Resources		
	Bidwell, Ryan	No	Social Sciences		
	Bratton, Nicholas	No	Social Sciences		
	Buffington, Stephen	No	Social Sciences		
	Cohen, Alex	No	Urban Planning		June 14, 2002
	da Luz, Michelle	Yes	Social Sciences		
	Erickson, Ara	Yes	Forest Resources		
	Grady, Johnny	Yes	Social Sciences		
	Karl, Suzanne	Yes	Forest Resources		
	Kim, Sooyoung	Yes	Social Sciences		
	Nichols, Morgan	Yes	Social Sciences		
	Sanchez, Veronica	Yes	Urban Horticulture		
	Walsh, Matthew	No	Forest Engineering		
	Whittaker, Kara	No	Forest Resources		
	Zwiebel, Brian	Yes	Social Sciences		
	Yr MS Chair/Graduated Student Total:	**0**	**Yr MS Grad Committee Membership Total:**		**15**
	3 Yr MS Chair/Graduated Student Total:	**4**	**3 Yr MS Grad Committee Membership Total:**		**52**

B.1 Funded Research

Instructor	Academic Year	Project Name	Source	Total Funding	Begin	End	PI/Co-PI	Ind Annual $
Bradley								
	Individual							
	2000							
		Political Forces	USDA FS PNW	$32,792	9/3/98	3/1/02	Co-P	$8,554
		Public Reactions	USDA FS	$90,617	9/6/96	9/5/01	Co-P	$18,123
		Stakeholders	USDA PNW	$88,000	10/11/96	7/31/00	Co-P	$11,846
		Urban Ecology Initiative	UW - Tools for Transformation	$322,210	1/1/00	12/31/0	Co-P	$161,105
							Yr Total:	**$199,629**

2001							
	CESU Planning Ecosystem Studies	NPS	$10,000	1/1/01	12/31/0	Co-P	$10,000
	Political Forces	USDA FS PNW	$32,792	9/3/98	3/1/02	Co-P	$8,554
	Public Reactions	USDA FS	$90,617	9/6/96	9/5/01	Co-P	$12,082
	Urban Ecology Initiative	UW - Tools for Transformation	$322,210	1/1/00	12/31/0	Co-P	$161,105
	Urban Ecology Initiative (IGERT)	NSF	$2,700,000	9/1/01	12/31/0	Co-P	$168,750
						Yr Total:	**$360,492**
2002							
	CESU Planning Ecosystems Studies	NPS/ BLM/ EPA/ BOR/ USFWS/ USFS ($10,000 each)	$60,000	1/1/02	12/31/0	Co-P	$60,000
	Forest Harvest Practices	USDA FS Forest and Range Experimentation Station	$39,596	1/1/02	12/31/0	Co-P	$39,596
	Political Forces	USDA FS PNW	$32,792	9/3/98	3/1/02	Co-P	$1,426
	Urban Ecology Initiative (IGERT)	NSF	$2,700,000	9/1/01	12/31/0	Co-P	$506,250
						Yr Total:	**$607,272**
						3Yr Total:	**$1,167,392**

3 Yr Combined Total (Center and Individual): $1,167,392

NOTE: The Individual Annual Amount for each year is the monthly project amount (total project funding divided by number of months funded) multiplied by the number of months which fall in the year indicated. When a project spans more than one year, it will appear as a pro-rated amount in each year.

B.2 and B.3 Publications

Instructor	Year	Title	Publisher	Co-Authors	Date
Bradley					
	Refereed				
	2002				
		Integrating Humans Into Ecology: Opportunities and Challenges for Urban Ecology		Alberti, Marzluff, Schulenberger, Ryan, Zurbrunnen	Submitted

Creativity and Sustaining a Culture of Interdisciplinarity: Novel Approaches to Graduate Education in the Environmental Sciences		Marzulff, Merisi, et. al.	Submitted

Yr Publications Total: 0
3 Yr Publications Total: 0

Non-Refereed

2000

Alternative Futures for Stovepipe Wells	Report to the National Park		2000

Yr Publications Total: 1

2002

Public Reactions	Silvicultural Options for Young-Growth Douglas-Fir: The Capitol Forest Study	Kearney, Wagar	2002
Ecological Restoration in the Urban-Wildland Interface	Ecological Restoration of Southwestern Ponderosa Pine Forests (Ed. Friederici)	Marzluff	2002

Yr Publications Total: 2
3 Yr Publications Total: 3

C.1 Academic and Educational Service

Academic Committees

Instructor	Academic Year	Academic Committee	Area	Chair
Bradley				
	2000			
		Academic Planning	CFR	No
		Campus Landscape Committee	UW	No
		CE Board of Deans	UW	No
		Committee to Develop Concurrent Degree Program with Evans	CFR	Yes
		Committee to Develop International Certificate CFR/GSPA/Jackson School	CFR	No
		Committee to Develop Proposal for Cooperative Ecosystem Studies Unit	CFR	No
		Computer Committee	CFR	Yes
		Facilities Committee	CFR	No
		Financial Aid (Scholarship) Committee	CFR	Yes

	Graduate School Council Nominating Committee	UW	No
	Graduate School Interdisciplinary Committee	UW	No
	Operations Committee	CFR	No
	Outreach Committee	CFR	No
	Policy and Law Search Committee	CFR	Yes
	Regional Continuing Education Coordinating Committee	UW/WSU/OSU	No
	Research Faculty Search Committee	CFR	Yes
	Strategic Planning	CFR	No
	Undergraduate & Graduate Curriculum Group Leader	F M - CFR	Yes
	Undergraduate Recruitment Committee	CFR	No
	University Curriculum Policy Board	UW	No
	Workplace Quality Committee	CFR	No
	Yr Academic Committee Membership: 21	**Yr Chair Academic Committee: 6**	
2001			
	Academic Planning	CFR	No
	Campus Landscape Committee	UW	No
	CE Board of Deans	UW	No
	College Management Council	CFR	No
	College Planning Committee	CFR	Yes
	Committee to Develop Concurrent Degree Program with Evans	CFR	Yes
	Committee to Develop International Certificate CFR/GSPA/Jackson School	CFR	No
	Committee to Develop Proposal for Cooperative Ecosystem Studies Unit	CFR	No
	Computer Committee	CFR	Yes
	Cooperative Ecosystem Studies Unit	UW	Yes
	Environmental Horticulture and Urban Forestry Search Committee	CFR	No
	Facilities Committee	CFR	No
	Financial Aid (Scholarship) Committee	CFR	Yes
	Graduate School Council Nominating Committee	UW	No
	Graduate School Interdisciplinary Committee	UW	No
	Operations Committee	CFR	No
	Outreach Committee	CFR	No
	Policy and Law Search Committee	CFR	Yes
	President's Committee on Charting Directions for CFR	UW	No
	Regional Continuing Education Coordinating Committee	UW/ WSU/ OSU	No

	Research Faculty Search Committee	CFR	Yes
	Strategic Planning	CFR	No
	Undergraduate & Graduate Curriculum Group Leader	FM - CFR	Yes
	Undergraduate Recruitment Committee	CFR	No
	University Curriculum Policy Board	UW	No
	Urban Forestry Committee	CFR	Yes
	Workplace Quality Committee	CFR	No
	Yr Academic Committee Membership: 27		**Yr Chair Academic Committee: 9**
2002			
	College Executive Team	CFR	No
	College Management Council	CFR	No
	College Planning Committee	CFR	Yes
	Committee to Develop Forestry-Fisheries Masters	CFR	No
	Conciliation Officer - Office of Ombudsman	UW	No
	Continuance Education Review Committee	CFR	Yes
	Cooperative Ecosystems Studies Unit	UW	Yes
	CUH-WPA Director Search Committee	CFR	Yes
	Financial Aid (Scholarship) Committee	CFR	No
	New Initiatives Team	CFR	No
	President's Committee on Charting Directions for CFR	UW	No
	Undergraduate & Graduate Curriculum Group Leader	FM - CFR	Yes
	Yr Academic Committee Membership: 12		**Yr Chair Academic Committee: 5**
	3Yr Academic Committee Membership: 60		**3Yr Chair Academic Committee: 20**

C.1 Academic and Educational Service — Continuing Education

Instructor	Academic Year	Continuing Education Event	Sponsor	Date	Attendance
Bradley					
	2000				
		Natural Resources Institute	Washington State University	2000	
				Yr Continuing Education Total:	**1**
	2001				

	Natural Resources Institute	Washington State University	2001

Yr Continuing Education Total: 1

3Yr Continuing Education Total: 2

C.2 Public and Professional Service

Instructor	Year	Service Type	Organization	Service Provided
Bradley				
	2000			
		Committee/Organization Memberships		
			King County Rural Forestry Commission	Member, Appointed by King County Executive Council
			Mountains to Sound/Middle Fork Snoqualmie River Planning Committee	Member
			Seattle Community and Urban Forestry Advisory Council - Treemendous Seattle	Member
			Tiger Mountain State Forest Advisory Committee	Member, Appointed by Comm. of Public Lands
			Western Summit Steering Committee, UC Davis	Member
			WFPA Land Use Committee	Member
		Conferences		
			Forest Aesthetics Workshop, Oregon Forest Industries Council, Oregon	Speaker, Organizer
			Forest Aesthetics Workshop, Weyerhaeuser	Speaker, Organizer
		Consulting		
			Washington Forest Protection Association	Consulting on Forest Practice in Visually Sensitive Areas
		Publication Reviews		
			Forest and Stream Management of the Oregon Coast Range	Review Book Chapter "Socioeconomic and Policy Interactions"
			Journal of Urban Ecosystems	Editorial Board
		Other		
			Dr. Abram Kaplan, Denison University	Promotion Review
			Dr. Bernadine Comprich, University of Michigan	Promotion Review
			Dr. Francis Kuo, University of Illinois	Promotion Review
			Dr. Sally Schauman, University of Washington	Promotion Review
			Dr. Tim Duane, University of California, Berkeley	Promotion Review
			Dr. William Sullivan, University of Illinois	Promotion Review
			Harpers Magazine	Interview, Forest Planning and Ecosystem Management
			Olympian	Interview, Forest Aesthetics/Silviculture
			Seattle Times	Interview, Urban Forestry

	Tacoma News Tribune	Interview, Forest Land Conservation
	The Wire, Champion International Corporation	Authored Article on Designing Clearcuts
	Vancouver Sun	Interview, Urban Forestry
		Yr Service Total: 23
2001		
Committee/Organization Memberships		
	King County Rural Forestry Commission Executive Committee	Member, Appointed by King County
	Mountains to Sound/Middle Fork Snoqualmie River Planning Committee	Member
	Seattle Community and Urban Forestry Advisory Council - Treemendous Seattle	Member
	Tiger Mountain State Forest Advisory Committee	Member, Appointed by Comm. of Public Lands
	Washington State Urban and Community Forest Council	Member, Appointed by Comm. of Public Lands
	Western Summit Steering Committee, UC Davis	Member
	WFPA Land Use Committee	Member
Consulting		
	National Park Service - Stovepipewells Master Plan	Developed Master Plan
	Washington Forest Protection Association	Consulting on Forest Practice in Visually Sensitive Areas
	WSU Skamania County Extension	Forest Aesthetics Advising
Proposal Reviews		
	NSF IGERT Review Panel	-
Publication Reviews		
	Journal of Urban Ecosystems	Editorial Board/ Reviewer
Other		
	High Country	Interview
	Mukilteo Beacon	Interview
	Seattle Times	2 Interviews
	Seattle Times	Interview, Urban Forest Interface/Wildlife
	Urban Interface	2 Interviews
	Wildlife Article	Interview2002
Committee/Organization Memberships		
	King County Rural Forestry Commission	Member
	Tiger Mountain State Advisory Committee	Member, Apptd. by Comm. of Public Lands
Conferences		
	Olympic National Park Orientation to New Employees - Crescent Lake	Presentation
	Society of American Foresters Annual State Meeting, Snoqualmie	Presentation
	Urban Ecology International Meeting, Berlin	Presentation
	Urban Ecology Presentation to Humboldt University	Presentation
	Urban Forest Summit, Chicago	Presentation
Consulting		
	SFI Visual Resource Management, Idaho Forest Industries Association	SFI Course

	SFI Visual Resource Management, Potlatch Timber Company, Lewiston,	SFI Course
		Yr Service Total: 20
Proposal Reviews		
	Pacific Watershed Initiative, Methow Valley	Reviewer
	Tech Advisory Visit USDA FS Wildland Urban Interface Research Unit, Gainesville, Florida	Invited Reviewer
Publication Reviews		
	Journal of Urban Ecosystems	Editorial Board/Reviewer
Other		
	CESU Co-Leader	Co-Leader
		Yr Service Total: 13
		3Yr Service Total: 56

Appendix III-B: Sample Course Evaluation and Student Comment Form

Instructional Assessment System

USE NO. 2 PENCIL ONLY

Fill in bubbles darkly and completely.
Erase errors cleanly.

FORM X

Instructor_____ Course_____ Section_____ Date_____

Completion of this questionnaire is voluntary. You are free to leave some or all questions unanswered.

	Excellent	Very Good	Good	Fair	Poor	Very Poor
1. The course as a whole was:	○	○	○	○	○	○
2. The course content was:	○	○	○	○	○	○
3. The instructor's contribution to the course was:	○	○	○	○	○	○
4. The instructor's effectiveness in teaching the subject matter was:	○	○	○	○	○	○

How frequently was each of the following a true description of this course?	Always			About Half			Never
5. The instructor gave very clear explanations.	○	○	○	○	○	○	○
6. The instructor successfully rephrased explanations to clear up confusion.	○	○	○	○	○	○	○
7. Class sessions were interesting and engaging.	○	○	○	○	○	○	○
8. Class sessions were well organized.	○	○	○	○	○	○	○
9. Student participation was encouraged.	○	○	○	○	○	○	○
10. Students were aware of what was expected of them.	○	○	○	○	○	○	○
11. Extra help was readily available.	○	○	○	○	○	○	○
12. Assigned readings and other out-of-class work were valuable.	○	○	○	○	○	○	○
13. Grades were assigned fairly.	○	○	○	○	○	○	○
14. Meaningful feedback on tests and other work was provided.	○	○	○	○	○	○	○
15. Evaluation of student performance was related to important course goals.	○	○	○	○	○	○	○

Relative to other college courses you have taken, how would you describe your progress in this course with regard to:	Great			Average			None
16. Learning the conceptual and factual knowledge of this course.	○	○	○	○	○	○	○
17. Developing an appreciation for the field in which this course resides.	○	○	○	○	○	○	○
18. Understanding written material in this field.	○	○	○	○	○	○	○
19. Developing an ability to express yourself in writing or orally in this field.	○	○	○	○	○	○	○
20. Understanding and solving problems in this field.	○	○	○	○	○	○	○
21. Applying the course material to real world issues or to other disciplines.	○	○	○	○	○	○	○
22. General intellectual development.	○	○	○	○	○	○	○

Relative to other college courses you have taken:	Much Higher			Average			Much Lower
23. Do you expect your grade in this course to be:	○	○	○	○	○	○	○
24. The intellectual challenge presented was:	○	○	○	○	○	○	○
25. The amount of effort you put into this course was:	○	○	○	○	○	○	○
26. The amount of effort to succeed in this course was:	○	○	○	○	○	○	○
27. Your involvement in this course (doing assignments, attending classes, etc.) was:	○	○	○	○	○	○	○

28. On average, how many hours per week have you spent on this course, including attending classes, doing readings, reviewing notes, writing papers and any other course related work?
○ Under 2 ○ 2 - 3 ○ 4 - 5 ○ 6 - 7 ○ 8 - 9 ○ 10- 11 ○ 12 - 13 ○ 14 - 15 ○ 16 - 17 ○ 18 - 19 ○ 20 - 21 ○ 22 or more

29. From the total average hours above, how many do you consider were valuable in advancing your education?
○ Under 2 ○ 2 - 3 ○ 4 - 5 ○ 6 - 7 ○ 8 - 9 ○ 10- 11 ○ 12 - 13 ○ 14 - 15 ○ 16 - 17 ○ 18 - 19 ○ 20 - 21 ○ 22 or more

30. What grade do you expect in this course?
○ A (3.9-4.0) ○ A- (3.5-3.8) ○ B+ (3.2-3.4) ○ B (2.9-3.1) ○ B- (2.5-2.8) ○ C+ (2.2-2.4) ○ C (1.9-2.1) ○ C- (1.5-1.8) ○ D+ (1.2-1.4) ○ D (0.9-1.1) ○ D- (0.7-0.8) ○ E (0.0) ○ Pass ○ Credit ○ No Credit

31. In regard to your academic program, is this course best described as:
○ In your major? ○ In your minor? ○ A distribution requirement? ○ A program requirement? ○ An elective? ○ Other?

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Instructional Assessment System

rev. 10/96

Student Comments

Instructor _____ Course _____ Section _____ Date _____

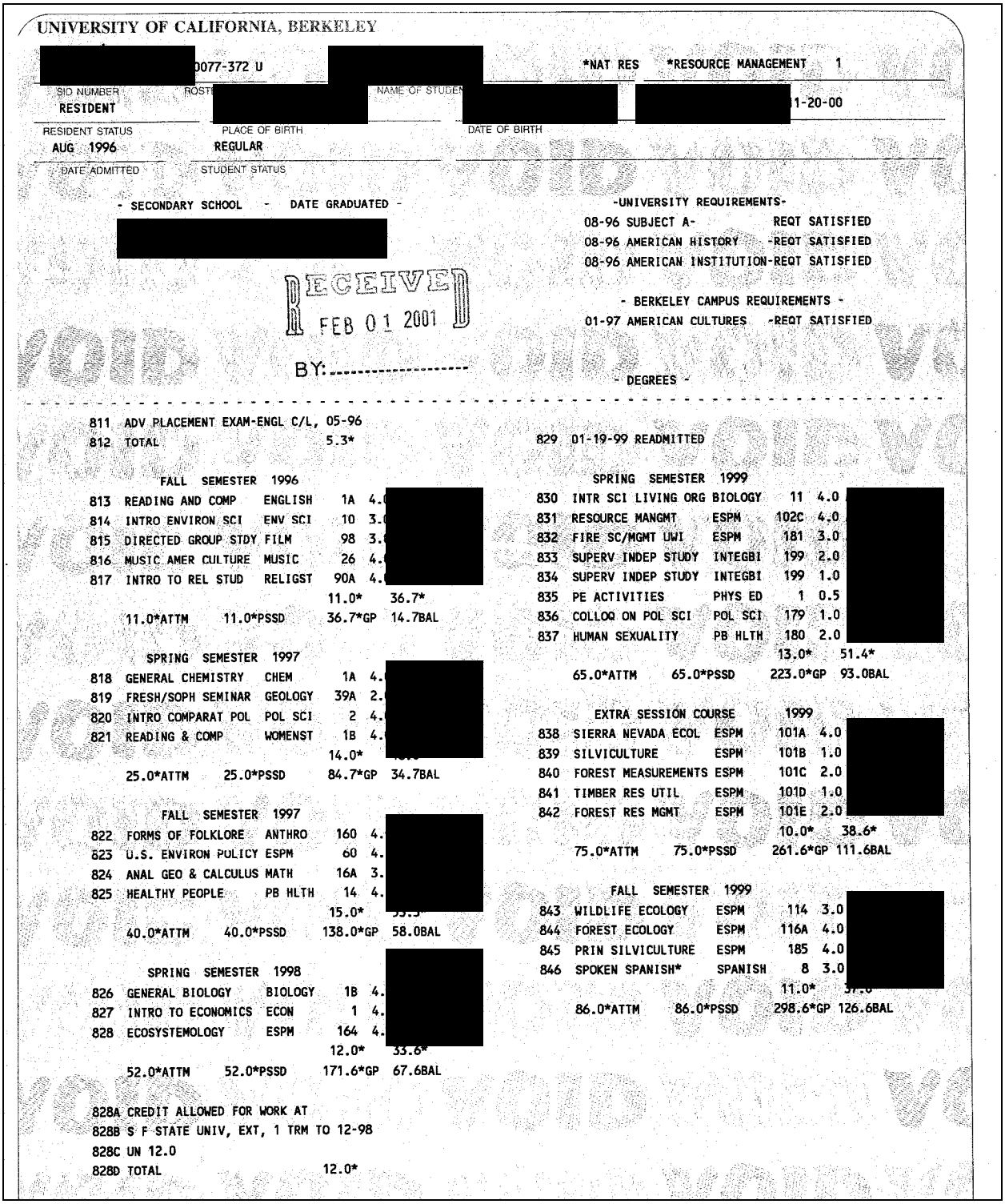
Your handwritten comments in response to the following questions will be returned to the instructor *after grades are turned in.* We encourage you to respond to all questions as thoughtfully and constructively as possible. Your comments will be used by the instructor to improve the course. However, you are not required to answer any questions.

Was this class intellectually stimulating? Did it stretch your thinking? Yes No Why or why not?
What aspects of this class contributed most to your learning?
What aspects of this class detracted from your learning?
What suggestions do you have for improving the class?
Please use the back of this sheet for any additional comments or to respond to additional questions. Thank you!

nana:\ias\document\comments.doc
rev. 10/24/96

Appendix III-C: Sample Transcripts

This student would fall into Category 3, since his/her undergraduate classes show a substantial background in forestry and natural resource management. Additionally, since the program is SAF accredited, the courses would meet the prerequisites of the MFR (Forest Management).



UNIVERSITY OF CALIFORNIA, BERKELEY

[redacted] 0077-372 U [redacted] *NAT RES *RESOURCE MANAGEMENT 1

SID NUMBER ROST[redacted] NAME OF STUDE[redacted] [redacted] 1-20-00

RESIDENT

RESIDENT STATUS PLACE OF BIRTH DATE OF BIRTH

AUG 1996 REGULAR

DATE ADMITTED STUDENT STATUS

- SECONDARY SCHOOL - DATE GRADUATED -

[redacted]

RECEIVED
FEB 01 2001
BY:_____

-UNIVERSITY REQUIREMENTS-
08-96 SUBJECT A- REQT SATISFIED
08-96 AMERICAN HISTORY -REQT SATISFIED
08-96 AMERICAN INSTITUTION-REQT SATISFIED

- BERKELEY CAMPUS REQUIREMENTS -
01-97 AMERICAN CULTURES -REQT SATISFIED

- DEGREES -

811 ADV PLACEMENT EXAM-ENGL C/L, 05-96
812 TOTAL 5.3*

FALL SEMESTER 1996

813	READING AND COMP	ENGLISH	1A	4.[redacted]	
814	INTRO ENVIRON SCI	ENV SCI	10	3.[redacted]	
815	DIRECTED GROUP STDY	FILM	98	3.[redacted]	
816	MUSIC AMER CULTURE	MUSIC	26	4.[redacted]	
817	INTRO TO REL STUD	RELIGST	90A	4.[redacted]	
				11.0*	36.7*
	11.0*ATTM	11.0*PSSD		36.7*GP	14.7BAL

SPRING SEMESTER 1997

818	GENERAL CHEMISTRY	CHEM	1A	4.[redacted]	
819	FRESH/SOPH SEMINAR	GEOLOGY	39A	2.[redacted]	
820	INTRO COMPARAT POL	POL SCI	2	4.[redacted]	
821	READING & COMP	WOMENST	1B	4.[redacted]	
				14.0*	[redacted]
	25.0*ATTM	25.0*PSSD		84.7*GP	34.7BAL

FALL SEMESTER 1997

822	FORMS OF FOLKLORE	ANTHRO	160	4.[redacted]	
823	U.S. ENVIRON POLICY	ESPM	60	4.[redacted]	
824	ANAL GEO & CALCULUS	MATH	16A	3.[redacted]	
825	HEALTHY PEOPLE	PB HLTH	14	4.[redacted]	
				15.0*	[redacted]
	40.0*ATTM	40.0*PSSD		138.0*GP	58.0BAL

SPRING SEMESTER 1998

826	GENERAL BIOLOGY	BIOLOGY	1B	4.[redacted]	
827	INTRO TO ECONOMICS	ECON	1	4.[redacted]	
828	ECOSYSTEMOLOGY	ESPM	164	4.[redacted]	
				12.0*	33.6*
	52.0*ATTM	52.0*PSSD		171.6*GP	67.6BAL

828A CREDIT ALLOWED FOR WORK AT
828B S F STATE UNIV, EXT, 1 TRM TO 12-98
828C UN 12.0
828D TOTAL 12.0*

829 01-19-99 READMITTED

SPRING SEMESTER 1999

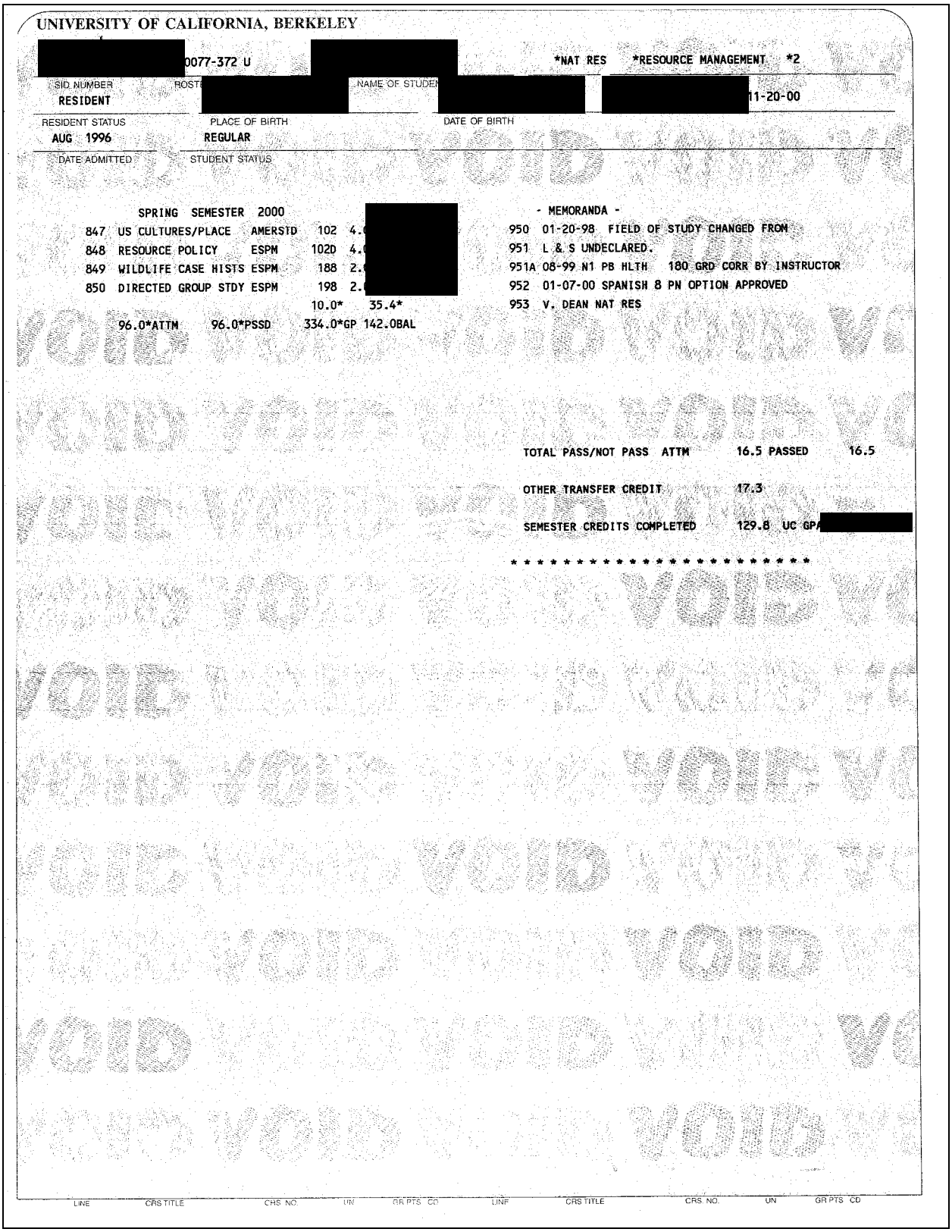
830	INTR SCI LIVING ORG	BIOLOGY	11	4.0	[redacted]
831	RESOURCE MANGMT	ESPM	102C	4.0	
832	FIRE SC/MGMT UWI	ESPM	181	3.0	
833	SUPERV INDEP STUDY	INTEGBI	199	2.0	
834	SUPERV INDEP STUDY	INTEGBI	199	1.0	
835	PE ACTIVITIES	PHYS ED	1	0.5	
836	COLLOQ ON POL SCI	POL SCI	179	1.0	
837	HUMAN SEXUALITY	PB HLTH	180	2.0	
				13.0*	51.4*
	65.0*ATTM	65.0*PSSD		223.0*GP	93.0BAL

EXTRA SESSION COURSE 1999

838	SIERRA NEVADA ECOL	ESPM	101A	4.0	[redacted]
839	SILVICULTURE	ESPM	101B	1.0	
840	FOREST MEASUREMENTS	ESPM	101C	2.0	
841	TIMBER RES UTIL	ESPM	101D	1.0	
842	FOREST RES MGMT	ESPM	101E	2.0	
				10.0*	38.6*
	75.0*ATTM	75.0*PSSD		261.6*GP	111.6BAL

FALL SEMESTER 1999

843	WILDLIFE ECOLOGY	ESPM	114	3.0	[redacted]
844	FOREST ECOLOGY	ESPM	116A	4.0	
845	PRIN SILVICULTURE	ESPM	185	4.0	
846	SPOKEN SPANISH*	SPANISH	8	3.0	
				11.0*	[redacted]
	86.0*ATTM	86.0*PSSD		298.6*GP	126.6BAL



UNIVERSITY OF CALIFORNIA, BERKELEY

[redacted] 0077-372 U [redacted] *NAT RES *RESOURCE MANAGEMENT *2

SID NUMBER [redacted] NAME OF STUDE [redacted] [redacted] 11-20-00

RESIDENT STATUS: RESIDENT | PLACE OF BIRTH | DATE OF BIRTH

DATE ADMITTED: AUG 1996 | STUDENT STATUS: REGULAR

SPRING SEMESTER 2000

847	US CULTURES/PLACE	AMERSTD	102	4.[redacted]	
848	RESOURCE POLICY	ESPM	102D	4.[redacted]	
849	WILDLIFE CASE HISTS	ESPM	188	2.[redacted]	
850	DIRECTED GROUP STDY	ESPM	198	2.[redacted]	
				10.0*	35.4*

96.0*ATTM 96.0*PSSD 334.0*GP 142.0BAL

- MEMORANDA -

950 01-20-98 FIELD OF STUDY CHANGED FROM
951 L & S UNDECLARED.
951A 08-99 N1 PB HLTH 180 GRD CORR BY INSTRUCTOR
952 01-07-00 SPANISH 8 PN OPTION APPROVED
953 V. DEAN NAT RES

TOTAL PASS/NOT PASS ATTM 16.5 PASSED 16.5

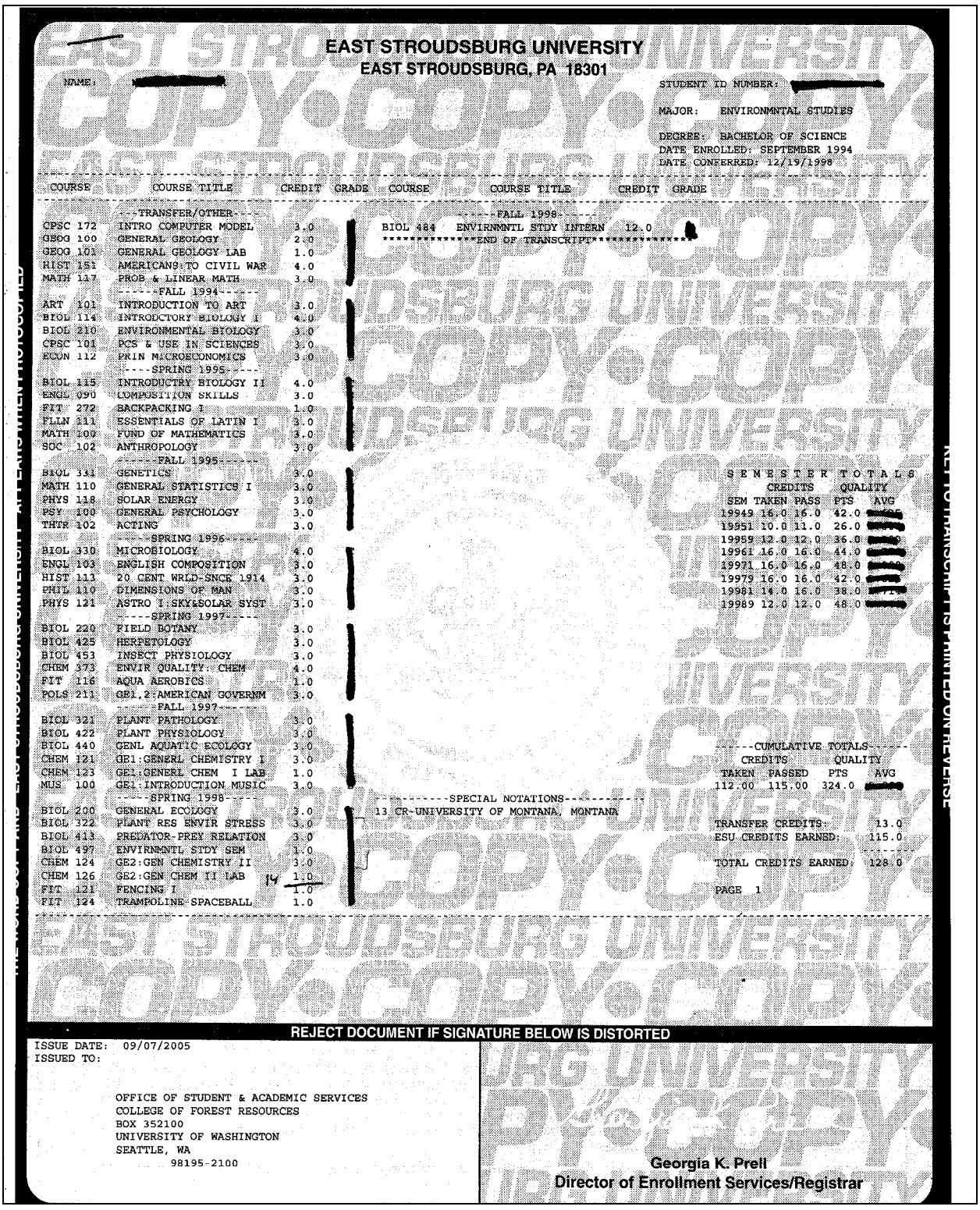
OTHER TRANSFER CREDIT 17.3

SEMESTER CREDITS COMPLETED 129.8 UC GP[redacted]

* *

LINE CRS TITLE CRS NO. UN GR PTS CD LINE CRS TITLE CRS NO. UN GR PTS CD

This student's undergraduate courses, providing a background in the biological and environmental sciences, combined with his/her professional experience in forestry and resource management would place his/her in Category 3 as well.



EAST STROUDSBURG UNIVERSITY
EAST STROUDSBURG, PA 18301

NAME: [redacted]

STUDENT ID NUMBER: [redacted]

MAJOR: ENVIRONMNTAL STUDIES

DEGREE: BACHELOR OF SCIENCE
DATE ENROLLED: SEPTEMBER 1994
DATE CONFERRED: 12/19/1998

COURSE	COURSE TITLE	CREDIT	GRADE
	---TRANSFER/OTHER---		
CPSC 172	INTRO COMPUTER MODEL	3.0	
GEOG 100	GENERAL GEOLOGY	2.0	
GEOG 101	GENERAL GEOLOGY LAB	1.0	
HIST 151	AMERICANS TO CIVIL WAR	4.0	
MATH 117	PROB & LINEAR MATH	3.0	
	-----FALL 1994-----		
ART 101	INTRODUCTION TO ART	3.0	
BIOL 114	INTRODCTORY BIOLOGY I	4.0	
BIOL 210	ENVIRONMENTAL BIOLOGY	3.0	
CPSC 101	PCS & USE IN SCIENCES	3.0	
ECON 112	PRIN MICROECONOMICS	3.0	
	----SPRING 1995----		
BIOL 115	INTRODUCTRY BIOLOGY II	4.0	
ENGL 090	COMPOSITION SKILLS	3.0	
FIT 272	BACKPACKING I	1.0	
FLLN 111	ESSENTIALS OF LATIN I	3.0	
MATH 109	FUND OF MATHEMATICS	3.0	
SOC 102	ANTHROPOLOGY	3.0	
	-----FALL 1995-----		
BIOL 341	GENETICS	3.0	
MATH 110	GENERAL STATISTICS I	3.0	
PHYS 118	SOLAR ENERGY	3.0	
PSY 100	GENERAL PSYCHOLOGY	3.0	
THTR 102	ACTING	3.0	
	-----SPRING 1996-----		
BIOL 330	MICROBIOLOGY	4.0	
ENGL 103	ENGLISH COMPOSITION	3.0	
HIST 113	20 CENT WRLD-SNCE 1914	3.0	
PHIL 110	DIMENSIONS OF MAN	3.0	
PHYS 121	ASTRO I:SKY&SOLAR SYST	3.0	
	-----SPRING 1997-----		
BIOL 220	FIELD BOTANY	3.0	
BIOL 425	HERPETOLOGY	3.0	
BIOL 453	INSECT PHYSIOLOGY	3.0	
CHEM 373	ENVIR QUALITY: CHEM	4.0	
FIT 116	AQUA AEROBICS	1.0	
POLS 211	GE1,2:AMERICAN GOVERNM	3.0	
	-----FALL 1997-----		
BIOL 321	PLANT PATHOLOGY	3.0	
BIOL 422	PLANT PHYSIOLOGY	3.0	
BIOL 440	GENL AQUATIC ECOLOGY	3.0	
CHEM 121	GE1:GENERL CHEMISTRY I	3.0	
CHEM 123	GE1:GENERL CHEM I LAB	1.0	
MUS 100	GE1:INTRODUCTION MUSIC	3.0	
	-----SPRING 1998-----		
BIOL 200	GENERAL ECOLOGY	3.0	
BIOL 322	PLANT RES ENVIR STRESS	3.0	
BIOL 413	PREDATOR-PREY RELATION	3.0	
BIOL 497	ENVIRNMNTL STDY SEM	1.0	
CHEM 124	GE2:GEN CHEMISTRY II	3.0	
CHEM 126	GE2:GEN CHEM II LAB	1.0	
FIT 121	FENCING I	1.0	
FIT 124	TRAMPOLINE-SPACEBALL	1.0	

-----FALL 1998-----

BIOL 484	ENVIRNMNTL STDY INTERN	12.0	[redacted]

**********END OF TRANSCRIPT**********

SEMESTER TOTALS

	CREDITS TAKEN	CREDITS PASS	QUALITY PTS	QUALITY AVG
19949	16.0	16.0	42.0	[redacted]
19951	10.0	11.0	26.0	
19959	12.0	12.0	36.0	
19961	16.0	16.0	44.0	
19971	16.0	16.0	48.0	
19979	16.0	16.0	42.0	
19981	14.0	16.0	38.0	
19989	12.0	12.0	48.0	

-----CUMULATIVE TOTALS-----

CREDITS TAKEN	CREDITS PASSED	QUALITY PTS	QUALITY AVG
112.00	115.00	324.0	[redacted]

----------SPECIAL NOTATIONS----------

13 CR-UNIVERSITY OF MONTANA, MONTANA

TRANSFER CREDITS:	13.0
ESU CREDITS EARNED:	115.0
TOTAL CREDITS EARNED:	128.0

PAGE 1

REJECT DOCUMENT IF SIGNATURE BELOW IS DISTORTED

ISSUE DATE: 09/07/2005
ISSUED TO:

OFFICE OF STUDENT & ACADEMIC SERVICES
COLLEGE OF FOREST RESOURCES
BOX 352100
UNIVERSITY OF WASHINGTON
SEATTLE, WA
98195-2100

Georgia K. Prell
Director of Enrollment Services/Registrar

Curriculum vitae - [redacted]

Vacancy Information

Announcement Number:
Position:
Duty Location:

Personal Information

[redacted]

Highest Grades: GS-0462-07, 05/04-Present
GS-0404-07, 05/00-10/00

Contact Information

[redacted]

Education

- B.S. Environmental Sciences, 1998
  East Stroudsburg University of Pennsylvania - East Stroudsburg, PA 18301
- High School Diploma, 1994
  [redacted]

Awards

- U.S.D.A., Certificate of Merit - for assistance and support to the Station Safety Committee.
- U.S.D.A., Certificate of Appreciation - for directing very efficient and accurate field work.
- D.O.I., Certificate of Appreciation - for recognition of enthusiasm, dedication and support of the fire management program.
- Received outstanding results on all performance reviews.

Qualifications and Training

- Current Fire Qualifications: FFT2 - Arduous, FFT1 (T), FEMO (T), B-Falling and Bucking.
- Fire Related Training: RX80, RX310, S130, S190, S212, S215, S244, S245, S290, S390, I100.
- Other Relevant Training: Safety for Supervisors, GPS for Natural Resource Managers, Defensive Driving, Hazardous Material Awareness, Firearm Safety and Animal Behavior, Administrative Essentials, CPR and First Aid, Mountaineering Oriented First Aid.

1

Curriculum vitae [redacted]

Work Experience

Lead Forestry Technician (Fuels Research) *08/03-Present*
GS-0462-07, 05/04-Present *Full Time-Term*
GS-0462-06, 08/03-05/04
U.S. Forest Service, Pacific Wildland Fire Research Lab, Seattle WA
Duties:

- Provide technical assistance to research personnel by accomplishing data collection and analysis to support ongoing studies of the Fire and Environmental Research Applications Fuels Team.
- Assist professional foresters in designing, developing, adapting, and implementing study plans and methodology to carry out fuel consumption and fuel loading research projects including: Litter and Duff Bulk Densities in the Southeastern U.S., Fuel Consumption and Flammability Thresholds In Shrub Dominated Ecosystems, and Photo Series for Major Natural Fuel Types of the U.S.
- Lead and manage a crew in the collection of fuels data, fire behavior data and vegetation analysis. Provide on the job training for field and laboratory data measurements. Responsible for quality control of data collection and data management.
- Responsible for organizing practical and administrative aspects of field sampling.
- Perform laboratory equipment set up and calibration for making scientific measurements and observations of sample material gathered from experimental field plots.
- Conduct initial statistical analysis and technical report writing of fuels data leading to initial conclusions and inferences.
- Participate in prescribed burning activities.
- Establish and maintain a working relationship with contacts outside the duty station. Coordinate and schedule work efforts in collaboration with other fire management organizations.
- Responsible for oversight of the field crew safety program and member of the stations safety committee.

Supervisor: You may contact [redacted]

Curriculum vitae - [redacted]

Work Experience Continued

Biological Technician (Fire Effects Monitor) *05/03-08/03 and 05/02-10/02*
GS-0404-05 *Full Time, Temporary*
Teton Interagency Fire, Grand Teton NP and Bridger Teton NF, Jackson WY
Duties:

- Support the agencies fire program. Responsible for collecting a variety of fire effects FMH monitoring data including; live and dead fuel loading, species distribution, class, size, conditions, associated species, percent cover, and cover type. Establish and monitor short and long term fire effects monitoring plots in forest, shrub, and grass fuel types. Validate and manage fire effects data.
- Participate in fire management program operations including technical and analytical work involving wildland fire suppression (~500 hrs.), fire use (~20 hrs.), and prescribed fire (~250 hrs.).
- Observe and report fuel moisture, fuel loading, fire behavior and weather data relating to spread rate, flame length and other prescription elements.
- Perform field inspections before, during, and after prescribed burns to determine if defined resource objectives have been met. Responsible for creating multi-level burn severity maps using GPS, GIS, and aerial photographs.
- Provide information to interested parties regarding the relationship of fire and local ecosystems as well as bureau policy, activity, and procedures on the use of prescribed fire. Support, understand, and relate projects to the broader fire program.
- Participate in the implementation of other projects as needed which included: performing field measurements for the validation of burn severity maps from space-born remotely sensed imagery; assisting in developing burn severity sampling methodology and a burn severity database; conducting data collection on aspen response to prescribed fire, mechanical treatments, and undulate herbivory.

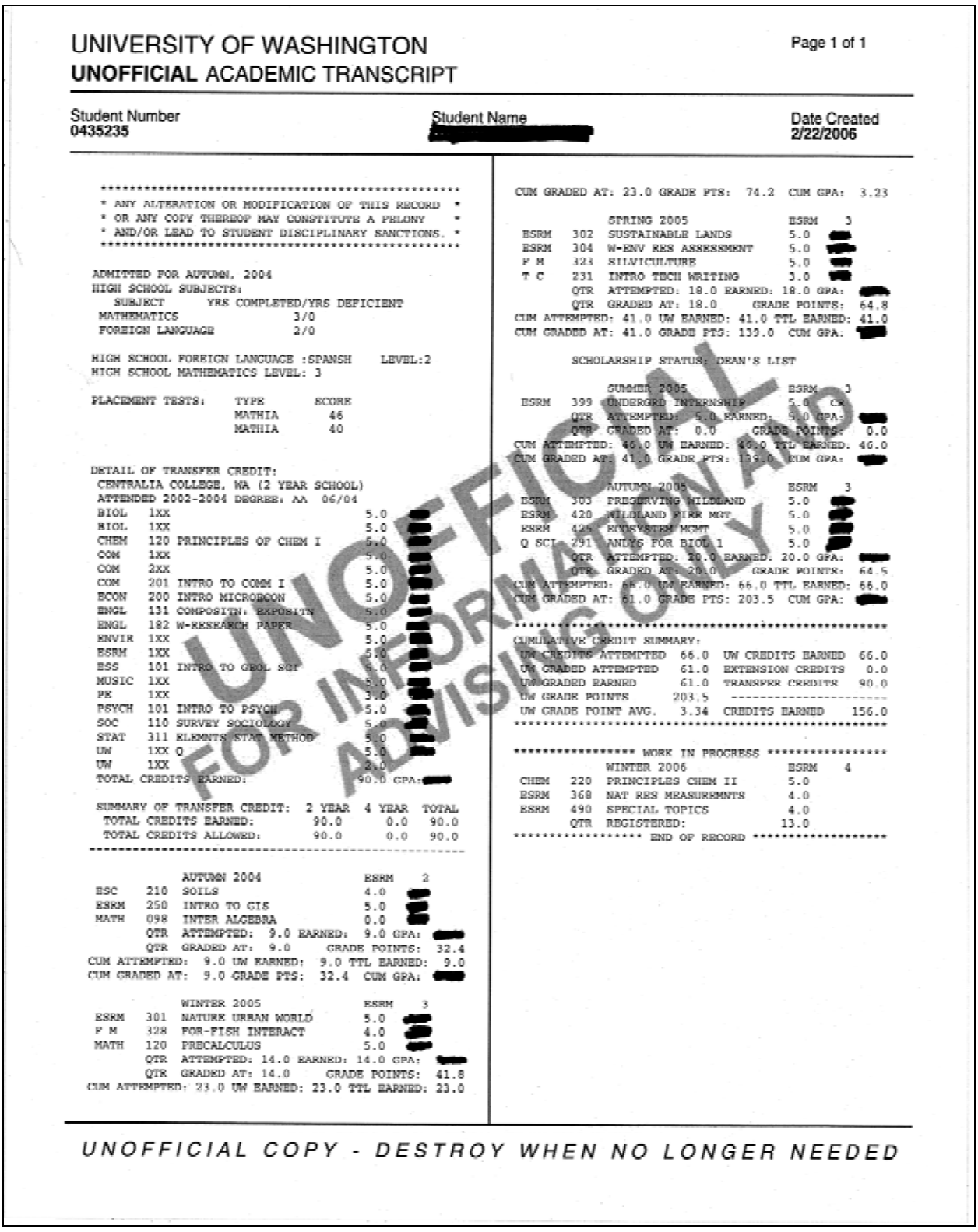
Supervisor: You may contact [redacted]

Field Technician (Habitat Restoration) *02/02-05/02 and 11/02-05/03*
$14.00/hour *Full Time-Seasonal*
Restoration Logistics, Seattle WA
Duties:

- Carry out habitat restoration and enhancement fieldwork on projects for local state, county, and city agencies.
- Maintain working relationships with clients and partners.

Supervisor: You may contact [redacted]

This student is an example of an undergraduate ESRM major progressing along the Sustainable Forest Management pathway. This student would be a likely candidate for the MFR program, but might fall into Category 2 if certain courses were not fulfilled in later quarters.



UNIVERSITY OF WASHINGTON
UNOFFICIAL ACADEMIC TRANSCRIPT

Page 1 of 1

Student Number
0435235

Student Name
[redacted]

Date Created
2/22/2006

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**************************************************
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* AND/OR LEAD TO STUDENT DISCIPLINARY SANCTIONS. *
**************************************************

ADMITTED FOR AUTUMN, 2004
HIGH SCHOOL SUBJECTS:
   SUBJECT        YRS COMPLETED/YRS DEFICIENT
 MATHEMATICS                3/0
 FOREIGN LANGUAGE           2/0

HIGH SCHOOL FOREIGN LANGUAGE :SPANSH     LEVEL:2
HIGH SCHOOL MATHEMATICS LEVEL: 3

PLACEMENT TESTS:    TYPE       SCORE
                    MATHIA       46
                    MATHIIA      40


DETAIL OF TRANSFER CREDIT:
 CENTRALIA COLLEGE, WA (2 YEAR SCHOOL)
 ATTENDED 2002-2004 DEGREE: AA  06/04
 BIOL   1XX                          5.0
 BIOL   1XX                          5.0
 CHEM   120 PRINCIPLES OF CHEM I     5.0
 COM    1XX                          5.0
 COM    2XX                          5.0
 COM    201 INTRO TO COMM I          5.0
 ECON   200 INTRO MICROECON          5.0
 ENGL   131 COMPOSITN: EXPOSITN      5.0
 ENGL   182 W-RESEARCH PAPER         5.0
 ENVIR  1XX                          5.0
 ESRM   1XX                          5.0
 ESS    101 INTRO TO GEOL SCI        5.0
 MUSIC  1XX                          5.0
 PE     1XX                          3.0
 PSYCH  101 INTRO TO PSYCH           5.0
 SOC    110 SURVEY SOCIOLOGY         5.0
 STAT   311 ELMNTS STAT METHOD       5.0
 UW     1XX Q                        5.0
 UW     1XX                          2.0
 TOTAL CREDITS EARNED:               90.0 GPA:

 SUMMARY OF TRANSFER CREDIT:  2 YEAR  4 YEAR  TOTAL
  TOTAL CREDITS EARNED:         90.0     0.0   90.0
  TOTAL CREDITS ALLOWED:        90.0     0.0   90.0
--------------------------------------------------

            AUTUMN 2004                 ESRM    2
 ESC    210  SOILS                       4.0
 ESRM   250  INTRO TO GIS                5.0
 MATH   098  INTER ALGEBRA               0.0
        QTR  ATTEMPTED:  9.0 EARNED:  9.0 GPA:
        QTR  GRADED AT:  9.0     GRADE POINTS:  32.4
CUM ATTEMPTED:  9.0 UW EARNED:  9.0 TTL EARNED:  9.0
CUM GRADED AT:  9.0 GRADE PTS:  32.4  CUM GPA:

            WINTER 2005                 ESRM    3
 ESRM   301  NATURE URBAN WORLD         5.0
 F M    328  FOR-FISH INTERACT          4.0
 MATH   120  PRECALCULUS                5.0
        QTR  ATTEMPTED: 14.0 EARNED: 14.0 GPA:
        QTR  GRADED AT: 14.0     GRADE POINTS:  41.8
CUM ATTEMPTED: 23.0 UW EARNED: 23.0 TTL EARNED: 23.0
CUM GRADED AT: 23.0 GRADE PTS:  74.2  CUM GPA:  3.23

            SPRING 2005                 ESRM    3
 ESRM   302  SUSTAINABLE LANDS          5.0
 ESRM   304  W-ENV RES ASSESSMENT       5.0
 F M    323  SILVICULTURE               5.0
 T C    231  INTRO TECH WRITING         3.0
        QTR  ATTEMPTED: 18.0 EARNED: 18.0 GPA:
        QTR  GRADED AT: 18.0     GRADE POINTS:  64.8
CUM ATTEMPTED: 41.0 UW EARNED: 41.0 TTL EARNED: 41.0
CUM GRADED AT: 41.0 GRADE PTS: 139.0  CUM GPA:

        SCHOLARSHIP STATUS: DEAN'S LIST

            SUMMER 2005                 ESRM    3
 ESRM   399  UNDERGRD INTERNSHIP        5.0  CR
        QTR  ATTEMPTED:  5.0 EARNED:  5.0 GPA:
        QTR  GRADED AT:  0.0     GRADE POINTS:   0.0
CUM ATTEMPTED: 46.0 UW EARNED: 46.0 TTL EARNED: 46.0
CUM GRADED AT: 41.0 GRADE PTS: 139.0  CUM GPA:

            AUTUMN 2005                 ESRM    3
 ESRM   303  PRESERVING WILDLAND        5.0
 ESRM   420  WILDLAND FIRE MGT          5.0
 ESRM   425  ECOSYSTEM MGMT             5.0
 Q SCI  291  ANLYS FOR BIOL 1           5.0
        QTR  ATTEMPTED: 20.0 EARNED: 20.0 GPA:
        QTR  GRADED AT: 20.0     GRADE POINTS:  64.5
CUM ATTEMPTED: 66.0 UW EARNED: 66.0 TTL EARNED: 66.0
CUM GRADED AT: 61.0 GRADE PTS: 203.5  CUM GPA:
**************************************************
CUMULATIVE CREDIT SUMMARY:
 UW CREDITS ATTEMPTED   66.0  UW CREDITS EARNED   66.0
 UW GRADED ATTEMPTED    61.0  EXTENSION CREDITS    0.0
 UW GRADED EARNED       61.0  TRANSFER CREDITS    90.0
 UW GRADE POINTS       203.5  ---------------------
 UW GRADE POINT AVG.    3.34  CREDITS EARNED     156.0
**************************************************

**************** WORK IN PROGRESS ****************
            WINTER 2006                 ESRM    4
 CHEM   220  PRINCIPLES CHEM II         5.0
 ESRM   368  NAT RES MEASUREMNTS        4.0
 ESRM   490  SPECIAL TOPICS             4.0
        QTR  REGISTERED:                13.0
**************** END OF RECORD *******************
```


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This student is an example of an undergraduate ESRM major who would not be a candidate for the MFR program (Category 1); he/she is not following the suggested courses of the Sustainable Forest Management pathway and is missing the prerequisites of the graduate program.

UNIVERSITY OF WASHINGTON
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Page 1 of 2

Student Number [redacted]

Student Name [redacted]

Date Created **2/22/2006**

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* AND/OR LEAD TO STUDENT DISCIPLINARY SANCTIONS. *
**************************************************

ADMITTED FOR WINTER, 2004
HIGH SCHOOL GPA: 3.41
HIGH SCHOOL SUBJECTS:
   SUBJECT       YRS COMPLETED/YRS DEFICIENT
 ENGLISH                  3/0
 SCIENCE                  2/0
 SOCIAL SCIENCE           3/0
 FOREIGN LANGUAGE         2/0
 ART                      1/0

HIGH SCHOOL FOREIGN LANGUAGE :JPNESE    LEVEL:2
HIGH SCHOOL MATHEMATICS LEVEL:

SAT SCORES :  VERBAL(R):510 MATH(R):430

UNIVERSITY OF WASHINGTON DEGREES EARNED:
 BACHELOR OF SCIENCE IN FOREST RESOURCES (ENV SCI &
  RES MGMT)
 AUTUMN 2005  (12/16/05)
 UW:123.0 TRANSFER: 74.0 EXTENSION:  0.0  GPA:  3.42

DETAIL OF TRANSFER CREDIT:
 SEATTLE CENTRAL CC, WA (2 YEAR SCHOOL)
 ATTENDED 2002-2003 DEGREE: AA  08/03
 ANTH   100 INTRO TO ANTHRO          5.0
 ASTR   101 ASTRONOMY                5.0
 BIOL   161 GENERAL BIOLOGY          5.0
 COM    1XX                          5.0
 ENGL   182 RESEARCH PAPER           5.0
 ENGL   243 READING POETRY           5.0
 ESC    110                          5.0
 MATH   098 INTER ALGEBRA            5.0
 MUSIC  1XX                          5.0
 UW     1XX                          5.0
 UW     1XX Q                        5.0
 TOTAL CREDITS EARNED:              50.0 GPA: [redacted]

 SHORELINE COMM COLL, WA (2 YEAR SCHOOL)
 ATTENDED 2001-2002
 JAPAN  111 1ST-YR JAPANESE          5.0
 JAPAN  112 1ST-YR JAPANESE          5.0
 JAPAN  113 1ST-YR JAPANESE          5.0
 TOTAL CREDITS EARNED:              15.0 GPA: [redacted]

 THE ART INSTITUTE, WA (2 YEAR SCHOOL)
 ATTENDED 1997-1999
 ENGL   1XX C                        3.0
 PSYCH  1XX                          3.0
 UW     1XX                          3.0
 TOTAL CREDITS EARNED:               9.0 GPA: [redacted]

 SUMMARY OF TRANSFER CREDIT:  2 YEAR  4 YEAR  TOTAL
  TOTAL CREDITS EARNED:         74.0     0.0   74.0
  TOTAL CREDITS ALLOWED:        74.0     0.0   74.0
-------------------------------------------------------

                WINTER 2004                 PREMAJ   2
 CHEM   142  GENERAL CHEMISTRY             5.0 [redacted]
 ENGL   207  INTRO CULTURE STUDY           5.0
 MATH   120  PRECALCULUS                   5.0
        QTR  ATTEMPTED: 15.0 EARNED: 15.0 GPA: [redacted]
        QTR  GRADED AT: 15.0      GRADE POINTS:  38.5
CUM ATTEMPTED: 15.0 UW EARNED: 15.0 TTL EARNED: 15.0
CUM GRADED AT: 15.0 GRADE PTS:  38.5  CUM GPA: [redacted]

                SPRING 2004                 ESRM     2
 CHEM   152  GENERAL CHEMISTRY             5.0 [redacted]
 ESC    110  ENVIRONMENTAL SCI            5.0
 Q SCI  291  ANLYS FOR BIOL 1             5.0
        QTR  ATTEMPTED: 15.0 EARNED: 15.0 GPA: [redacted]
        QTR  GRADED AT: 15.0      GRADE POINTS:  51.5
CUM ATTEMPTED: 30.0 UW EARNED: 30.0 TTL EARNED: 30.0
CUM GRADED AT: 30.0 GRADE PTS:  90.0  CUM GPA: [redacted]

                SUMMER 2004                 ESRM     3
 Q SCI  292  ANLYS FOR BIOL 2             5.0 [redacted]
 Q SCI  381  INTRO PROBABIL&STAT          5.0
 T C    231  W-INTRO TECH WRITING         3.0
        QTR  ATTEMPTED: 13.0 EARNED: 13.0 GPA: [redacted]
        QTR  GRADED AT: 13.0      GRADE POINTS:  41.4
CUM ATTEMPTED: 43.0 UW EARNED: 43.0 TTL EARNED: 43.0
CUM GRADED AT: 43.0 GRADE PTS: 131.4  CUM GPA: [redacted]

                AUTUMN 2004                 ESRM     3
 ESC    210  SOILS                        4.0 [redacted]
 ESC    455  WLF SEMINAR                  1.0
 ESRM   250  INTRO TO GIS                 5.0
 ESRM   304  WR-ENV RES ASSESSMENT        5.0
        QTR  ATTEMPTED: 15.0 EARNED: 15.0 GPA: [redacted]
        QTR  GRADED AT: 14.0      GRADE POINTS:  49.0
CUM ATTEMPTED: 58.0 UW EARNED: 58.0 TTL EARNED: 58.0
CUM GRADED AT: 57.0 GRADE PTS: 180.4  CUM GPA: [redacted]

        SCHOLARSHIP STATUS: DEAN'S LIST

                WINTER 2005                 ESRM     3
 BIOL   162  GENERAL BIOLOGY             5.0 [redacted]
 ESC    350  WILDLIFE BIOL&CONSV          5.0
 ESC    455  WLF SEMINAR                  1.0
 ESRM   301  NATURE URBAN WORLD           5.0
        QTR  ATTEMPTED: 16.0 EARNED: 16.0 GPA: [redacted]
        QTR  GRADED AT: 15.0      GRADE POINTS:  56.5
CUM ATTEMPTED: 74.0 UW EARNED: 74.0 TTL EARNED: 74.0
CUM GRADED AT: 72.0 GRADE PTS: 236.9  CUM GPA: [redacted]

        SCHOLARSHIP STATUS: DEAN'S LIST

                SPRING 2005                 ESRM     4
 ESC    326  WILD HAB SILV                3.0 [redacted]
 ESC    401  SPR COMES TO CASCAD          3.0
 ESRM   302  SUSTAINABLE LANDS           5.0
 ESRM   351  WILD RES TECHNIQUES         8.0
        QTR  ATTEMPTED: 19.0 EARNED: 19.0 GPA: [redacted]
        QTR  GRADED AT: 19.0      GRADE POINTS:  65.1
CUM ATTEMPTED: 93.0 UW EARNED: 93.0 TTL EARNED: 93.0
CUM GRADED AT: 91.0 GRADE PTS: 302.0  CUM GPA: [redacted]
```

UNIVERSITY OF WASHINGTON
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Student Number **0440231**

Student Name [redacted]

Date Created **2/22/2006**

```
            SUMMER 2005                ESRM    4
 ESRM   320 W-MKTG/HR/MGMT/ENVIR       5.0  [redacted]
 ESRM   371 ENVIRON SOCIOLOGY          5.0
 ESRM   472 WETLAND ECOLOGY            5.0
       QTR  ATTEMPTED: 15.0 EARNED: 15.0 GPA: [redacted]
       QTR  GRADED AT: 15.0     GRADE POINTS:  55.5
CUM ATTEMPTED:108.0 UW EARNED:108.0 TTL EARNED:108.0
CUM GRADED AT:106.0 GRADE PTS: 357.5  CUM GPA: [redacted]

       SCHOLARSHIP STATUS: DEAN'S LIST

            AUTUMN 2005                ESRM    4
 BIOL   397 AVIAN SPECIMEN PREP        5.0  [redacted]
 ESRM   303 PRESERVING WILDLAND        5.0
 ESRM   458 MGMT ENDANGERED SPE        5.0
       QTR  ATTEMPTED: 15.0 EARNED: 15.0 GPA: [redacted]
       QTR  GRADED AT: 15.0     GRADE POINTS:  56.5
CUM ATTEMPTED:123.0 UW EARNED:123.0 TTL EARNED:123.0
CUM GRADED AT:121.0 GRADE PTS: 414.0  CUM GPA: [redacted]

       SCHOLARSHIP STATUS: DEAN'S LIST

-------------- DEGREE EARNED 12/16/05 --------------
 BACHELOR OF SCIENCE IN FOREST RESOURCES (ENV SCI &
  RES MGMT)
 UW:123.0 TRANSFER: 74.0 EXTENSION:   0.0  GPA: [redacted]
----------------------------------------------------

****************************************************
CUMULATIVE CREDIT SUMMARY:
 UW CREDITS ATTEMPTED 123.0  UW CREDITS EARNED 123.0
 UW GRADED ATTEMPTED  121.0  EXTENSION CREDITS   0.0
 UW GRADED EARNED     121.0  TRANSFER CREDITS   74.0
 UW GRADE POINTS      414.0  ------------------------
 UW GRADE POINT AVG.    3.42 CREDITS EARNED    197.0
****************************************************
****************** END OF RECORD ******************
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Appendix III-D: Undergraduate and Graduate Exit Survey

Educational Information

Undergraduates

What is your major

If you have a minor, what is it

Graduates

What degree did you earn at the College?

Who is your committee chair/adviser?

What is your program area?

All Students

When did you begin your studies at CFR? (Qtr/Year)

When did you begin your studies at the UW? (Qtr/Year)

When will your degree be awarded? (Qtr/Year)

Are you planning to continue your education?

If yes, what program are you planning to pursue?

Where will you be going to school?

How would you evaluate your educational experience at the College?

What factors contributed to your experience? (briefly explain):

How did you learn about the programs at the College of Forest Resources?

How would you evaluate the Faculty

Administration

Staff

Students

What do you think the College could do to improve service to the students?

What do you think the College could do to improve the overall student experience?

Employment Information

Are you currently looking for employment?

Have you accepted employment?

If yes, is this a permanent position?

Your employer:

Your job title:

Job Location:

What is your starting salary? (optional)

What is this position in:

In what ways did your education help you get this position?

Does this position relate to your degree?

Did you need a degree for the position?

Did the College help you find employment?

If yes, in what way did the College help you?

In what ways do you think the College could have helped you more in your job search?

Other comments

Do you have any other comments you would like to share?

Appendix III-E: Employer Evaluation

GREEN DIAMOND RESOURCE COMPANY

Northwest Timberlands Division

215 North Third St
PO Box 9001

Shelton, Washington
98584-0931

T (360) 426-3381
greendiamond.com

September 6, 2005

Gordon Bradley
University of Washington
College of Forest Resources
Box 352100
Seattle, WA 98195-2100

Re: Green Diamond Resource Company – UW College Forest Resources 2005 Summer Internship Program

Dear Gordon:

As promised, you will find attached the evaluations that were done by individuals at Green Diamond Resource Co. (GDRCo) as the four students moved through the intern program. They are unedited by me and reflect the feelings of our staff with regard to the following questions:

1. Did the student(s) grasp the subject matter, understanding the field procedures, data use, technical theory, etc.?
2. Did the students show a "curiosity" about what they were learning or did they just passively participate?
3. If there were deliverables involved (data collection sheets, reports, maps, etc.) what was the quality of the deliverable?
4. Any recommendations relative to their educational background to make them better prepared participants in the internship program?
5. Any other observations or experiences?

From my own observations, the students were great to work with; showed strong work ethics; and respected the nature of their housing and use of GDRCo's facilities. They were engaged in the learning opportunity presented to them and represented the University well in this regard.

Some areas of concern to GDRCo's staff were the lack of exposure to photogrammetry, use of forestry equipment (e.g., compass, clinometer, etc.) and basic forest mensuration. There was some discussion about these topics with you after the student's presentation and possibly we could continue our discussion in context of the internship's future. In following up with GDRCo's staff relative to carrying the internship forward, all were enthusiastic but with a request to have the participant's exposed to the areas mentioned above in their curriculum. By doing this, our time would be spent more on operational application and less on basic theory.

If nothing else Gordon, I think we sparked the student's understanding of operational forestry and energized their desire to pursue their education further in this regard. Please let me know the dates of the student's presentations. Thanks for all of your help and please extend my appreciation to others at the CFR for taking the risk to support the internship program.

Sincerely,

E. Keith Simmons
Manager Harvest Planning & Engineering

XC: Maureen Frisch
Jim Thiemens

UW Intern Progress Report
[redacted]
Field Biologist

20-24 June 2005
Temperature Monitor Deployment
Students worked in pairs to deploy 30 temperature dataloggers (15 per pair) for GDRCo's 2005 HCP temperature monitoring. After 1 day of orientation to the project, each group was given maps and old data sheets (description and sketches from previous deployments) for the monitors. The students used the maps and field descriptions/sketches to locate monitoring sites and successfully deployed 28 of the 30 monitors (one group was unable to locate the access for 2 of the monitors – in a bit of a confusing spot). The students demonstrated an understanding of the project they were working on and both groups had questions/observations about things they had seen in the field. The field notes that were returned by the students were legible and all the fields are filled out. Students worked in rugged terrain (the majority of the monitoring sites they visited are located in the foothills of the Olympic Mountains) and had to navigate (road and off trail) to find the monitoring locations.

29-31 August 2005
Temperature Monitor Recovery
Students paired up again for the recovery of the temperature monitors. Each pair recovered the monitors that they deployed. All temperature monitors were successfully recovered. The students were more adept at navigating our tree farm and did a better job of planning to make the recovery more efficient. Part of the increased efficiency was due to better use of the field notes from previous years' monitoring. A couple of monitors were placed in locations that went dry. Many of the monitoring location are at the upper end of the channel network and flow conditions get pretty low at the end of the monitoring period. Experience is the best teacher about where to place some of these monitors.

28 June 2005
Harvest Unit Environmental Review
[redacted] accompanied me on two harvest unit environmental reviews. As part of one review (EM176), I explained GDRCo's channel classification system, measuring points for HCP buffers, identifying perennial versus seasonal channels and preferred locations for discontinuous buffers on small seasonal channels. On the other review (EM180), GDRCo's wetland classification system and supplemental wildlife tree conservation program were explained and used. The students were engaged during the reviews and had good questions that led to more in depth discussions about the requirements of our HCP. The students wrote up a report of the environmental review for the second harvest unit.

Assessment of UW Interns [redacted]

Subject: Harvest Unit Layout (flagging of stream buffers, property lines and leave tree areas)
Equipment used: Compass, Range Finder, Clinometer and Aerial Photos

[redacted] showed that they were very interested in every part of the layout process and asked great questions. They took their newly learned skills and applied them very well to their project.

Their project was to develop a harvest/land management plan for a "Demonstration Forest" adjacent to the Simpson Employee's Mason Lake recreation area.

The project deliverables were:

- Environmental review summary
- Identification and flagging/tagging of harvest boundaries
- Traverse Map – showing their management plan
- Cruise of areas planned for initial harvest
- Completed Forest Practice Application
- Demonstration Forest prescriptions

The deliverables were all completed and were of high quality work. The map subdivision of the area and prescriptions were especially well done considering that they were shown/given a project area and told to develop a plan for a "Demonstration Forest" with the above list of deliverables.

I would suggest that future interns come to the program with some knowledge of how to use the basic tools that we use on a daily basis i.e. compass, clinometer and aerial photos.

It was a pleasure working this summer with [redacted]

[redacted]

Summer Intern Evaluation

Subject: Commercial Thinning
Interns: [redacted]

GDRCo Employee: [redacted] Contract Logging Administrator

I had the pleasure of working with [redacted] on the Green Diamond thinning program. They both had experience laying out PCT units so it was a natural progression to extend it to laying out commercial thinning units. The assignment was to lay out the WC-1-2-3 2006 CTL unit. They needed an understanding of water types, machine capabilities, quality of roads, laws, rules, regulations, and log marketing. [redacted] and I spent a good half day with them in the office and out in the field. They had a good understanding of the assignment and completed it in a timely and professional manner.
The other project I assigned was to compare variable plot to fixed plot on determining trees/acre. I had them measure to the nearest .10" at DBH. As predicted they came up with the same answer. They proved that careful and precise measurements were necessary to get the correct trees per acre when using a variable plot. The one thing they will need in my opinion to further there career is some surveying experience. Good luck to the both of them and I found it enjoyable to work with them.

Write up for UW students; submit by [redacted] GDRCo Field Biologist

Below is a general description of the students participation followed by a brief description of my observations of them as individual learners.

The UW students assisted me in conducting toad surveys, stream dwelling amphibian surveys, and fish surveys. [redacted] paired up for the week of 7/18-21 while [redacted] paired up for the week of 7/25-28.

1. Did the student(s) grasp the subject matter, understanding the field procedures, data use, technical theory, etc.?

Yes, the students asked questions relating to field techniques and also about a variety of forestry operations. While making connections with prior experiences, they engaged in discussion about biology and ecology and their relationship to timber management. Each made sure to understand the objectives for each survey and expressed interest in what use the data would serve.

2. Did the students show a "curiosity" about what they were learning or did they passively participate?

The students were enthusiastic and curious and were active participants in each of our field surveys.

3. If there were deliverables involved (data collection sheets, reports, maps, etc.) what was the quality of the deliverable.

N/A, the students assisted me in collecting data. Although I did show them how to address each question on each data sheet, students were not responsible for the integrity of the data sheet.

4. Any recommendations relative to their educational background to make them better prepared participants in the internship program?

The students had very little experience with fish or amphibians and were unfamiliar with their basic biology; however, each student expressed curiosity

and interest towards the topic and asked questions to further their understanding.

5. Any other observations or experiences?
Each student conducted their work mindfully and with care; paying attention to the details and asking questions if they needed further clarification.

[redacted] always volunteered to carry equipment and he remained upbeat even when tired at the end of the day. To further his understanding he asked to borrow a copy of the HCP.

[redacted] was a curious and hard worker. He was interested in reading and discussing many aspects of biology. In particular he read/thumbed through all the books of related topics that I had stored in the car.

[redacted] was an enthusiastic participant during all the surveys.

[redacted] took pictures of almost every new animal species we encountered and of many natural features he discovered while on our surveys.

Green Diamond Resource Company
Summer Internship Program

During the week of June 30th to July 8th our Road/Logging Engineer, [redacted] and myself worked with students [redacted] on unit traversing and road layout. We worked on a 65 acre harvest unit located on the west end of the tree farm. The students were tasked with traversing the unit with hand compass and a 300' surveyor's tape to generate an accurate map of the area. They grasped the subject matter and picked up the field procedures fairly quickly and were able to complete their traverse in two days with an acceptable error of closure of 1:124. From this map they were to lay out a preliminary road route in the field, traverse the route using compass and pacing, and plot it on the traverse map manually. This was also completed in a timely manner however, with limited knowledge of logging systems and little experience in road design I think they had a tougher time grasping the technical theory behind road location in the short amount of time we had to work with.

The students did show a curiosity about what they were learning and they actively participated in their assigned tasks. They took a short written quiz over material that had been covered and also completed a small voluntary homework assignment where they were asked to put a paper road plan together on a 1": 400' topography map for one of the last remaining high country road less areas of our tree farm. The students provided all of the deliverables that were assigned to them: traverse map, road layout and route plotting, road plan homework exercise, and the short quiz.

[redacted] showed a willingness to learn accomplishing their deliverables in a timely manner and exhibited some extra effort on voluntary assignments. However, if they were to pursue a career in forestry/ forest engineering they would need some more forestry specific courses to fill their background. They lacked the basic skills needed to perform this job (e.g.): Forest menstruation/ use of a hand compass/declination; basic land survey skills like pacing, chaining, following a bearing; air photo interpretation to locate yourself in the field; and basic legal descriptions. I realize this is not their area of study but these skills are vital to compete for employment opportunities in the industry and can be acquired at most two year forestry tech. programs.

After some short basic training and brief field discussions the students adapted quickly to some new skills in a new environment and were able to complete their field work. They have been exposed to a commercial working forest and it seems to have peaked their interest. This internship is a great opportunity to get some real world experience in the industry and I hope that [redacted] will be able to apply what they have learned to their future career choices.

[redacted]
Layout Forester, Green Diamond

Forest Inventory: June 29 & June 30

Students: [redacted]

Subject Matter:

A pre-harvest cruise was initiated using Variable Radius Plot cruising as the sample method. Much discussion about how VRP sampling works inclusive of strengths and weaknesses. Also discussed other sampling methods for comparison. Students had to use compass and learned the skill of pacing between plots. A laser range finder, Topcon optical range finder, Spencer tape, increment borer and Relaskop was used to take various tree measurements inclusive of: DBH, Form Factor, Bole Height to a Bole DOB, Total Height and Age at DBH for site determination. Discussed desired trees for site measurement and why we take site. Grading trees from the perspective of GDRCo.'s customers was employed along with defect recognition. Various scribner and cubic scaling rules along with the associated Bureau Scaling measurements were discussed pointing out their relative differences and how it would impact volumes. Students were made aware of various taper functions available for determining bole diameters and bole heights of cruised trees. Cruise accuracy discussed at various levels: total volume, volume by species, and volume by grade and volume by log size. Since poles were cruised, we made a trip to a peeling pole yard. Students had some hands on practice in taking pole measurements to determine pole size and type. Peeling and grading process was observed. Student also attended a weekly morning log allocation meeting to see how pre-harvest cruises are used.

Student Participation:

Overall the students were exposed to a large amount of information in a short period of time. They asked very good questions and picked up the key points of the project.

Deliverables:

Cruise data collected was captured within a handheld computer and downloaded at end of day 2. Results were observed and discussed.

Education Recommendations:

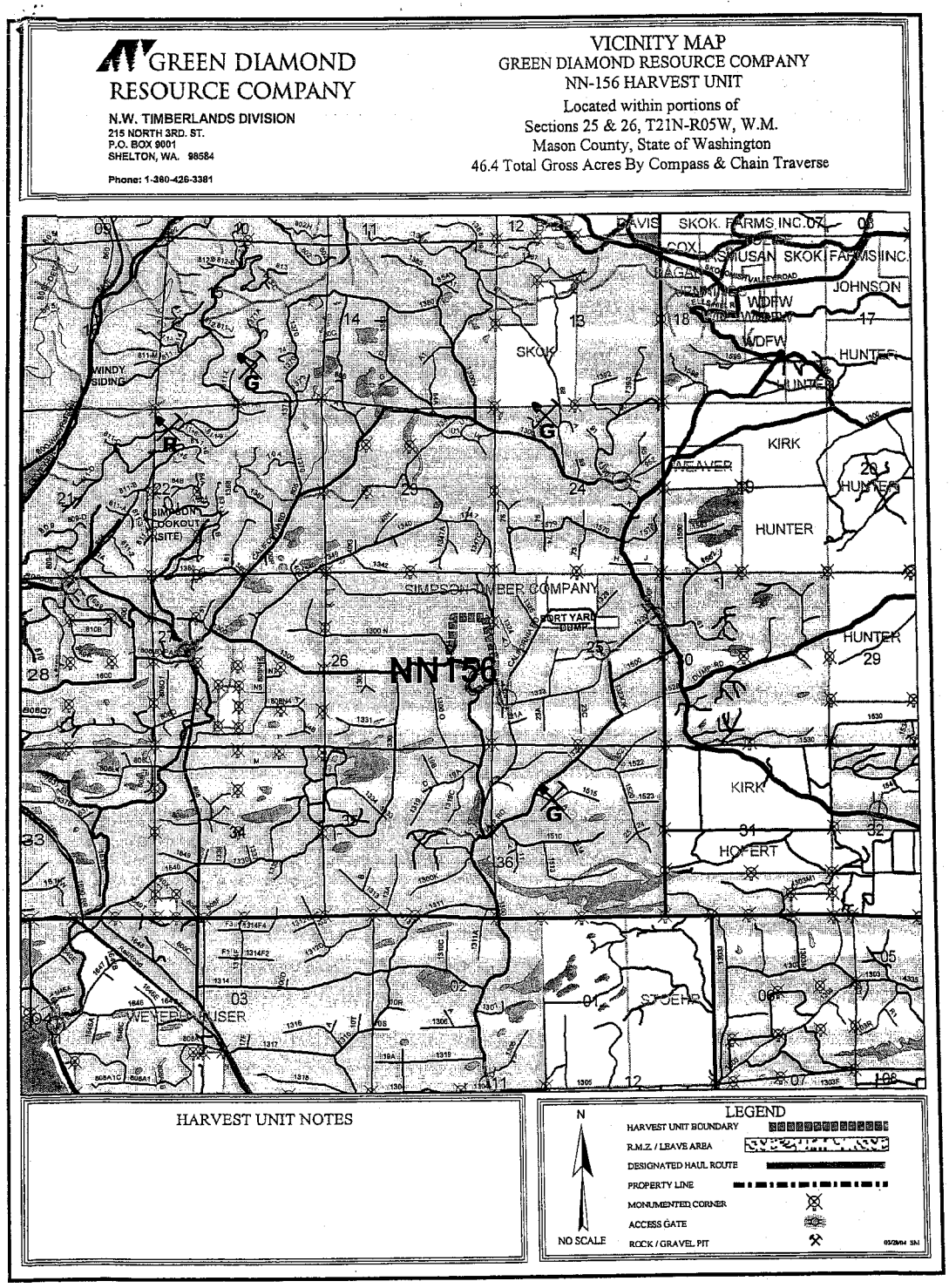
Students had none to very little experience per subject matter and skills needed to accomplish the task. Forest Inventory covers a broad range of applications in today's world. It is just not about buying or marketing timber anymore. Inventory is used operationally throughout timber companies for numerous applications: biological, woody debris, planting surveys, stand management, pre-harvest/sale work, long term inventory and so forth. Would recommend that all CFR students regardless of their discipline be required to take an inventory class inclusive of a field lab to apply classroom instruction, learn to take various measurements, apply various sampling methods and learn how to use tools applicable to inventory.

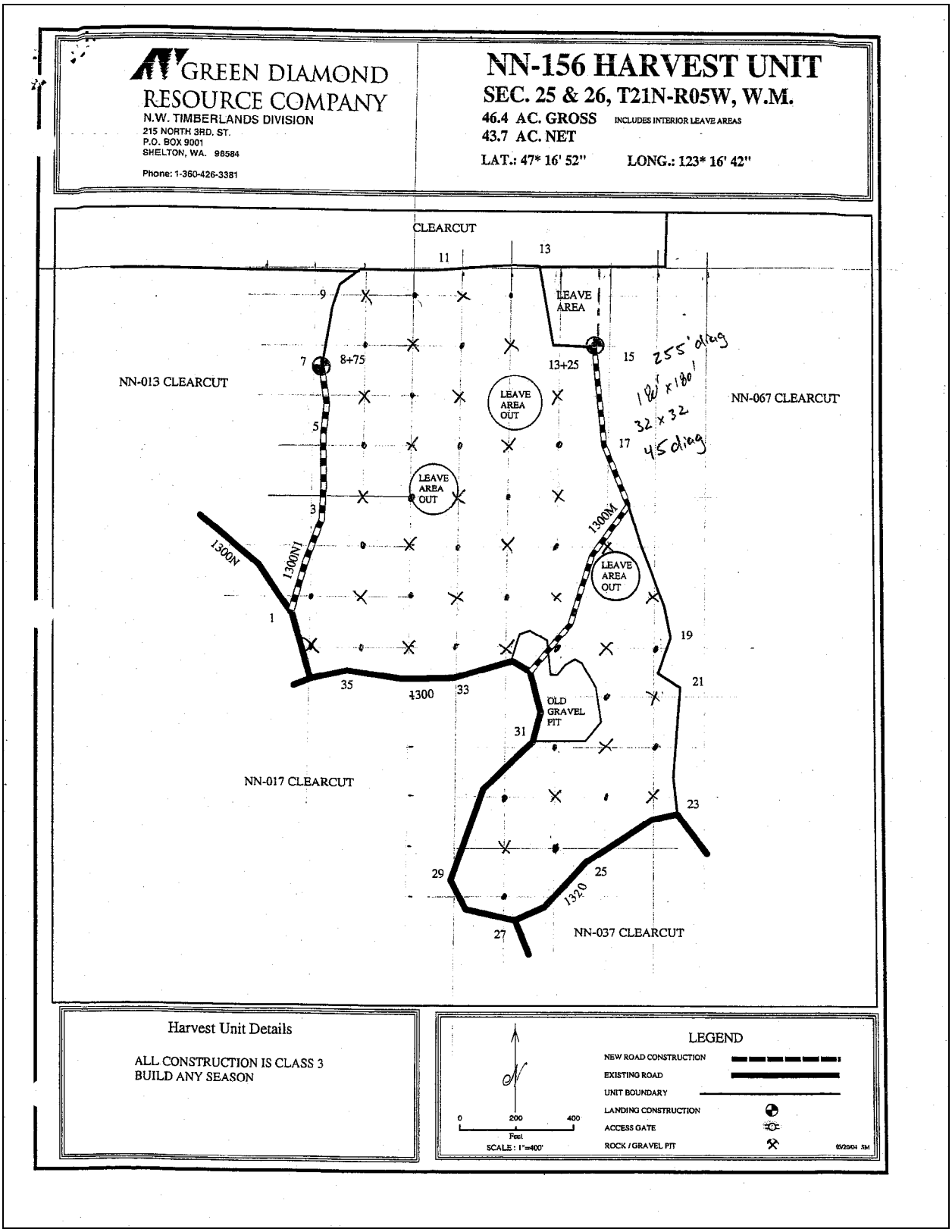
Having graduated from CFR in 1981 I was disappointed in the general lack of field skills in the students curriculum to date. Critical skills related to forest management, inventory and engineering were taught and applied in the field via a quarter at Pack Forest. These skills were then applied through the remainder of our education. These skills are important/critical for a forest management degree and a career in forest management.

Other:

What the students lacked in course preparation was offset by a demonstrated desire to learn.

[redacted] Cruising Supervisor


GREEN DIAMOND RESOURCE COMPANY
N.W. TIMBERLANDS DIVISION
215 NORTH 3RD. ST.
P.O. BOX 9001
SHELTON, WA. 98584
Phone: 1-360-426-3381
VICINITY MAP
GREEN DIAMOND RESOURCE COMPANY
NN-156 HARVEST UNIT
Located within portions of
Sections 25 & 26, T21N-R05W, W.M.
Mason County, State of Washington
46.4 Total Gross Acres By Compass & Chain Traverse
NN156
SIMPSON TIMBER COMPANY
SKOK. FARMS INC.
SKOK
HUNTER
KIRK
HOPERT
WDFW
JOHNSON
WEAVER
WINDY SIDING
SIMPSON LOOKOUT (SITE)
HARVEST UNIT NOTES
LEGEND
HARVEST UNIT BOUNDARY
R.M.Z. / LEAVE AREA
DESIGNATED HAUL ROUTE
PROPERTY LINE
MONUMENTED CORNER
ACCESS GATE
ROCK / GRAVEL PIT
N
NO SCALE


GREEN DIAMOND RESOURCE COMPANY
N.W. TIMBERLANDS DIVISION
215 NORTH 3RD. ST.
P.O. BOX 9001
SHELTON, WA. 98584
Phone: 1-360-426-3381
NN-156 HARVEST UNIT
SEC. 25 & 26, T21N-R05W, W.M.
46.4 AC. GROSS INCLUDES INTERIOR LEAVE AREAS
43.7 AC. NET
LAT.: 47* 16' 52" LONG.: 123* 16' 42"
CLEARCUT
NN-013 CLEARCUT
NN-067 CLEARCUT
NN-017 CLEARCUT
NN-037 CLEARCUT
LEAVE AREA
LEAVE AREA OUT
OLD GRAVEL PIT
1300N
1300N1
1300M
1300
1320
8+75
13+25
255' diag
180' x 180'
32 x 32
45 diag
Harvest Unit Details
ALL CONSTRUCTION IS CLASS 3
BUILD ANY SEASON
LEGEND
NEW ROAD CONSTRUCTION
EXISTING ROAD
UNIT BOUNDARY
LANDING CONSTRUCTION
ACCESS GATE
ROCK / GRAVEL PIT
0 200 400
Feet
SCALE : 1"=400'

Evaluation of UW Interns

Subject: Pre-Commercial Thinning
Instructor: [redacted]
Interns Names: [redacted]

Scope of the Project

The interns were asked to perform pre-commercial thinning pre-audits on a number of potential candidates. With given instruction, they were to determine weather these units would make good candidates for a PCT or some other prescription. Most of the units were moved on to pre-commercial status where the contract cutting was hired and monitored during the process by the interns. Post-thinning audits were then performed using transect and grid type plotting systems to compare the accuracy of both.

1. Both students seemed to grasp the PCT concept almost immediately. It appeared their prior exposure to pre-commercial thinning was somewhat limited if non-existent. With minor adjustments along the way, they became very accomplished with the pre, and post-audit segment of the project. After seeing the project full circle, it was very apparent that both interns understood the importance of using pre-commercial thinning as a viable tool.

2. They showed eagerness to learn and further their field experience at all times. I could tell by the questions that were asked, they were both engaged in the subject matter.

3. The fieldwork was accurate and on time. The changes that needed to be made were done immediately and accurately.

4. Keep preaching theory in the classroom, but also find a way to continue with as much field experience as possible.

5. It was rewarding to share some of the things we do in the forest industry with students that have an interest in the field like we do. It was a pleasure working with these gentlemen and I hope they were able to take something with them in furthering their educational experience. GO DAWGS!!!!!!!!!!

Evaluation of U. of W. Interns

Subject: Tree Improvement
Supervisor: [redacted]

Scope of the project:

Each set of students spent one week with me discussion our tree improvement program and pinning progeny sites. Pinning involved placing metal ID tags on wire pins and placing the pins in the ground next to seedlings with the same ID. Each crew had 2 progeny sites to complete with approximately 2,400 tags to place at each site.

[redacted]

1. When talking about tree improvement, they did not ask very many questions. They seemed to understand the concept but did not seek additional information or ask for clarification. They grasped the concept of pinning fairly quickly but asked very few questions as to the relevance of what they were asked to do. They finished pinning both of their progeny sites.

2. They asked very few questions.

3. Pinning of progeny sites was done accurately and worked at a good pace and without much supervision. They accurately identified discrepancies.

[redacted]

1. When talking about tree improvement, [redacted] asked several questions showing interest and clarification. [redacted] like the others, did not. [redacted] grasped the concept of pinning fairly quickly and asked questions related to progeny sites and how they played a role in tree improvement. He picked up the concept very quickly and adapted his own methods which were acceptable to me. Jason appeared to have trouble grasping the pinning concept. After a little more work with him, he seemed to grasp the concept. They did not finish pinning one of the progeny sites.

   I worked with [redacted] on their demonstration forest project and gave recommendations from a managed forest perspective. [redacted] appears to have taken the lead and he and I have discussed the project on several occasions.

2. [redacted] asked more questions than any of the others and showed more interest in forestry issues.

3. Pinning of progeny sites was done accurately but worked slower than the other crew. They did not identify any discrepancies.

General:

4. They definitely need more course work in all aspects of silviculture and field time to put concepts in practice. I am disappointed to see Pack Forest dropped as a requirement for graduation. This is where they gained practical experience. The U of W needs to get SAF certification re-established.

5. Students are being cheated in their educational experience with a lack of forestry related course work. Students are generally sharp enough but lack the educational tools necessary to step in without a lot of initial hand holding. It is not fair to the students and companies like ours that have to devote so much time to train students in basic forestry. When they graduate, students will be at a competitive disadvantage with graduates from forestry related schools like OSU.

Standard IV: Faculty

At the start of the current academic year, 45 regular teaching and research faculty, 14 adjunct faculty associated with other departments on campus, and 64 affiliated faculty from various government and private organizations are part of the College faculty. As shown in Document C-1, of the regular teaching and research faculty, 33 are full professors, 7 are associate professors, 2 are research professors, and 3 are research associate professors.

Document C-1 lists all faculty in the College, with academic rank, field of expertise, and educational and professional background. Document C-2 lists affiliated faculty members who occasionally teach courses required in the background courses offered in the ESRM program. In addition to those faculty listed in Documents C-1 and C-2, the College regularly recruits teaching expertise (either as lead instructor or guest lecturer) from the numerous adjunct and affiliated faculty members, shown in Table 1. Document D lists all faculty members who regularly teach courses offered by the College; not documented are one-time teaching events from staff or faculty outside of the College, or courses offered jointly with other departments with the lead instructor not part of the College.

Table 1. Affiliate and Adjunct Faculty 2005-2006

Name	Title, Location
ACKER, STEVEN	AFFILIATE ASSOCIATE PROFESSOR, OLYMPIC NATIONAL PARK
AMMIRATI, JOSEPH	ADJUNCT PROFESSOR, BIOLOGY
ANTONELLI, ARTHUR	AFFILIATE PROFESSOR, WSU, PUYALLUP
ANTOS, JOSEPH	AFFILIATE ASSOCIATE PROFESSOR, UNIV OF VICTORIA
AUBRY, KEITH	AFFILIATE ASSOCIATE PROFESSOR, USFS PNW LAB, OLYMPIA
BARBOUR, JAMIE	AFFILIATE ASSOCIATE PROFESSOR, USFS PNW LAB, PORTLAND
BIGLEY, RICHARD	AFFILIATE ASSISTANT PROFESSOR, WA DNR, OLYMPIA
BILBY, ROBERT	AFFILIATE ASSOCIATE PROFESSOR, WEYCO, WTC 1A5
BISSON, PETER	AFFILIATE PROFESSOR, USFS PNW LAB, OLYMPIA
BOOTH, DEREK	ADJUNCT RESEARCH PROFESSOR, CIVIL/ENVIRONMENTL ENGR
BRAATNE, JEFFREY	AFFILIATE ASSISTANT PROFESSOR, UNIV OF IDAHO
CAREY, ANDREW	AFFILIATE PROFESSOR, USFS PNW LAB, OLYMPIA
CARSON, WARD	AFFILIATE PROFESSOR, BLOEDEL 292
CHALKER-SCOTT, LINDA	AFFILIATE ASSOCIATE PROFESSOR, WSU, PUYALLUP
CLARK, ROGER	AFFILIATE PROFESSOR, USFS PWFS LAB, SEATTLE
COHEN, MICHAEL	AFFILIATE ASSISTANT PROFESSOR,
CONQUEST, LOVEDAY	ADJUNCT PROFESSOR, FISHERIES
CUNDY, TERRANCE	AFFILIATE PROFESSOR, POTLATCH CORP, IDAHO
CURTIS, ROBERT	AFFILIATE PROFESSOR, USFS PNW LAB, OLYMPIA
DEBELL, DEAN	AFFILIATE PROFESSOR, USFS PNW LAB, OLYMPIA
DUNWIDDIE, PETER	AFFILIATE PROFESSOR, THE NATURE CONSERVANCY
FARNUM, PETER	AFFILIATE PROFESSOR, WEYCO
FIMBEL, ROBERT	AFFILIATE ASSISTANT PROFESSOR, WA PARKS AND RECREATION
FULLER, WILLIAM	AFFILIATE ASSOCIATE PROFESSOR, WEYCO, TECH CENTER
GANTER, MARK	ADJUNCT PROFESSOR, MECH ENGINEERING
GAOLACH, BRADLEY	AFFILIATE ASSISTANT PROFESSOR, WSU EXTENSION, RENTON
GAYALDO, PERRY	AFFILIATE ASSISTANT PROFESSOR, NOAA, SILVER SPRING, MD
GLAWE, DEAN	AFFILIATE PROFESSOR, WSU, PUYALLUP

GOLD, WARREN	ADJUNCT ASSOCIATE PROFESSOR, UW BOTHELL
GRUE, CHRISTIAN	ADJUNCT ASSOCIATE PROFESSOR, FISHERIES
HARRINGTON, CONNIE	AFFILIATE ASSOCIATE PROFESSOR, USFS PNW LAB, OLYMPIA
HAYNES, RICHARD	AFFILIATE PROFESSOR, USFS PNW LAB, PORTLAND
HENRY, CHARLES	ADJUNCT SENIOR LECTURER, UW BOTHELL
HESSBURG, PAUL	AFFILIATE PROFESSOR, USFS PNW LAB, WENATCHEE
HICKS, LORIN	AFFILIATE ASSOCIATE PROFESSOR, PLUM CREEK TIMBER
HORNER, RICHARD	ADJUNCT RESEARCH ASSOC PROF, LANDSCAPE ARCH
HUMMEL, RITA	AFFILIATE ASSOCIATE PROFESSOR, WSU, PUYALLUP
HYINK, DAVID	AFFILIATE PROFESSOR, WEYCO
JOHNSON, DARRYLL	AFFILIATE ASSOCIATE PROFESSOR, ANDERSON 15
JOHNSON, JON	AFFILIATE ASSOCIATE PROFESSOR, WSU, PUYALLUP
KAPLAN, RACHEL	AFFILIATE PROFESSOR, UNIV OF MICHIGAN
KAPLAN, STEPHEN	AFFILIATE PROFESSOR, UNIV OF MICHIGAN
KEARNEY, ANNE	AFFILIATE ASSISTANT PROFESSOR, SEATTLE, WA
KIFFNEY, PETER	AFFILIATE ASSOCIATE PROFESSOR, NMFS SCI CTR
KOBAYASHI, KOICHI	AFFILIATE ASSISTANT PROFESSOR, KOBAYASHI ASSOC INC
LEHMKUHL, JOHN	AFFILIATE ASSOCIATE PROFESSOR, USFS PNW LAB, WENATCHEE
LITTKE, WILLIS	AFFILIATE ASSISTANT PROFESSOR, FALL CITY, WA
MCGAUGHEY, ROBERT	AFFILIATE INSTRUCTOR, BLOEDEL 361
MCKENZIE, DONALD	AFFILIATE ASSISTANT PROFESSOR, USFS PWFS LAB, SEATTLE
MEGRAW, ROBERT	AFFILIATE PROFESSOR, KENT, WA
MICHAELIS, LYNN	AFFILIATE PROFESSOR, WEYCO, TACOMA
MIYATA, EDWIN	AFFILIATE PROFESSOR, SIEG 211
NADKARNI, NALINI	AFFILIATE ASSOCIATE PROFESSOR, EVERGREEN STATE COLLEGE
OLIVER, CHADWICK	AFFILIATE PROFESSOR, YALE UNIV
PEARSON, SCOTT	AFFILIATE ASSISTANT PROFESSOR, WA DF&W, OLYMPIA
PEPLOW, DAN	AFFILIATE ASSISTANT PROFESSOR, SEATTLE, WA
PETRUNCIO, MARK	AFFILIATE ASSISTANT PROFESSOR, HERITAGE UNIVERSITY
RAPHAEL, MARTIN	AFFILIATE ASSOCIATE PROFESSOR, USFS PNW LAB, OLYMPIA
RESTANI, MARCO	AFFILIATE ASSISTANT PROFESSOR, ST CLOUD STATE UNIV
REUTEBUCH, STEPHEN	AFFILIATE INSTRUCTOR, BLOEDEL 364
RICKER, NEIL	ADJUNCT PROFESSOR, CHEMICAL ENGINEERING
ROBERTSON, IAIN	ADJUNCT ASSOCIATE PROFESSOR, LANDSCAPE ARCH
ROCHEFORT, REGINA	AFFILIATE ASSISTANT PROFESSOR, NO CASCADES NAT'L PK
ROYZEN, ZINOVY YETIM	AFFILIATE ASSOCIATE PROFESSOR, TRIZ CONSULTING, SEATTLE
RUCKER, JACK	AFFILIATE INSTRUCTOR, SEATTLE, WA
RUSSELL, KENELM	AFFILIATE ASSOCIATE PROFESSOR, OLYMPIA, WA
SANDBERG, DAVID	AFFILIATE ASSOCIATE PROFESSOR, USFS PNW LAB, CORVALLIS
SCHREINER, EDWARD	AFFILIATE ASSISTANT PROFESSOR, USGS, PT ANGELES
SINGH, JAIDEV	AFFILIATE ASSISTANT PROFESSOR, SEATTLE, WA
SKALSKI, JOHN	ADJUNCT PROFESSOR, FISHERIES
SMITH, DANIEL	AFFILIATE INSTRUCTOR, CAPSTONE TECHNOLOGY
STEINEMANN, ANNE	ADJUNCT PROFESSOR/DIR, CEE
STEVENS, JAMES	AFFILIATE ASSOCIATE PROFESSOR, THE CAMPBELL GROUP
TERRY, THOMAS	AFFILIATE PROFESSOR, WEYCO - CENTRALIA

VAN VOLKENBURGH, LIZ	ADJUNCT PROFESSOR, BIOLOGY
VANBLARICOM, GLENN	ADJUNCT ASSOCIATE PROFESSOR, FISHERIES
VANDER HAEGEN, MATTHEW	AFFILIATE ASSOCIATE PROFESSOR, WA DF&W
WHITE, TIMOTHY	AFFILIATE ASSISTANT PROFESSOR, CH2M HILL INC., BELLEVUE, WA

Eighteen faculty are directly involved with the MFR in Forest Management degree, and teach either a required course or one of the restricted electives in the program. Document E shows individual faculty information for these faculty. Curriculum vitas for *all* College faculty will be made available to the review team during the on-site visit.

Faculty Transformation

The size of the instructional faculty has remained relatively stable over the past 10 years, with a higher than average proportion of full professors. As a result of its age profile the College will be experiencing a high rate of retirements in the near future, at least six in the next two years. Out of long-term strategic planning has come a conscious change in how faculty are recruited, rather than replacing in kind, the goal is to seek faculty who can create new knowledge through collaborative and innovative research while also contributing to professional responsibilities at both the undergraduate and graduate levels. During this academic year, the College is conducting nine faculty searches.

Four search committees have completed their work, with offers made and accepted for positions with the following areas of expertise: 1) remote sensing and biospatial analysis, 2) natural products chemistry, 3) landscape plant science and sustainable management, and 4) sustainable forestry, also serving as the Director of the Center for Sustainable Forestry at Pack Forest.

Five search committees have been established and are in the process of finding new faculty in the areas of 1) bioresource science, 2) quantitative landscape science, 3) environmental/natural resource economics, 4) natural resource informatics, and 5) natural resource restoration and management. The job descriptions are shown below.

Bioresource Science — Assistant Professor

The College of Forest Resources at the University of Washington is inviting applications for a tenure track appointment (100% FTE, nine-month appointment) in Bioresource Science at the assistant professor level beginning Fall 2006. The College recognizes the imperative to balance society's need for energy and products with the necessity of maintaining environmental quality. We seek a broadly trained scientist with experience in employing plants to improve the sustainable use of natural resources and the quality of the environment. The successful candidate is expected to develop an externally funded, interdisciplinary research program with national and international excellence in bioresource science and its application to natural-resource and environmental stewardship. The candidate's academic training should be centered in plant biology, but his/her research may focus on diverse topics such as bioenergy, bioproducts, phytoremediation, or plant genetics. Candidates must have completed their Ph.D. by the start of the appointment.

We anticipate that this person will take advantage of potential research collaborations with faculty within the College and the University. His/her program should provide financial support for graduate student research towards MS and Ph.D. degrees. Teaching opportunities include undergraduate or graduate courses in bioresource science, specialized bioresource applications, and interdisciplinary topics relevant to the curricula of the College.

Applicants should have a Ph.D. in biological sciences, with an emphasis in plant genetics, biotechnology of resource plants, microbiology, or biochemistry.

Environmental/Natural Resource Economics — Assistant Professor
The College of Forest Resources at the University of Washington is inviting applications for a tenure track appointment (100% FTE, nine-month appointment) in Environmental/Natural Resource Economics at the assistant professor level beginning Fall 2006. The College of Forest Resources is focused on the stewardship of natural and managed environments and the sustainable use of products and services, and we seek a broadly trained economist with a Ph.D. in economics, environmental/natural resource economics, agricultural economics, or a related area. Candidates with research interests and expertise, as well as teaching and other work experience, in any area of environmental/natural resource economics are invited to apply. We encourage the applications of those interested in the economics of land use patterns and land cover changes; ecological economics; externalities or non-market valuation of environmental services; water conservation; environmental risk management; or environmental regulation. The successful candidate will be expected to work in an interdisciplinary context, to nurture and strengthen collaborations with other colleges and schools, and integrate environmental/natural resource economics with other social and natural sciences. Involvement with the College's Urban Ecology program is encouraged. The successful candidate will possess strong analytical and research methodology skills and is expected to: (1) develop a nationally recognized research program in their area of specialization, (2) teach classes in both the College's undergraduate and graduate programs; (3) advise graduate and undergraduate students interested in social sciences, and (4) develop collaborative relationships with scientists in other departments. Candidates must have completed their Ph.D. by the start of the appointment.

Natural Resource Informatics — Assistant or Associate Professor
What is the Precision Forestry Cooperative (PFC)? The PFC is an Advanced Technology Initiative program established by The Legislature of the State of Washington, to develop applications of advanced technologies to improve competitiveness of the forest sector, sustain forest values, and meet or exceed regulatory requirements. One major goal of PFC focuses on new information technologies and associated algorithms to convert data into useful metrics. Another major goal is to effectively integrate information from these technologies and algorithms into information and decision support systems useful for organizations responsible for managing natural resources.

Current PFC Facilities and Projects: The PFC jointly operates a remote sensing laboratory with the USDA Forest Service PNW Research Station in the College of Forest Resources. Current projects include LIDAR and IFSAR measurements of forest fuels, forest vegetation structure for inventory and monitoring, mapping and measurement of forest gaps and streams. The PFC is also exploring the use of RFID tagging systems for tracking seedlings, trees, and logs and the use of non-destructive testing methods for predicting stiffness and strength properties of wood in trees and logs to improve harvest planning and marketing of wood products. Scientists associated with the PFC are leaders in developing algorithms for processing data from these technologies into useful metrics and visualization products. Since these technologies provide data at unprecedented spatial and temporal resolutions they transform the information management and strategic and operational decision systems of those who must deal with issues such as accountability associated with certification, chain-of-custody, and environmental regulations.

Position Description. The PFC is seeking a faculty member with research and teaching interests in designing information systems with respect to scientific and complex management needs and developing new types of data products and models with a specific focus on natural resources issues such as:

- Computer modeling in areas such as timber/carbon value modeling, landscape level management plans, and hierarchical planning models.
- Integration of new technology to the operational decision and business processes of private and public forestland managing entities.

- Innovative engineering and management (knowledge management, supply chain management, internet and web-based decision support systems), and information technology management (data centers and warehousing, data mining, network management).

This position will complement existing programs and will be attractive to applicants who wish to creatively work in an interdisciplinary environment, have advanced skills in business/economics and engineering/computer science and are committed to disseminating their research findings through publications, teaching and outreach. The successful applicant will be expected to devote about 75% of his/her effort to research, professional, and technology transfer activities. The remaining 25% will involve teaching a course for natural resource/engineering undergraduates and an advanced course for graduate students in the College of Forest Resources.

PFC Collaborators and Partners: PFC involves collaborations with faculty from other units on campus, such as the Management Science Department in the School of Business or Industrial Engineering. An adjunct appointment with one of these units is envisioned. Collaboration with other College research programs is also highly encouraged.

Partners include the USDA Forest Service, PNW Research Station, Joint Fire Science Program, US Department of Defense, and the Washington Department of Natural Resources. PFC has an Executive Board composed of representatives from stakeholder organizations. In addition, Technical Advisory Committees composed of representatives from stakeholders advise and assist project PIs.

Position requirements:
- Ph.D. in engineering, information science, management science, forestry or a related natural resources field.
- Strong diverse background in business/economics and industrial engineering/computer science or operations research.
- Proven ability to network and collaborate with partners from private industry, federal, state, and local agencies, and other academic units on applied projects.

Terms of Appointment: This is a 9-month, tenure track Assistant Professor or tenured Associate Professor position in the College of Forest Resources.

Natural Resource Restoration and Management — Assistant Professor

The College of Forest Resources at the University of Washington is inviting applications for a tenure track appointment (100% FTE, nine-month appointment) in Natural Resource Restoration and Management at the assistant professor level beginning Fall 2006. The College of Forest Resources is focused on the stewardship of natural and managed environments and the sustainable use of products and services. We seek a broadly trained biologist with a Ph.D. in silviculture, plant, or animal ecology, horticulture, conservation biology, or a related area. Candidates with research interests and expertise in any area of environmental/natural resource restoration and management are invited to apply. We encourage the applications of those interested in ecological restoration of urban to wildlands, of wetland and riparian systems, and of forest to alpine systems. The successful candidate will be expected to work in an interdisciplinary context, to nurture and strengthen collaborations with other colleges and schools, and integrate restoration and management with other social and natural sciences. Involvement with the Restoration Ecology Network, a multi-campus program, the Urban Ecology program, or the Stand Management Cooperative, for example, are encouraged. The successful candidate is expected to: (1) develop a nationally recognized research program in their area of specialization, (2) to participate in the teaching of the introductory course in restoration ecology and in the capstone series of restoration courses, (3) to teach classes in both the College's undergraduate and graduate programs in their area of expertise; (4) advise graduate and undergraduate students interested in natural and management sciences, and (5) develop collaborative relationships with scientists in other departments amongst the three campuses. Candidates must have completed their Ph.D. by the start of the appointment.

Quantitative Landscape Scientist — Assistant Professor
The College of Forest Resources, University of Washington is accepting applications for a 9-month tenure-track position at the Assistant Professor level. Candidates must have knowledge of the development and use of quantitative techniques in landscape analysis and their application to problems of social and natural aspects of landscape change. The appointee will be expected to develop new undergraduate and graduate courses in their area of specialization to complement existing courses in the College. A Ph.D. in forest resources, ecology, biometrics, statistics, geography, conservation biology, or another relevant field is required with demonstrated experience in the use and development of quantitative techniques to address social and natural aspects of landscape change in ecosystems undergoing urbanization and development. There is an expectation that the appointee will develop a strong externally-funded research program to foster the development of a dynamic graduate program. This faculty member will be an integral member of the Environmental Science and Resource Management Program within the College of Forest Resources.

The University of Washington is located in an area of rapid landscape change along an extensive urban-wildland interface. The person appointed will have opportunities to collaborate with interdisciplinary programs engaged in teaching and research in this subject including the Urban Ecology Integrative Graduate Education and Research Traineeship Program (NSF) and the Center for Statistics and the Social Sciences. We are seeking candidates with a demonstrated record of participation in interdisciplinary teaching and research. Candidates must have completed their Ph.D. by the start of the appointment.

High Quality Instruction

The faculty of the College are intimately involved in curricula decisions and course changes, often serving on committees or being part of the discussion during faculty meetings and retreats. Although the College does not have a formal review of course content, faculty are encouraged to keep their information and teaching up to date, incorporating new technologies and relevant political and social events. The formation of the innovative and new ESRM program and co-taught courses is one example of faculty responding to the need to significantly change teaching styles and content.

Faculty Expertise and Effectiveness

Faculty-taught courses are assigned by the Faculty Chair and Vice-Chair, based on expertise and workload. The College seeks outside expertise when there are unfilled positions, often resulting from high levels of turnover at the College in the past and a changing curriculum. These outside hires are most often adjunct or affiliated faculty, but can include Ph.D. students or College staff if their level of expertise and teaching ability meet the requirements of the course. As shown in Documents C-1 and C-2, the College is fortunate to have faculty with diverse backgrounds and fields of expertise.

Faculty instruction is monitored by the Faculty Chair and Vice-Chair, and relies on input from student evaluations and occasional peer evaluation. As discussed in Standard III, when a faculty member is nominated for promotion or merit-pay, he or she undergoes a rigorous review of teaching capabilities and graduate student advising and mentoring levels. Since the College is relatively small, the Faculty Chair is aware of faculty members who are substantially involved with student projects, internships, and programs.

Related Professional Development and Scholarly Activities

As shown in the detailed faculty information provided in Document D, as a few examples, the faculty associated with the Master of Forest Resources program participate in many outside professional development and scholarly activities which are directly related to the College's goals and mission, as well as the individuals' respective areas of expertise. College faculty are often asked to

speak at conferences, review journal articles and funding proposals, and present their research both informally and formally throughout the world.

When faculty members are considered for promotion or merit-pay, they submit a description of recent research activities, publications, conferences attended, and other professional development activities. An example of these documents is included in Appendix III-A in Standard III.

Recruitment and Retention of Cultural, Ethnic, and Religious Diversity

The College of Forest Resources makes public our commitment to recruiting and hiring culturally and ethnically diverse faculty (as well as staff and students), as described in the College profile available on-line: *CFR is committed to diversity, promoting respect for the rights and privileges of others, and the understanding and appreciation of human differences.*

Similar to many forestry-focused programs throughout the U.S., however, the College's diversity is unexceptional. With nine female and two non-Caucasian faculty members, the College has much room to improve. As an example, Figure 1 shows the report produced by the Equal Opportunity Office at the UW. Fortunately, with the nine new positions, the College has opportunities to fill these spots with qualified individuals, thus improving the chance of increasing the number of the diverse faculty members.

UNIVERSITY OF WASHINGTON
Utilization And Goals Report
By College
Faculty/Academic Personnel October 2004

	Total Staff	# Affected Class	% Aff Class Of Total	Availability	Relative Utilization	Total * Goal #	Annual Goal Hires
FOREST RESOURCES - COLL							
LADDER FACULTY	**41**						
FEMALE		7	17.1%	13.8%	3.3%	MET	
TOTAL MINORITY		2	4.9%	9.9%	-5.0%	3	9.9%
ASIAN		0	0.0%	6.6%	-6.6%	3	6.6%
BLACK		0	0.0%	1.6%	-1.6%	1	1.6%
AMERICAN INDIAN		0	0.0%	0.3%	-0.3%	---	0.3%
HISPANIC		2	4.9%	1.4%	3.5%	MET	
NON-LADDER FACULTY	**2**						
FEMALE		1	50.0%	26.1%	23.9%	MET	
TOTAL MINORITY		0	0.0%	6.1%	-6.1%	---	6.1%
ASIAN		0	0.0%	1.9%	-1.9%	---	1.9%
BLACK		0	0.0%	1.4%	-1.4%	---	1.4%
AMERICAN INDIAN		0	0.0%	0.8%	-0.8%	---	0.8%
HISPANIC		0	0.0%	2.0%	-2.0%	---	2.0%
RESEARCH FACULTY	**8**						
FEMALE		4	50.0%	23.6%	26.4%	MET	
TOTAL MINORITY		0	0.0%	19.8%	-19.8%	2	19.8%
ASIAN		0	0.0%	8.1%	-8.1%	1	8.1%
BLACK		0	0.0%	10.1%	-10.1%	1	10.1%
AMERICAN INDIAN		0	0.0%	0.2%	-0.2%	---	0.2%
HISPANIC		0	0.0%	1.4%	-1.4%	---	1.4%
POST-DOCTORAL FACULTY	**2**						
FEMALE		0	0.0%	35.0%	-35.0%	1	35.0%
TOTAL MINORITY		1	50.0%	10.3%	39.7%	MET	
ASIAN		1	50.0%	2.6%	47.4%	MET	
BLACK		0	0.0%	2.6%	-2.6%	---	2.6%
AMERICAN INDIAN		0	0.0%	0.7%	-0.7%	---	0.7%
HISPANIC		0	0.0%	4.4%	-4.4%	---	4.4%

Figure 1. Diversity at the College of Forest Resources

When a new faculty search committee is formed, all members are directed to use the *Faculty Recruitment Toolkit*, provided by the University's Equal Opportunity Office. The Toolkit includes a section on enhancing diversity, which contains the following text as well as many additional sources of information and contacts:

Ensuring that the applicant pool includes women and persons from underrepresented groups is a major responsibility of the faculty search committee. This section includes tips for working with organizations to identify and recruit stellar candidates from diverse backgrounds. A cursory list of organizations and newsletters is included with suggestions for developing discipline-specific lists.

Although the passage of Initiative 200 has changed how the University goes about increasing diversity on campus, the University commitment to do so has been strengthened. According to a diversity compact signed by the President and Board of Regents in October of 2000, "the long-term objective is a campus community of students, faculty and staff that fully reflects the human diversity of our State and our world. While equitable representation of racial and ethnic minorities is one of the most challenging aspects of our diversity goals, we are all committed to improving our University's diversity, with regard to race, sex, religion, sexual orientation, culture and physical ability."

When it comes to actually recruiting diverse faculty members, many search committees report that they cannot find qualified women or people of color to apply for their open positions. Research, however, has shown that committees succeed in hiring women and people of color when they transform the search process, are committed to diversity and are proactive about building a diverse applicant pool

Transforming the search process requires that the committee do more than simply place ads and wait for applicants to express interest. Search committees can use personal and professional networks of existing faculty and students, and discipline-based organizations, and take advantage of publications and web sites that specialize in the recruitment of diverse faculty members. The following tips can help committees transform the search process.

Document C-1: Background Summary for Faculty Reporting to the Forest Resources Program Head

Institution Name: UW College of Forest Resources Academic Year: 2005-2006

Official Degree Program Title: Master of Forest Resources

Official Option Title: Forest Management

Faculty Member	Academic Rank or Title	Major Field	Highest Degree Held/Degree/Year/Inst.	Experience		
				Current Institution	Other Institution	Non-academic
James K. Agee	Professor	Forest Ecology and Forest Management	Ph.D., Wildland Resource Science, 1973, University of California, Berkeley	27	1	5
G. Graham Allan	Professor	Fiber and Polymer Science	D.Sc., Chemical Engineering, 1970, University of Strathyclyde, Scotland	39	2	4
B. Bruce Bare	Dean and Professor	Forest Management, Quantitative Science	Ph.D., Forest Management, Operations Research, 1969, Purdue University	35	2	3
Susan M. Bolton	Professor	Civil Engineering, Watershed Studies	Ph.D., Civil Engineering, 1991, New Mexico State University	14	8	
Gordon A. Bradley	Professor and Vice-Faculty Chair	Forest and Environmental Planning	Ph.D., Technological and Environmental Planning, 1986, University of Michigan	33	2	3
David Briggs	Professor and Director of PFC and SMC	Wood Science, Forestry	Ph.D., Forest Products, 1980, University of Washington	33		2
Sally L. Brown	Research Associate Professor	Environmental Chemistry, Agronomy	Ph.D., Agronomy, 1996, University of Maryland	7	6	5
Linda B. Brubaker	Professor	Dendrochronology	Ph.D., Zoology, 1973, University of Michigan	32	3	2

Faculty Member	Academic Rank or Title	Major Field	Highest Degree Held/Degree/Year/Inst.	Experience		
				Current Institution	Other Institution	Non-academic
Sharon L. Doty	Research Assistant Professor	Microbiology, Biochemistry	Ph.D., Microbiology, 1995, University of Washington	2	8	
Ivan L. Eastin	Professor and Director of CINTRAFOR	Forest Products Marketing	Ph.D., Forest Products Marketing, 1992, University of Washington	16	1	4
Robert L. Edmonds	Professor and Associate Dean	Forest Pathology	Ph.D., Forest Pathology, 1971, University of Washington	39	1	2
Kern Ewing	Professor	Plant Ecology	Ph.D., Botany, 1982, University of Washington	22	6	13
E. David Ford	Professor	Spatial Analysis, Plant Ecophysiology	D.Sc., Plant Ecology, 1995, University of London	20	17	5
Jerry F. Franklin	Professor and Director of WRCCRF	Ecosystem Analysis/Forest Management	Ph.D., Botany and Soils, 1966, Washington State University	19	11	6
James L. Fridley	Professor	Forest Engineering	Ph.D., Mechanical Engineering, 1984, University of Washington	21	9	3
Robert I. Gara	Professor	Forest Entomology	Ph.D., Forest Entomology, 1964, Oregon State University	37	2	15
Francis E. Greulich	Professor	Forest Engineering	Ph.D., Operations Research, 1976, University of California, Berkeley	28	4	4
Richard R. Gustafson	Professor and Faculty Chair	Fiber and Polymer Science	Ph.D., Chemical Engineering, 1982, University of Washington	19		6
Charles B. Halpern	Research Professor	Forest Ecology	Ph.D., Botany/Plant Ecology, 1987, Oregon State University	14	11	
Robert B. Harrison	Professor	Soil and Environmental Science	Ph.D., Agronomy and Soils, 1985, Auburn University	16	7	4

Faculty Member	Academic Rank or Title	Major Field	Highest Degree Held/Degree/Year/Inst.	Experience		
				Current Institution	Other Institution	Non-academic
Thomas M. Hinckley	Professor of Forestry	Forest Ecology, Tree Physiology	Ph.D., Physiology and Ecology, 1971, University of Washington	27	11	1
Kevin T. Hodgson	Professor	Paper Science and Engineering, Chemical Engineering	Ph.D., Chemical Engineering, 1986, University of Washington	15	4	12
Jay A. Johnson	Professor	Wood Science, Paper Science	Ph.D., Wood and Fiber Science, 1973, University of Washington	21	4	20
Robert G. Lee	Professor	Forest Ecology and Sociology	Ph.D., Wildland Resource Science, 1973, University of California, Berkeley	27	6	5
Bruce R. Lippke	Professor and Director of RTI	Forest Economics	M.S., Industrial Engineering, 1966, University of California, Berkeley	15		33
David J. Mabberley	Professor and Director of UWBG	Botany	Ph.D., Biology, 1975, Cambridge, England	2	27	2
David A. Manuwal	Professor	Wildlife Science	Ph.D., Zoology, 1972, University of California, Los Angeles	31	8	
John M. Marzluff	Professor	Wildlife Biology and Zoology	Ph.D., Zoology, 1987, Northern Arizona University	8	9	
William T. McKean	Professor	Pulp and Paper Engineering	Ph.D., Chemical Engineering, 1967, University of Washington	26	6	8
Dorothy A. Paun	Associate Professor	Forest Product Marketing and Business Performance	Ph.D., International Marketing, 1993, University of Oregon	13	3	6
John M. Perez-Garcia	Associate Professor	Forestry and Agricultural Economics	Ph.D., Forest Economics, 1991, Yale University	15		8

Faculty Member	Academic Rank or Title	Major Field	Highest Degree Held/Degree/Year/Inst.	Experience		
				Current Institution	Other Institution	Non-academic
David L. Peterson	Professor	Forest Ecology	Ph.D., Forest Ecology, 1980, University of Illinois	16		8
Kenneth J. Raedeke	Research Associate Professor	Wildlife Ecology and Conservation	Ph.D., Wildlife Ecology, 1979, University of Washington	30	4	5
Sarah E. Reichard	Associate Professor	Conservation Biology and Botany	Ph.D., Botany, 1994, University of Washington	16		
Clare M. Ryan	Associate Professor	Natural Resource and Environmental Policy	Ph.D., Natural Resource and Environmental Policy, 1996, University of Michigan	7	8	8
Peter Schiess	Professor	Forest Engineering	Ph.D., Micrometeorology, 1975, University of Washington	36		1
Gerard F. Schreuder	Professor	Forest Economics and Statistics	Ph.D., Economics, 1968, Yale University	35	4	7
Douglas G. Sprugel	Professor (without tenure)	Forest Ecology	Ph.D., Forest Ecology, 1974, Yale University	22	5	7
Stuart E. Strand	Research Professor	Environmental Engineering	Ph.D., Environmental Engineering, 1982, Pennsylvania State University	23		
Eric C. Turnblom	Associate Professor	Forest Biometrics	Ph.D., Forest Biometrics, 1994, University of Minnesota	11	9	2
Daniel J. Vogt	Associate Professor	Soil and Ecosystem Ecology	Ph.D., Forestry, 1987, University of Washington	5	5	4
Kristiina A. Vogt	Professor	Forest Systems and Biology	Ph.D., Microbial Ecology, 1976, New Mexico State University	14	13	

Faculty Member	Academic Rank or Title	Major Field	Highest Degree Held/Degree/Year/Inst.	Experience		
				Current Institution	Other Institution	Non-academic
Stephen D. West	Professor and Associate Dean for Academic Affairs	Wildlife Ecology and Conservation	Ph.D., Zoology, 1979, University of California, Berkeley	26	4	3
John A. Wott	Professor	Urban Horticulture	Ph.D., Horticulture, 1968, Cornell University	24	14	3
Darlene Zabowski	Associate Professor	Soil Science	Ph.D., Soils, 1988, University of Washington	15	1	7

Document C-2: Background Summary for Faculty Teaching Courses Listed in Forms B-1 and B-2 but NOT Reporting to the Program Head

Institution Name: UW College of Forest Resources Academic Year: 2005-2006

Official Degree Program Title: Master of Forest Resources

Official Option Title: Forest Management

Faculty Member	Course(s) Taught	Academic Rank or Title	Major Field	Highest Degree Held/Degree/Year/Inst.
Robert J. Naiman	CFR 547	Professor	Aquatic and Fishery Sciences	Ph.D., Fisheries, 1974, Arizona State University
John R. Skalski	QSCI 477	Professor	Fisheries	Ph.D., Biometry, 1985, Cornell University
Loveday L. Conquest	QSCI 482	Professor	Aquatic and Fishery Sciences	Ph.D., Biostatistics, 1975, University of Washington

Document D: Summary for Faculty Reporting to the College of Forest Resources Program Head

Institution Name: UW College of Forest Resources **Academic Year: 2004-05**

Official Degree Program Title: Master of Forest Resources

Official Option Title: Forest Management

Faculty Member	Budgeted Time Allocation			All Courses Taught							Committees Served/Chaired	
	Teaching	Research	Service	Course Number and Title (new course number is in parentheses)	Co-Taught	Required for MFR	Credit Hours	Contact Hours	Total Enrollment Undergrad	Total Enrollment Grad		
James K. Agee	40%	40%	20%	ESC 326 (ESRM 326): Wildlife Habitat and Silviculture			3		32		2	0
				ESC 535 (CFR 535): Fire Ecology		Yes	3			19		
				ESRM 351: Wildlife Research Techniques	*		3		17			
				FM 324 (ESRM 324): Forest Protection	*		5		25			
G. Graham Allan	40%	40%	20%	CHEME 309: Creativity and Innovation			2		210		1	1
				CHEME 570: Chemistry of High Polymers			3			8		
				PSE 309: Creativity and Innovation			2		194			
B. Bruce Bare	20%	10%	70%	QSCI 381: Introduction to Probability and Statistics			5		169			
Susan M. Bolton	40%	40%	20%	FE 425 (ESRM 426): Wildland Hydrology		Yes	4		11		7	4
				FE 529 (No longer offered): Current Topics in Wildland Hydrology			1			16		

Faculty Member	Budgeted Time Allocation			All Courses Taught							Committees Served/Chaired	
	Teaching	Research	Service	Course Number and Title (new course number is in parentheses)	Co-Taught	Required for MFR	Credit Hours	Contact Hours	Total Enrollment: Undergrad	Total Enrollment: Grad		
Gordon A. Bradley	40%	40%	20%	CFR 580: Advanced Urban Ecology	*		5			52	14	3
				EHUF 470 (ESRM 471): Urban Forest Landscape			5	4	17			
				ESRM 470: Natural Resource Policy and Planning		Yes	5		22	1		
				FM 381 (ESRM 381): Management of Wildland Recreation and Amenities			3		14			
				FM 495 (No longer offered): Senior Project in Forest Management			5		3			
David Briggs	50%	20%	30%	ESRM 304: Environmental and Resource Assessment	*		5		17		9	1
				PSE 248: Paper Properties	*		4		19			
				PSE 482: Paper Science and Engineering Design I			3		5			
				QSCI 291: Analysis for Biologists I			5		57			
Sally L. Brown	15%	80%	5%	ENVIR 203: Environmental Case Studies: Resources	*		5		44		4	0
Linda B. Brubaker	45%	45%	10%	ESC 310 (ESRM 310): Trees in Our Environment			5		21		1	1
				ESC 501 (CFR 501): Forest Ecosystems - Community Ecology		Yes	5			29		
				ESRM 303: Preserving Wildland	*		5		41			
Sharon L. Doty	10%	80%	10%	ESRM 521: Current Topics in Phytoremidiation			2		11		3	0

Faculty Member	Budgeted Time Allocation			All Courses Taught							Committees Served/Chaired	
	Teaching	Research	Service	Course Number and Title (new course number is in parentheses)	Co-Taught	Required for MFR	Credit Hours	Contact Hours	Total Enrollment: Undergrad	Total Enrollment: Grad		
Ivan L. Eastin	20%	40%	40%	FM 402 (ESRM 403): Forest and Economic Development			3		16	4	10	3
				FM 587 (No longer offered): Current Topics in Intl Forest Products Trade	*		2			2		
Robert L. Edmonds	40%	40%	20%	CFR 529: Topics in Streamside Studies			1			28	13	3
				EHUF 451 (ESRM 451): Urban Plant Protection	*		5	6.5	9	5		
				ESC 411 (ESRM 409): Forest Soil Microbiology			4		9	3		
				ESC 511 (No longer offered): Advanced Forest Soil Microbiology	*		5			13		
				ESRM 429: Seminar in Streamside Studies			1		19	1		
				FISH 429: Seminar in Streamside Studies			1		6			
				FISH 529: Topics in Streamside Studies			1			1		
				FM 324 (ESRM 324): Forest Protection	*		5		25			
Kern Ewing *(Continued on next page)*	40%	40%	20%	CFR 590: Graduate Studies			3			5	13	0
				EHUF 362 (ESRM 362): Introduction to Restoration Ecology	*		5		32			
				EHUF 462 (ESRM 462): Restoration Ecology Capstone: Introduction			2		15	10		

Faculty Member	Budgeted Time Allocation			All Courses Taught							Committees Served/Chaired	
	Teaching	Research	Service	Course Number and Title (new course number is in parentheses)	Co-Taught	Required for MFR	Credit Hours	Contact Hours	Total Enrollment: Undergrad	Total Enrollment: Grad		
Kern Ewing *(Continued)*				EHUF 463 (ESRM 463): Restoration Ecology Capstone: Proposal and Plan			3	2	13	8		
				EHUF 464 (ESRM 464): Restoration Ecology Capstone: Field Site Restoration			5	2	10	6		
				EHUF 473 (ESRM 473): Principles of Ecological Restoration			5	3	36	15		
				EHUF 503 (CFR 503): Current Issues in Urban Horticulture	*		1		46			
				ESRM 302: Sustainability in Production Lands	*		5		43			
E. David Ford	45%	50%	5%	BIOL 162: General Biology			5		101		3	0
				EHUF 478 (ESRM 478): Horticultural Stress Physiology		Yes	5	4	7	6		
				ESRM 302: Sustainability in Production Lands	*		5		17			
				QERM 550: Ecological Modeling and Spatial Analysis		Yes	5	6		6		
				QERM 597: Seminar in Quantitative Ecology			2	1.5		21		
Jerry F. Franklin	45%	45%	15%	FM 425 (ESRM 425): Ecosystem Management		Yes	5	8	18	4	5	2

Faculty Member	Budgeted Time Allocation			All Courses Taught							Committees Served/Chaired	
	Teaching	Research	Service	Course Number and Title (new course number is in parentheses)	Co-Taught	Required for MFR	Credit Hours	Contact Hours	Total Enrollment: Undergrad	Total Enrollment: Grad		
James L. Fridley	40%	40%	20%	ESRM 301: Maintaining Nature in an Urban and Urbanizing World	*		5		41		5	2
				ESRM 302: Sustainability in Production Lands	*		5		43			
				ESRM 303: Preserving Wildland	*		5		41			
				FE 524 (No longer offered): Watershed Design			4			1		
Robert I. Gara	45%	45%	10%	CFR 528: International Forestry			3			5	9	3
				EHUF 451 (ESRM 451): Urban Plant Protection	*		5	6.5	9	5		
				ESRM 101: Forests and Society			5		58			
				ESRM 301: Maintaining Nature in an Urban and Urbanizing World	*		5		41			
				ESRM 303: Preserving Wildland	*		5		41			
				FM 324 (ESRM 324): Forest Protection	*		5		25			
Richard R. Gustafson	40%	40%	20%	CFR 500: Graduate Orientation Seminar		Yes	5			33	8	3
				PSE 102: Paper, Society, and the Environment	*		5		158			
				PSE 406: Wood Chemistry I	*		3		15			
				PSE 480: Pulp and Paper Process Control			3		7			
				PSE 487: Paper Science and Engineering Design II	*		5	8	5			

Faculty Member	Budgeted Time Allocation			All Courses Taught							Committees Served/Chaired	
	Teaching	Research	Service	Course Number and Title (new course number is in parentheses)	Co-Taught	Required for MFR	Credit Hours	Contact Hours	Total Enrollment			
									Undergrad	Grad		
Charles B. Halpern	15%	80%	5%								7	2
Robert B. Harrison	40%	40%	20%	ESC 110 (ESRM 100): Introduction to Environmental Science			5		699		2	0
				ESC 110 (ESRM 100): Introduction to Environmental Science	*		5		384			
				ESC 311 (ESRM 311): Soils and Land Use			3		55			
				ESC 507 (CFR 507): Soils and Land Use Problems		Yes	4			2		
				ESRM 302: Sustainability in Production Lands	*		5		43			
Kevin T. Hodgson	40%	40%	20%	CHEME 326: Chemical Engineering Thermodynamics			4		66		4	2
				CHEME 472: Papermaking Processes			3		4			
				PSE 201: Introduction to Pulp and Paper Technology			3		64			
				PSE 202: Pulp and Paper Lab and Field Studies			1		27			
				PSE 477: Papermaking Processes II			3		8	3		
				PSE 487: Paper Science and Engineering Design II	*		5	8	5			
				PSE 501 (CFR 505): Introduction to Pulp and Paper Technology			3			2		

Faculty Member	Budgeted Time Allocation			All Courses Taught							Committees Served/Chaired	
	Teaching	Research	Service	Course Number and Title (new course number is in parentheses)	Co-Taught	Required for MFR	Credit Hours	Contact Hours	Total Enrollment			
									Undergrad	Grad		
Robert G. Lee	40%	45%	15%	ENVIR 271/FM 271 (ESRM 371)/SOC 279: Environmental Sociology			3		73		8	3
				ENVIR 460: Sustainable Practices		Yes	5	3	21			
				ESC 460 (ESRM 460): Institutionalizing Sustainable Ecological Practices			5		23	1		
				FM 504 (CFR 504): Research Processes in Forest Resources			4			6		
				CFR 570: Advanced Natural Resources Sociology		Yes	3			9		
Bruce R. Lippke	0%	60%	40%								10	0
David A. Manuwal	40%	40%	20%	ESC 350 (ESRM 350): Wildlife Biology and Conservation			5		32		5	1
				ESRM 302: Sustainability in Production Lands	*		5		43			
				ESRM 351: Wildlife Research Techniques	*		3		17			
John M. Marzluff	40%	40%	20%	CFR 580: Advanced Urban Ecology	*		5			52	9	6
William T. McKean	33%	33%	33%	PSE 102: Paper, Society, and the Environment	*		5		158		4	0
				PSE 404: Papermaking I			3		11			
				PSE 406: Wood Chemistry I	*		3		13	2		
				PSE 479: Pulp and Paper Laboratory II			3	6	7			
				PSE 497: Pulp and Paper Internship			1		8			

Faculty Member	Budgeted Time Allocation			All Courses Taught							Committees Served/Chaired	
	Teaching	Research	Service	Course Number and Title (new course number is in parentheses)	Co-Taught	Required for MFR	Credit Hours	Contact Hours	Total Enrollment: Undergrad	Total Enrollment: Grad		
Dorothy A. Paun	50%	35%	15%	ESRM 302: Sustainability in Production Lands	*		5		43		2	1
				FM 320 (ESRM 320): Marketing and Human Resource Management from an Environmental Perspective		Yes	5		190			
				FM 321 (ESRM 321): Finance and Accounting from An Environmental Perspective			5		46			
				FM 520 (No longer offered): Fundamentals of Marketing Forest Products			3			4		
				FM 521 (CFR 519): Fundamentals of Finance Forest Products		Yes	3			4		
				FM 587 (No longer offered): Current Topics in Intl Forest Products Trade	*		2			2		
John M. Perez-Garcia	30%	50%	20%	ENVIR 235: Environmental Economics			3		42		11	3
				FM 464 (ESRM 465): Economics of Conservation		Yes	3		14	8		
				QSCI 483: Statistical Inference in Applied Research		Yes	5		8	31		
David L. Peterson	40%	40%	20%								3	0
Kenneth J. Raedeke	40%	40%	20%								3	0

Faculty Member	Budgeted Time Allocation			All Courses Taught							Committees Served/Chaired	
	Teaching	Research	Service	Course Number and Title (new course number is in parentheses)	Co-Taught	Required for MFR	Credit Hours	Contact Hours	Total Enrollment: Undergrad	Total Enrollment: Grad		
Sarah E. Reichard	35%	35%	30%	EHUF 331 (ESRM 331): Landscape Plant Recognition	*		3		18		13	8
				EHUF 402 (ESRM 402): Curation and Education in Public Gardens	*		3	4	17			
				EHUF 503 (CFR 503): Current Issues in Urban Horticulture	*		1		46			
				EHUF 549 (CFR 549): Urban Horticulture Seminar			1		18			
				ESRM 301: Maintaining Nature in an Urban and Urbanizing World	*		5		41			
Clare M. Ryan	40%	40%	20%	CFR 571: Natural Resource Policy and Administration		Yes	5				10	4
				CFR 580: Advanced Urban Ecology	*		5			52		
				ESRM 400: Conflict Management			3		34	5		
				ESRM 470: Natural Resource Policy and Planning	*		5					
Peter Schiess *(Continued on next page)*	40%	40%	20%	ESRM 304: Environmental and Resource Assessment	*		5		17		2	2
				FE 444 (No longer offered): Introduction to Forest Engineering Design			4		8			
				FE 450 (No longer offered): Advanced Forest Engineering Design			5		8			

Faculty Member	Budgeted Time Allocation			All Courses Taught							Committees Served/Chaired	
	Teaching	Research	Service	Course Number and Title (new course number is in parentheses)	Co-Taught	Required for MFR	Credit Hours	Contact Hours	Total Enrollment: Undergrad	Total Enrollment: Grad		
Peter Schiess *(Continued)*				FE 451 (No longer offered): GIS-based Landscape Modeling			5		8			
				FE 452 (No longer offered): Stream-Road System Interactions			5		8			
				FM 328 (ESRM 328): Forestry-Fisheries Interactions			4		8			
Gerard F. Schreuder	40%	40%	20%	ESRM 304: Environmental and Resource Assessment	*		5		17		5	2
				FE 430 (ESRM 430): Aerial Photos/Remote Sensing Natural Resources		Yes	3		22	4		
				FE 490 (No longer offered): Undergraduate Studies			1		1			
				QSCI 381: Introduction to Probability and Statistics			5		33			
Douglas G. Sprugel	40%	40%	20%								5	0
Stuart E. Strand	0%	80%	20%								0	0
Eric C. Turnblom *(Continued on next page)*	45%	35%	20%	ESRM 302: Sustainability in Production Lands	*		5		43		6	3
				ESRM 304: Environmental and Resource Assessment	*		5		17			
				FE 368 (ESRM 368): Natural Resource Measurements			4		12			
				FM 323 (ESRM 424): Silviculture			5		16			

Faculty Member	Budgeted Time Allocation			All Courses Taught							Committees Served/Chaired	
	Teaching	Research	Service	Course Number and Title (new course number is in parentheses)	Co-Taught	Required for MFR	Credit Hours	Contact Hours	Total Enrollment: Undergrad	Total Enrollment: Grad		
Eric C. Turnblom *(Continued)*				QSCI 482: Statistical Inference in Applied Research		Yes	5		12	9		
				QSCI 486: Advanced Experimental Design		Yes	3		2	11		
Daniel J. Vogt	45%	40%	15%	ESC 110 (ESRM 100): Introduction to Environmental Science	*		5		271		1	0
				ESC 511 (No longer offered): Advanced Forest Soil Microbiology	*		5			13		
				ESC 601 (No longer offered): Graduate Internship in Ecosystem Science and Conservation			1			1		
				ESRM 101: Forests and Society	*		5		50			
				ESRM 302: Sustainability in Production Lands	*		5		43			
				ESRM 304: Environmental and Resource Assessment	*		5		17			
Kristiina A. Vogt	40%	40%	20%	CFR 590: Graduate Studies			3			12	24	13
				ESC 110 (ESRM 100): Introduction to Environmental Science	*		5		119			
				ESRM 101: Forests and Society	*		5		50			

Faculty Member	Budgeted Time Allocation			All Courses Taught							Committees Served/Chaired	
	Teaching	Research	Service	Course Number and Title (new course number is in parentheses)	Co-Taught	Required for MFR	Credit Hours	Contact Hours	Total Enrollment: Undergrad	Total Enrollment: Grad		
John A. Wott	40%	40%	20%	EHUF 402 (ESRM 402): Curation and Education in Public Gardens	*		3	4	17		5	0
				EHUF 411 (ESRM 411): Plant Propagation: Principles and Practice			3		17	4		
				EHUF 561 (CFR 561): Public Presentation in Urban Horticulture			2		5			
Darlene Zabowski	50%	35%	15%	ESC 110 (ESRM 100): Introduction to Environmental Science	*		5		247		7	4
				ESC 210 (ESRM 210): Introductory Soils			4		77			
				ESRM 304: Environmental and Resource Assessment	*		5		17			

James K. Agee

Professor of Forest Ecology

EDUCATION

B.S. Forest Management, University of California, Berkeley, 1967
M.S. Range Management, University of California, Berkeley, 1968
Ph.D. Wildland Resource Science, University of California, Berkeley, 1973

PROFESSIONAL EXPERIENCE

1973	Lecturer, School of Forestry and Conservation, University of California, Berkeley
1974-1976	Survey Ecologist, Western Region, National Park Service
1976-1978	Regional Forest Ecologist, Western Region, National Park Service
1978-1980	Research Biologist/Assistant Professor, NPS Cooperative Park Studies Unit, College of Forest Resources, University of Washington
1980-1984	Research Biologist/Associate Professor, NPS Cooperative Park Studies Unit, College of Forest Resources, University of Washington
1984-1988	Research Biologist/Professor, NPS Cooperative Park Studies Unit, College of Forest Resources, University of Washington
1988-1993	Professor and Chairman, Division of Forest Resources Management, College of Forest Resources, University of Washington
1998-2001	Courtesy Professor, Department of Forest Management, Oregon State University
1993- Present	Professor, Division of Ecosystem Sciences, College of Forest Resources, University of Washington

PUBLICATIONS DURING THE PAST FIVE YEARS (2001-2006)

Agee, J.K. 2001. GOBIG2K: An analysis of fire and mollusk species on four northern California National Forests. Report to the Klamath National Forest, Yreka, CA. 35 p.

Agee, J.K., and F. Krusemark. 2001. Forest fire regime of the Bull Run watershed, Oregon. Northwest Science 75 (3): 292-306.

Dunne, T., J.K. Agee, S. Beissinger, W. Dietrich, D. Gray, M. Power, V. Resh, and K. Rodrigues. 2001. A scientific basis for the prediction of cumulative watershed effects. University of California Wildland Resources Center Report 46. Berkeley, CA. 103 p.

Heyerdahl, E.K, L.B. Brubaker, and J.K. Agee. 2001. Factors controlling spatial variation in historical fire regimes: A multiscale example from the interior West, USA. Ecology 82(3): 660-678.

Agee, J.K. 2002. Fire as a coarse filter for snags and logs. Pp. 359-368 In: Ecology and management of dead wood in western forests. USDA Forest Service General Technical Report PSW-GTR-181.

Agee, J.K. 2002. Year of the fires: The story of the great fires of 1910. Northwest Science 76: 100-101 (book review).

Agee, J.K 2002. The fallacy of passive management of western forest reserves. Conservation Biology in Practice 3(1): 18-25.

Agee, J.K. 2002. Fire ecology of Pacific Northwest forests. Pp. 19-27 In: Fitzgerald, S. (ed). A synthesis of wildfire in eastern Oregon. Oregon Forest Resources Institute. Portland Oregon.

Agee, J.K. 2002. Development of fire policy on the Pacific Northwest. P. 63-66 In: Fitzgerald, S. (ed). A synthesis of wildfire in eastern Oregon. Oregon Forest Resources Institute. Portland Oregon.

Agee, J.K. 2002. The scope of the problem. Pp. 78-84 In: Fitzgerald, S. (ed). A synthesis of wildfire in eastern Oregon. Oregon Forest Resources Institute. Portland Oregon.

Agee, J.K. 2002. Fire behavior and firesafe forests. Pp. 119-126 In: Fitzgerald, S. (ed). A synthesis of wildfire in eastern Oregon. Oregon Forest Resources Institute. Portland Oregon.

Agee, J.K., C.B. Wright, N. Williamson, and M.H. Huff. 2002. Foliar moisture content of Pacific Northwest vegetation and its relation to wildland fire behavior. Forest Ecology and Management 167: 57-62.

Heyerdahl, E.K., L.B. Brubaker, and J.K. Agee 2002. Annual and decadal climate forcing on historical fire regimes in the interior Pacific Northwest, USA. The Holocene 12:597-604.

Kopper, K., D. McKenzie, J.K. Agee, and D.L. Peterson. 2002. Meta-analysis design and interpretation: A case study of prescribed fire effects on fuel loadings in ponderosa pine ecosystems. Final Report on USDA Forest Service Cooperative Agreement PNW-01-CA-11261967-037. College of Forest Resources, University of Washington, Seattle.

Williamson, N., and J.K. Agee. 2002. Heat content variation of interior Pacific Northwest conifer foliage. International Journal of Wildland Fire 11: 91-94.

Agee, J.K. 2003. Oak Forest Ecosystems (book review). Quarterly Review of Biology 78(1):115.

Agee, J.K. 2003. Monitoring post-fire mortality in a mixed-conifer forest, southern Oregon. Natural Areas Journal 23(2): 114-120.

Agee, J.K. 2003. Historical range of variability in eastern Cascade forests, Washington, USA. Landscape Ecology 18: 725-740.

Agee, J.K. 2003. Burning issues in fire: will we let the coarse-filter operate? Pp. 7-13 In: K.E.M. Galley, R.C. Klinger, and N.G. Sugihara (eds.) Fire Conference 2000: First National Congress on Fire Ecology, Prevention, and Management. Miscellaneous Publication 13. Tall Timbers Research Station. Tallahassee, FL.

Andersen, H-E., R. McGaughey, S. Reutebuch, G. Schreuder, J.Agee, and B. Mercer. 2004. Estimating canopy fuel parameters in a Pacific Northwest conifer forest using mulitfrequency polarimetric IFSAR. ISPRS commission III, working Group III/3. 6 p.

Franklin, J.F., and J.K. Agee. 2003. Forging a science-based national forest fire policy. *I*ssues in Science and Technology 20(1): 59-66.Hessburg, P.H., and J.K. Agee. 2003. An environmental narrative of inland Northwest US forests, 1800-2000. Forest Ecology and Management 178: 23-59.

Hummel, S., and J.K. Agee. 2003. Western spruce budworm defoliation effects on forest structure and potential fire behavior. Northwest Science 77: 159-169.

Agee, J.K., and D.R. Perrakis. 2004. Interpretation of the Crater Lake fuel demonstration project. Final report, JVA PNW 01-JV-11261900-033. University of Washington, Seattle.15 p.

Brown, R.T., J.K. Agee, and J.F. Franklin 2004. Forest restoration and fire: principles in the context of place. Conservation Biology 18: 903-912.

Regan, A.C. and J.K. Agee 2004. Oak community and seedling response to fire at Fort Lewis, Washington. Northwest Science 78:1-11.

Wright, C.S., and J.K. Agee 2004. Fire and vegetation history in the eastern Cascade mountains, Washington. Ecological Applications 14(2): 443-459.

Agee, J.K. 2005. The complex nature of mixed-severity fire regimes. Pp.1-10 In: Mixed Severity Fire Regimes: Ecology and Management. Association for Fire Ecology Misc. Pub. 3. Washington State University, Pullman, WA.

Agee, J.K. 2005. Forest restoration and fire in the western United States. Chapter 2 In: Innovative Fence Designs. CINTRAFOR. University of Washington, Seattle.

Agee, J.K., and C.N. Skinner 2005. Basic principles of forest fuel reduction treatments. Forest Ecology and Management 211: 83-96.

Hessburg, P.F., J.F. Franklin, and J.K. Agee. 2005. Dry forests and wildland fires of the inland Northwest USA: contrasting the landscape ecology of the presettlement and modern eras. Forest Ecology and Management 211: 117-139.

Olson, D.L., and J.K. Agee. 2005. Historical riparian forest fires in the southern Cascades of Oregon. Fire Ecology 1(1): 50-74.

Peterson, D.L., M.C. Johnson, J.K. Agee, T.B. Jain, D. McKenzie, E.D. Reinhardt. 2005. Forest structure and fire hazard in dry forests of the western United States. USDA Forest Service General Technical Report PNW-GTR-268.

Agee, J.K. 2006. Foreword. In: Fire Ecology of California Vegetation. University of California Press, Berkeley, CA. (in press)

Agee, J.K. (in press). The role of silviculture in restoring fire-adapted ecosystems. Pp. ___ in USDA Forest Service General Technical Report PSW-GTR- ___.

Perrakis, D., and J.K. Agee. (in press). Seasonal fire effects on mixed-conifer forest structure and ponderosa pine resin properties. Canadian J. Forest Research

Skinner, C.N., J.K. Agee, and A.S. Taylor. 2006. Klamath Mountains. In: Fire Ecology of California Vegetation. University of California Press, Berkeley, CA.

Calkin, D.E., S.S. Hummel, and J.K. Agee (in press). Production relationships between fire threat and forest structure in a late successional reserve. Canadian J. Forest Research (in press)

PROFESSIONAL SERVICE AND CONSULTANCIES 2000-2006

Service

1997-2000	Member, USDA Committee of Scientists, reviewing Forest Service planning regulations and NFMA
1997-2001	Associate Editor, Ecological Applications
1998-2001	Member, University of California Committee on Evaluating Cumulative Effects of Timber Harvest in the Redwood Region.
2000-2004	Commissioner, Skagit Environmental Endowment Commission

Consultancies

Various Audiences - Fire Ecology Workshops

Oregon State University - Fire Modeling Advice for the Applegate Watershed

Oregon Forest Resources Institute - Lewis and Clark Forest Conditions, Oregon Coast, and Fire Ecology Assistance

U.S. Forest Service -

Review of the Dry Forest Strategy, Wenatchee National Forest
Forest Management Strategies for the Umpqua National Forest
Scientific Basis for Fire and Fuels Management
Forest Restoration after the B&B Fire, Oregon

National Park Service –

Fire Management Plan Assistance
"Vital Sign" Monitoring Protocols
State of Oregon - Review of Sun Pass State Forest Management
Brookings Institute – Washington, D.C. – Review of Federal fire policy
Cascade Woodlands – Review of Wildland Urban Interface fuel treatments, Methow Valley

MEMBERSHIPS

Association for Fire Ecology
Ecological Society of America
International Association of Wildland Fire
Natural Areas Association
Northwest Scientific Association
Washington Native Plant Society

SIGNIFICANT AWARDS

Scientist of the Year 1998, Northwest Scientific Association
Award made to a single scientist in one year covering natural science disciplines and states/provinces of the Pacific Northwest (Northern California, Oregon, Washington, Idaho, Montana, British Columbia, and Alaska)
Virginia and Prentice Bloedel Professor, University of Washington, 2004-2007

RESEARCH FUNDING DURING THE PAST FIVE YEARS (2001-2006)

1998-2003, Flammability Limits, USDA Forest Service, Pacific Northwest Research Station, $427,896

1999-2001, Oak Fire Ecology, USDA Forest Service, Pacific Northwest Research Station, $69,921

2000-2005, Fire and Fire Surrogates, Mission Creek, WA, Joint Fire Science Program (R. Edmonds and D. Zabowski, co-PI), $150,000

2001-2004, Use of high-resolution remotely sensed data in estimating crown fire behavior variables, Joint Fire Science Program, (G. Schreuder, co-PI). $472,054

2001-2003, Gotchen Fire Issues, USDA Forest Service, Pacific Northwest Research Station, $17,000

2001-2002, Prescribed Fire Meta-analysis, Joint Fire Science Program, (D. Peterson, co-PI), $32,417

2001-2004, Seasonal Effects of fire at Crater Lake, Joint Fire Science Program, $150,000

2001-2005, Fire Severity, USDA Forest Service, Pacific Northwest Research Station, $1,289,241

2002-2004, Fire and Climate, USDA Forest Service, Pacific Northwest Research Station, $129,326.

2002-2006, Forest Fuel Treatment , M. Finney, PI), Joint Fire Science Program, $49,000

2003-2008, CROP Forest Ecology (E.D. Ford, co- PI), USDA Forest Service, Pacific Northwest Research Station, $185,959

2004-2005, Skagit River Watershed, Skagit Environmental Endowment Commission, $10,184

2004-2006, PNW Fuel Treatments, USDA Forest Service, Pacific Northwest Research Station, $141,823

2004-2008, NPS Protocols, National Park Service, $92,350

2005-2007, Why Burning Brings Beetles, Joint Fire Science Program, $88,494

2005-2007, Old Growth Pine, The Nature Conservancy, $133,069

2005-2006, Fire Severity 2, USDA Forest Service, Pacific Northwest Research Station, $324,157

Susan M. Bolton

Professor of Watershed Studies and Civil Engineering
Adjunct Professor, School of Fishery and Aquatic Sciences
Adjunct Professor, Department of Civil and Environmental Engineering

EDUCATION

B.S. Biology, University of Colorado, Boulder, l976
M.S. Zoology, North Dakota State University, 1979
M.S. Civil Engineering, New Mexico State University, 1985
Ph.D. Civil Engineering, New Mexico State University, 1991

PROFESSIONAL EXPERIENCE

Full Professor, College of Forest Resources, UW, September 2004 - present
Co-director, Center for Water and Watershed Studies, UW, 2002-2003
Sabbatical leave: Initiated research program in Costa Rica, September 2002 – September 2003
Director, Center for Streamside Studies, UW, 1998-2002
Corkery Chair, College of Forest Resources, UW, 1998-2002
Interim Director, Center for Streamside Studies, UW, December 1996 – December 1998
Rayonier Associate Professor in Watershed Management, College of Forest Resources, UW, September 1996 - 2004
Rayonier Assistant Professor in Watershed Management, College of Forest Resources, UW, 1994 - 1996
I.T.T. Rayonier Research Assistant Professor in Watershed Management, September 1992 – September 1994
Assistant Professor, Department of Civil, Agricultural, and Geologic Engineering, N.M. State University, August 1991 - May 1992.
Engineer III, Department of Civil Engineering, New Mexico State University: Conducted and coordinated research projects dealing with surface water hydrology, non-point source water quality, and computer modeling of hydrologic systems, August 1991 – August 1992.
Engineer I, Department of Civil Engineering, New Mexico State University: Assisted principal investigators on interdisciplinary project on modeling the major river basins in New Mexico, July 1985 - July 1991

CERTIFICATION

Registered Professional Engineer (Washington No. 0031521)
Registered Professional Engineer (New Mexico No. 11464)
Engineering Intern Certification, 1984

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers
International Association of Hydrologic Sciences
American Water Resources Association
Watershed Management Council
American Geophysical Union

PROFESSIONAL ACTIVITIES

5/2003: Organizing Committee, Instream flow science and management in Western Washington, Seattle, WA
4/2001: Organizing Committee Society for Ecological Restoration, Restoration Symposium, Bellevue, WA
6/2000: Session moderator, ASCE Watershed Management Symposium, Fort Collins, CO
September 2000, AWRA meetings Portland
10/2000: Organizing Committee the Int'l Conference on Wood in Rivers,
1999-present: American Society of Civil Engineers
Chair, Watershed Management Technical Committee, Water Resources Engineering Div. of ASCE, Oct. 1997-Oct 1999
Vice-Chair, Watershed Management Technical Committee Water Resources Engineering Div. of ASCE, Oct. 1995-1997
Secretary, Watershed Management Technical Committee Irrigation and Drainage Div. of ASCE, Oct. 1993-Sept. 1995
Sept 1995 – present: Mentor, Humphrey Fellow Program
Sept 1999 – present: Mentor, Women in Science and Engineering UW
August 1995: Organizing Committee, ASCE Watershed Management Symposium
November 1992-July 1993: Moderator, Watershed Workshop Management Series, EPA

HONORS AND AWARDS

Recipient 2004 of 'Outstanding Contribution to Washington's Water Resources', American Water Resources Association, Washington Chapter for the book 'Restoration of Puget Sound Rivers'
First place tie recipient for "Dissertation Thesis Award for Outstanding Water Resources Dissertation in the Field of Engineering and Physical Sciences" June 1992, Awarded by the Universities Council on Water Resources.
Chi Epsilon 1987, New Mexico State University
Phi Kappa Phi Honor Society 1983, New Mexico State University
Phi Beta Kappa Honor Society 1976, University of Colorado

CONSULTING ACTIVITY

Federal Emergency Management Agency, 2004-2005. Develop web-based course modules for course on 'Floodplain Management and Stream Restoration'. Responsible for 5 sessions in the module 'Biological Landscape: The River as Habitat'.
Scientific Review Panel, 2004-2005 The Nature Conservancy, Seattle WA. Provide technical review on TNC program for Freshwater conservation and protection
Scientific Review, City of Seattle, Seattle Public Utilities, 2003-2004. Provide guidance and review of effort to develop synthetic hydrographs for evaluation for hydrologic change using Indicators of Hydrologic Alteration and Range of Variability Analyses.
Panel review, 2005, USEPA Research Program Washington, D.C.
Panel review, 2001, USEPA Research Program Washington, D.C.
Panel review, 2000, USEPA Research Program Washington, D.C., April, 1999. USFS, blind review of Forest Plan.
Panel review, 1997. NSF/EPA Water and Watersheds, Washington, D.C.
April, 1997:Crater Lake National Park, Panel member to help define research at the park relative to management needs.

May, 1996: Talk on logging effects on flooding to the Lewis County Economic Development Council
September, 1994: Observer on a Washington Department of Natural Resources ID team for the Lake Cavanaugh Improvement Association. Prepared comments on proposed forest harvest around the lake
March-April, 1986: Worked for Dynaspan Services at White Sands Missile Range. I prepared a portion of an Environmental Assessment which included sections on geology and soils, air and water quality and hazardous waste disposal.

GRANTS AND CONTRACTS DURING THE PAST FIVE YEARS

$2500 PI Provost's Office	Support for developing a quarter long international class in Costa Rica 2005-06
$46,250 National Park Service	Landscape structure as a component of hydrologic response 1/2004 to 12/2005
$13,807 TetraTech-Foster Wheeler	Effectiveness monitoring of salmon restoration actions 6/2004 to 12/2006
$1500 PI Provost Office	Support for developing a quarter long international class in Costa Rica 2004-05
$2500 PI Provost Office	Support for developing a quarter long international class in Costa Rica 2003-04
$2000 PI Lindbergh Mobility Grant, UW	Airfare and travel expenses for 2 undergraduate students to Costa Rica 2003
$15,000 PI UW Graduate School	Airfare for 15 graduate students to begin environmental assessment of La Cangreja National Park in Costa Rica 10/02 to 01/03
$15,000 Rocky Mt. Forest Service	On-line riparian bibliography development and maintenance 8/03 to 8/08
$14,573 PI ONRC	Evaluate sediment transport in headwater streams 10/02 to 12/03
$33,579 PI Dept.of Nat.Resources	Evaluate headwater stream origins 07/01/02 to 06/30/04
$40,000 PI National Park Service CESU	Evaluate hydrologic models for use in Northwest National Parks 9/02 to 12/03
$20,000 PI King County	Monitor and characterize variations in dissolved oxygen (DO) concentrations in the Mill Creek basin 6/02 to 12/03
$32,576 PI USDA FS RMS	Road/Stream Crossing Removal Methods 4/01-9/02
$20,000 PI Puget Sound Water Quality Action Team/EPA	Alternative Futures/Sustainable Development 5/01-12/01
$21,529 PI NCASI	Evaluation of Stream Changes II 12/00-12/01
$8,000 PI WA DOT	Salmon and Turbidity White Paper 10/00-12/01
$24,000 PI WA DOT	Ecological Issues in Floodplain Corridors 3/00-5/01
$80,000 PI	Fish Culvert Passage

WA DOT	2/00-12/01
$59,800 PI	Evaluation of Road Abandonment at Stream Crossings 8/99-
USDA FS RMS	12/01
$60,042 PI	On-line Riparian Bibliography
USDA FS Stream Tech. Center	8/99-12/05
$30,000 PI	Evaluation of Stream Changes following flooding in a Small
Potlatch Corp.	Forested Watershed in N. Idaho 8/99-12/01
$424,700 PI	Wood Compatibilities Initiative
USDA FS PNW	8/98-12/02
$367,145 PI	Hydrology Component of the DEMO Project
USDA FS PNW	7/93-12/01

PUBLICATIONS DURING THE PAST FIVE YEARS (2001-2006)

Refereed Papers/Chapters

Fox, M.J. and S. Bolton. (In review) North American J. of Fisheries Management. A Regional and Geomorphic Reference for Quantities and Volumes of Instream Wood in Unmanaged Forested Basins of the Pacific Northwest.

Jaeger, K. D. Montgomery, *S. Bolton. (*In review*)* Environmental Management. Perennial flow initiation in headwater streams: Management implications of variability in source-area size.

Montgomery, D.R., and *S.M. Bolton.* (2003). Sources of geomorphic and hydrological variability in river ecosystems. Pp 39-80 In R.C. Wissmar and P.A. Bisson (eds.) Strategies for Restoring River Ecosystems: Sources of Variability and Uncertainty in Natural and Managed Systems. American Fisheries Society.

Bolton, S. and C. Berman. 2002. Research on stream issues through the Wood Compatibility Initiative. Pp 93-99 In Congruent Management of Multiple Resources: Proceedings from the Wood Compatibility Initiative Workshop. USDA-FS, PNW-GTR-563.

Storck, P., D.P. Lettenmeier, *S.M.Bolton*. 2002. Measurement snow interception and canopy effects on snow accumulation and melt in a mountain, maritime environment. Water Resources Research. 10.1029/2002WR001281.

Bergen,S., *S.Bolton,* and J. Fridley. 2001. Ecological Engineering: Design based on ecological principles. Ecol. Eng. 18(2):201-210.

Bolton, S. and J. Shellberg. 2001. Ecological Issues in Floodplain and Riparian Corridors -Salmon Habitat Protection and Restoration Standards and Guidelines for Floodplain and Riparian Corridor Issues. WA DOT, WDFW, DOE. http://www.wa.gov/wdfw/hab/ahg/floodrip.htm

Working Papers and Reports

Bolton, S. 2003. Resumen de las investigaciones de las cuencas del Cerro Cangreja y el Parque Nacional La Cangreja. Ministerio del Ambiente y Energia. Puriscal, Costa Rica.

Bolton, S., J. Moss, J. Southard, G. Williams, C. DeBlois, N. Evans. 2002. Juvenile coho movement study. Research Report Project T1803, Task 23. Washington State Transportation Center, University of Washington, Seattle, WA.

Bash, J., C. Berman, and *S. Bolton*. 2001. Effects of turbidity and suspended solids on salmonids. Research Report Project T1803, Task 24. Washington State Department of Transportation.

Books and Book Chapters

Montgomery, D.R., *S.M. Bolton* and D.B. Booth (eds.). 2002 Restoration of Puget Sound Rivers. UW Press, Seattle, WA. 505 pp.

Montgomery, D.R., D.B. Booth, ***S.M Bolton.*** 2002 Puget Sound Rivers and Salmon Recovery, Pp. 1-13 In D.R. Montgomery, ***S.M. Bolton*** and D.B. Booth. (eds.) Restoration of Puget Sound Rivers. UW Press. Seattle, WA.

Fox, M.J., ***S.M Bolton,*** L. Conquest (2002) Reference conditions for instream wood in Western Washington, Pp. 361-393 In D.R. Montgomery, ***S.M. Bolton*** and D.B. Booth. (eds.) Restoration of Puget Sound Rivers. UW Press. Seattle, WA.

Bolton, S.M., D.R. Montgomery, and D.B. Booth. 2002 Restoration of Puget Sound Rivers: Do we know how to do it? Pp. 483-490 In D.R. Montgomery, ***S.M. Bolton*** and D.B. Booth (eds.). Restoration of Puget Sound Rivers. UW Press. Seattle, WA.

Ward, T.J., R.A. Cole, and ***S.M. Bolton***. 2002. The water management basis of RIOFISH: A model for analysis of sportfishery management policy. In, Vijay P. Singh and Donald K. Frevert(eds.) Mathematical Models of Small Watershed Hydrology and Applications, Chapter 24 pp. 907-945(plus program on CD). Water Resources Publications, LLC, Littleton, CO.

Gordon A. Bradley

Professor of Forest Planning
Adjunct Professor, Department of Urban Design and Planning
Adjunct Professor, Department of Landscape Architecture

EDUCATION

B.S.L.A Landscape Architecture, California State Polytechnic University, Pomona, 1969
M.L.A. Environmental Planning, University of California, Berkeley, 1972
Ph.D. Technological and Environmental Planning, University of Michigan, Ann Arbor, 1986

PROFESSIONAL EXPERIENCE

1968	Landscape Architecture Section, Recreation Branch, USDA Forest Service, San Bernardino National Forest, San Bernardino, California
1969	Research Assistant, Lampman and Associates, Municipal Planning and Engineering Consultants, Pomona, California
1969-1970	Landscape Architect (Jr.) Master Planning, California State Department of Parks and Recreation, Sacramento, California
1970-1972	Research Assistant, Institute of Urban and Regional Development, Tahoe Basin Regional Study, University of California, Berkeley
1971	Consultant, Tahoe Regional Planning Agency, South Lake, Tahoe, California
1972	Teaching Assistant, Urban Landscape Design, University of California, Berkeley
1972-1973	Acting Assistant Professor, Resource Planning, College of Forest Resources, University of Washington, Seattle
1973-1977	Assistant Professor, Resource Planning, University of Washington, Seattle
1977-1991	Associate Professor, Resource Planning, University of Washington, Seattle
1991-Present	Adjunct Professor, Department of Urban Design and Planning, University of Washington, Seattle
1991-Present	Professor, Resource Planning, University of Washington, Seattle
1990-Present	Adjunct Professor, Department of Landscape Architecture, University of Washington, Seattle.
1998-2001	Associate Dean for Academic Affairs
2005-Present	Vice-Chair College of Forest Resources Faculty
2001-Present	Co- Leader Cooperative Ecosystem Studies Unit, CFR University of Washington
2004-Present	Director, Individual PhD Program University of Washington, Graduate School

PROFESSIONAL SERVICE

2001–Present	Editorial Advisory Board – Urban Ecosystems
2005–Present	National Science Foundation, IGERT proposal panelist

MEMBERSHIPS AND AWARDS

American Society of Landscape Architects *

American Forestry Association
Society of American Foresters
Planning Association of Washington *
Alpha Zeta
Xi Sigma Pi
Gamma Sigma Delta
Rackham First Year, Michigan College Fellowship
Distinguished Alumnus 1993, California State Polytechnic University, Pomona
National Urban and Community Forestry Advisory Council
* former member

PUBLICATIONS DURING THE PAST FIVE YEARS (2001-2006)

Marzluff, John and Gordon Bradley. (2003) "Ecological Restoration in the Urban Wildland Interface. In Ecological Restoration of Southwestern Ponderosa Pine Forests. Ed. Peter Friederici. Island Press.

Alberti, Marina, John Marzluff, Eric Schuleberger, Gordon Bradley, Clare Ryan, and Craig Zumbrunnen. (2003) Integrating Humans into Ecology: Opportunities and Challenges for Urban Ecology. BioScience Vol 53. No 12

Bradley, Gordon and Ed Macie. (2003) "Changing Land Use". A Revised National Research and Technology Transfer Agenda for Urban and Community Forestry. Tree Research and Education Endowment Fund. Champaign , Illinois.

Bradley, Gordon and Ed Macie. (2003) "Land-Use Planning and Public Policy". A Revised National Research and Technology Transfer Agenda for Urban and Community Forestry. Tree Research and Education Endowment Fund. Champaign , Illinois.

Bradley, Gordon, Anne Kearney and Al Wagar. (2004)"Public Reactions Research Project. Silvicultural Options for Young-Growth Douglas-fir Forests: The Capitol Forest Study – Establishment and First Results. USDA Forest Service. Pacific Northwest Research Station. Forest Sciences Lab. Olympia, Washington. PNW-GTR -598

Petrich, Carl, Diane Simpson-Colebank, Gordon Bradley, Anne Kearney, Rachel Kaplan, Stephen Kaplan. 2004. Scenic Perception Study for the Lake Tahoe Basin. Tahoe Regional Planning Agency. Tempe. AZ

Bradley, Gordon. 2005 Public Perceptions of Alternative Silvicultural Treatments. In Proceedings of the IUFRO International Workshop. Balancing Ecosystem Values: Innovative Experiments for Sustainable Forestry General Technical Report PNW-GRT-635. Portland. Oregon

Bradley, Gordon, Anne Kearney, Seth White.2005. Seeing the Forest for the Trees: Visual Resources Research in the Capitol State Forest. In Understanding Key Issues of Sustainable Wood Production in the Pacific Northwest. PNW GTR- 626 USFS

Bradley, Gordon. 2005. Visual Preference Research: Linking science to practice in meeting sustainable forestry objectives.. Forests in the Balance: Linking Tradition and Technology. XXII IUFRO World Congress, August 8-14, 2005. Brisbane, Australia. (abstract). The International Forestry Review Vol. 7(5).

Bradley, Gordon. 2005. Linking Visual Preference and Sustainable Forestry Practices. In

Managing Forest Viewscapes: Public Expectations, Operational Challenges, and International Perspectives. Proceedings of a conference held in Kamloops, British Columbia. British Columbia Ministry of Forests.

PUBLIC SERVICE

Washington State Highways--Review Montesano Interchange Study
Department of Ecology--Review Shoreline Management Guidelines
U.S. Forest Service--Review Cougar Lakes Land Use Study
Office of Program Research, Washington State Legislature--Report Review
UW, Department of Landscape Architecture--Review Graduate Program Proposal
Pack Forest General Development Plan--Plan Development
Washington Forest Protection Association--Land Use Committee
Society of American Foresters--Growth Management Task Force
Department of Interior--Federal Employees Board, Awards Review Committee
Washington Forest Protection Association--Co-Coordinator of Woods Tour
Island County Planning Workshop--Speaker
American Planning Association National Convention--Mobile Workshop Leader
The Seattle Engineers Club--Luncheon Speaker
King County Planning Department--Review Growth Development Guide
University of Washington Forest Club--Faculty Advisor
Society of American Foresters--UW Student Chapter Advisor
Society of American Foresters--S. Puget Sound Chapter Executive Committee
Society of American Foresters--Washington State Executive Committee
American Forestry Association--Urban Forestry Conference Steering Committee
Washington Forest Protection Association--Review Project Learning Tree Proposal
Society of American Foresters--Issues Forum Committee
King County Planning Department--Review Comprehensive Plan
Department of Natural Resources--Tiger Mountain State Forest Advisory Committee
American Forestry Association--Urban Forest Interface Working Group
King County Planning Department--Open Space Planning Workshop
Washington Forest Protection Association--Review County Land Use Guidelines
American Forestry Association--Urban Forest Council
Department of Natural Resources--Forestland Conversion Task Force
Department of Natural Resources--Block Planning Guidelines Development
King County Open Space Bond Committee
King County Open Space Speakers Bureau
King County Open Space Oversight Committee
Washington Forest Protection Association Conference Planning
Governor's Growth Strategies Committee--Task Group Organizer
Washington State Legislature--Land Use Information
Woodlands Mountain Initiative Land Use/Growth Management Information
Department of Natural Resources--Urban Forest Council Development
Department of Natural Resources--Urban and Community Forest Council
USDA, Secretary of Agriculture--Natural Urban and Community Forestry Advisory Council
Washington Forest Protection Association--Forest Practice in Visually Sensitive Areas

GRANT AND CONTRACT RESEARCH

USFS: Political Forces	$20,000	Co-PI	indiv	2yr
USFS: Ecosystems Studies/Shared Images	$10,000	Co-PI	indiv	1yr
USFS: The Problem of Assuming Shared Images	$5,518	Co-PI	indiv	1yr

USFS: Social Protocols for Watershed Analysis	$25,349	PI	indiv	2yr
USFS: Community Well Being	$15,000	Co-PI	indiv	2yr
USFS: Public Reactions	$90,617	Co-PI	indiv	5yr
USFS: Stakeholders	$58,000	Co-PI	indiv	3yr
UDFS: Stakeholders	$30,000	Co-PI	indiv	2yr
EPA: Fellow	$11,101	PI	indiv	2yr
DNR: Rattlesnake Ridge	$34,205	PI	indiv	1yr
NSF: Impact of Urban Patterns on Ecosystem Dev	$470,884	Co-PI	indiv	5yr
UW: Tools for Transformation – Urban Ecology	$322,210	Co-PI	indiv	2yr
Multiple: PNW Coop Ecosystem Studies Unit	$70,000	Co-PI	indiv	5yr
NSF: IGERT in Urban Ecology	$2,700,000	PI	indiv	5yr
USFS: Harvest Practices	$49,000	PI	indiv	5yr

Linda Beck Brubaker

Professor of Dendrology

EDUCATION

B.S. Biology, University of Redlands, 1966 (Phi Beta Kappa)
M.S. Biology, University of Michigan, Ann Arbor, 1967
M.S. Zoology, University of Michigan, Ann Arbor, 1973

PROFESSIONAL EXPERIENCE

1967-1969	Laboratory Technologist (palynology), Great Lakes Research Division, Ann Arbor, Michigan
1970-1971	Teaching Fellow, University of Michigan
1972-1973	Assistant Professor (Biology), Trumbull Campus, Kent State University, Warren, Ohio
1973-Present	Assistant, Associate, Full Professor, College of Forest Resources, University of Washington, Seattle, Washington
1976-Present	Adjunct Assistant, Associate, Full Professor, Quaternary Research Center, University of Washington, Seattle, Washington

AWARDS, RECOGNITION, PROFESSIONAL SERVICE

1988-1991	NSF Science Advisory Committee, Division of Polar Programs
1989-1992	Science Advisory Committee, Institute of Arctic and Alpine Research, University of Colorado
1991	NSF Task Group: Undergraduate Training in Geosciences
1991-1995	Co-Chair, Paleoclimate from Arctic Lakes and Estuaries (PALE), NSF Research Initiative
1992	Burlington Northern Teaching Award, College of Forest Resources
1992	NSF Panel: Doctoral dissertation improvement grants
1995-2001	Arctic Research Consortium of the United States, Board of Director
1997-2003	Bureau of Land Management, Science Advisory Board
1988-2003	Bloedel Professorship, University of Washington
2000- 2003	NSF Panel: Ecology
2000- 2001	National Science Plan for BLM, writing committee member
2004	Ecological Society of America, 2004 Organizing Committee

PUBLICATIONS DURING THE PAST FIVE YEARS (2001-2006)

Brubaker, L.B., P.M. Anderson, F.S. Hu. 2001. Vegetation Ecotone Dynamics in Southwest Alaska during the Late Quaternary. Quaternary Science Review 20:175-188.

CAPE: Holocene paleoclimate data from the Arctic: testing models of global climate change, *Pages 1275-1287* CAPE Project Members Quaternary Science Reviews Volume 20, Issue 12, Pages 1275-1376 (June 2001)

Edwards, ME, PM Anderson, LB Brubaker, TA Ager, AA Andreev NH Bigelow, LC Cwynar, WR Eisner, SP Harrison, FS Hu, D Jolly, AV Lozzhkin, GM MacDonald, CJ Mock, JC Ritchie, AV

Sher, RW Spear, JW Williams G Yu, 2000 Pollen-based biome reconstruction for Beringia 18,000, 6000 and 014C yr BP, J. Biogeography 27:521-554.

Edwards ME, PM Anderson, LB Brubaker, TA Ager, AA Andreev, NH Bigelow, LC Cwynar, WR Eisner, SP Harrison, FS Hu, D Jolly, AV Lozhkin, GM MacDonald, CJ Mock, JC Ritchie, AV Sher, RW Spear, JW Williams, F Yu. 2001. Pollen-based biomes for Beringia 18,000, 6000, and 0 14C yr BP. Journal of Biogeography.

Oswald, W.W., L.B. Brubaker, P.M. Anderson, S.C. Gerlach. 2002. Late Holocene environmental and cultural changes at Tukuto Lake, northwestern Alaska.. In: Zooarchaeology in the North, The Festschrift for R. Dale Guthrie, (S.C. Gerlach and M. S. Murray,eds.), British Archaeological Reports International Series, Oxford.

Heyerdahl, EK. LB Brubaker, JK Agee. 2001. Factors controlling spatial variation in historical fire regimes: A multiscale example from the interior west. USA. Ecology 82: 660-678.

Gavin, DG, JS McLachlan, LB Brubaker KA Young. 2001. Post-glacial history of sub-alpine forests, Olympic Peninsula, Washington, USA. The Holocene 11:177-188.

CAPE Members. 2001. Holocene Paleoclimatie Data from the Arctic: Testing Models of Global Climate Change. Quaternary Science Review.

Greenwald, DN, and LB Brubaker. 2001. A 5000 year record of disturbance and vegetation change in riparian forests of the Queets River, Washington. Canadian Journal of Forest Research.

Heyerdahl, EK, LB Brubaker, and JK Agee. 2002. Annual and decadal climate forcing of historical fire regimes in the interior Pacific Northwest, USA. The Holocene: 12(5). 597-604.

Winter LE, LB Brubaker, DQ DeWitt, JF Franklin EA Miller. 2002. Initiation of an old-growth Douglas-fir stand in the Pacific Northwest: a reconstruction from tree-ring records. Canadian Journal of Forest Research. 32: 1039-1056.

Winter LE, LB Brubaker, DQ DeWitt, JF Franklin EA Miller. 2002. Canopy disturbances over the lifetime of an old-growth Douglas-fir stand in the Pacific Northwest. Canadian Journal of Forest Research. 32: 1057-1070.

Anderson, PM, AV Lozhkin, LB Brubaker. 2002. Smirdinoya history. Quaternary Research 57(3); 325-333.

Lertzman K, DG Gavin, D Hallet, LB Brubaker, R Matthews. Lertzman, K., D. Gavin, D. Hallett, L. Brubaker, D. Lepofsky, and R. Mathewes. 2002. Long-term fire regime estimated from soil charcoal in coastal temperate rainforests. Conservation Ecology 6(2): 5. [online] URL: http://www.consecol.org/vol6/iss2/art5.

Gavin, DG, LB Brubaker, KP Lertzman. 2003. Holocene fire history of a coastal temperate rain forest based on soil charcoal radiocarbon dates. Ecology 84 (1): 186-201.

Gavin DG, LB Brubaker, KP Lertzman 2003. An 1800-year record of the spatial and temporal distribution of fire from the west coast of Vancouver Island, Canada.

Canadian Journal of Forest Research. 33 (4): 573-586.

Oswald, W.W., P.M. Anderson, L.B. Brubaker, F.S. Hu, and D.R. Engstrom.2003. Representation of tundra vegetation by pollen in lake sediments of northern Alaska. Journal of Biogeography 30: 521-535.

Oswald WW, Brubaker LB, Hu FS, Gavin DG . 2003. Pollen-vegetation calibration for tundra communities in the Arctic Foothills, northern Alaska
Journal of Ecology. 91 (6): 1022-1033.

Oswald WW, Brubaker LB, Hu FS, Kling GW 2003 Holocene pollen records from the central Arctic Foothills, northern Alaska: testing the role of substrate in the response of tundra to climate change. Journal of Ecology 91 (6): 1034-1048

Bigelow, NH, LB Brubaker, ME Edwards, SP Harrison, IC Prentice PM Anderson, AA Andreev, PJ Barlein, TR Christensen, W Cramer, JO Kaplan, AV Lozhkin, NV Matveyeva, DF Murray, AD McGuire, VY Razzhivin, JC Ritchie, B Smith, DA Walker, K Gayewski, VG Goetchus, BH Holmqvist, Y Igarishi, KV Kremenetskii, A Paus, MFJ Pisaric and VS Volkovoa. 2003. Climate change and arctic ecosystems I: Biome reconstruction of tundra vegetation types at 0, 6, and 18 radiocarbon k yr in the Arctic. J Geophys Res-Atmos 108 (D19): Art. No. 8170.

Kaplan JO, NH Bigelow, PJ Bartlein, TR Christensen, W Cramer, SP Harrison, NV Matveyeva, AD McGuire, DF Murray, IC Prentice, VY Razzhivin, B Smith, DA Walker, PM Anderson, AA Andreev, LB Brubaker, ME Edwards, AV Lozhkin, JC Ritchie. 2003. Climate change and arctic ecosystems II: Modeling, paleodata-model comparisons, and future projections. J Geophys Res-Atmos 108 (D19): Art. No. 8171.

Kaufman DS, Ager TA, Anderson NJ, Anderson PM, Andrews JT, Bartlein PJ, Brubaker LB, Coats LL, Cwynar LC, Duvall ML, Dyke AS, Edwards ME, Eisner WR, Gajewski K, Geirsdottir A, Hu FS, Jennings AE, Kaplan MR, Kerwin MN, Lozhkin AV, MacDonald GM, Miller GH, Mock CJ, Oswald WW, Otto-Bliesner BL, Porinchu DF, Ruhland K, Smol JP, Steig EJ, Wolfe BB. 2004. Holocene Thermal Maximum in the Western Arctic (0 to 180° W). Quaternary Science Reviews 23 (5-6): 529-560.

Anderson PA, ME Edwards, LB Brubaker. 2004. Results and paleoclimatic implications of 35 years of paleoecological research in Alaska. IN The Quaternary Period in the United States. Edited by AR Gillespie, SC Porter and BF Atwater. Elsevier Press. Pp. 427-440.

Higuera PE, DG Sprugel, LB Brubaker. 2005. Reconstructing fire regimes with charcoal and pollen from small hollows: A calibration with tree-ring records of fire. The Holocene. 15:238-251.

Edwards ME, LB Brubaker, Anatoly V. Lozhkin, PA Anderson. 2005 Structurally novel biomes: a response to past warming in Beringia. Special Features. Ecology 86 (6): 1696-1703.

Graumlich LJ, S Sugita, LB Brubaker, V Card. 2005 Paleoperspectives in Ecology. Special Features Ecology 86 (7) 1667-1668.

Brubaker LB, PA Anderson, ME Edwards. 2005. Beringia as a refugium for boreal trees and shrubs; new perspectives from mapped pollen data. Journal of Biogeography 32 (5) 833-848.

Oswald, W.W., P.M. Anderson, T.A. Brown, L.B. Brubaker, F.S. Hu, A.V. Lozhkin, W. Tinner, and P. Kaltenrieder. 2005. Effects of sample size and type on radiocarbon dating of arctic and subarctic lake sediments. The Holocene 15: 648-662.

Gavin DG, LB. Brubaker, J McLachlan, and WW Oswald. 2005. Correspondence of pollen assemblages with forest zones across steep environmental gradients, Olympic Peninsula, Washington, USA. The Holocene. 15 (5): 648-662.

Ivan Louis Eastin

Professor of Forest Products Marketing
Director of Center for International Trade in Forest Products

EDUCATION

B.S. Wood Science and Technology, Michigan Technological University, 1983
M.S. Wood Science and Technology, Michigan Technological University, 1985
Ph.D. Forest Products Marketing, University of Washington, Seattle, 1992

PROFESSIONAL EXPERIENCE

1/04-Present **Director, CINTRAFOR**
Center for International Trade in Forest Products (CINTRAFOR),
College of Forest Resources, University of Washington.
Administer Forest Products Marketing Research Program. Provide input and review for strategic plans, annual, and quarterly research plans. Represent CINTRAFOR on various association boards, at meetings with federal and state legislators, and at national and international research conferences and meetings. Coordinate and assist with outreach activities and legislative contacts.

7/04-Present **Professor, Forest Products Marketing**
College of Forest Resources, University of Washington
Perform marketing research on the forest products industry related to issues of industry competitiveness, strategic orientation, material substitution, and international trade. Responsible for designing and teaching courses in forest products marketing, international marketing of forest products.

8/97-1/04 **Associate Director, CINTRAFOR**

2/97-6/04 **Associate Professor, Forest Products Marketing, College of Forest Resources, UW**

9/92-2/97 **Assistant Professor, Forest Products Marketing, College of Forest Resources, UW**

5/92-7/92 **USAID Consultant**
Developed environmental impact assessment for a potential development project in the wooden furniture sector in Ghana.

1991-1992 **Research Associate, Center for International Trade in Forest Products, UW**
Conducted market research related to west coast furniture markets and strategic opportunities for small- and medium-sized furniture manufacturers in the PNW.

1990-1991 **Fulbright Fellow, Ghana, West Africa**
Affiliated with both the Forest Research Institute of Ghana and the Institute of Renewable Natural Resources at the University of Science and Technology, Kumasi.

1987-1990 **Research Associate, College of Forest Resources, UW**
Conducted research in the areas of wood structure and mechanics, international trade of forest products, and forest products marketing.

1985-1987 **Peace Corps Volunteer, Liberia, West Africa.**
Worked concurrently as an adjunct assistant professor of wood science and technology at the University of Liberia and as a research scientist at the Liberian Forest Products Lab. Also administered the USAID Small Project Assistance

Fund to support small business ventures of indigenous entrepreneurs by providing capital and project management assistance.

1983-1985 **Teaching Assistant.**
Department of Wood Science, MTU, Houghton, MI. Responsible for teaching laboratory courses in wood anatomy, wood chemistry, and wood mechanics.

1980-1982 **Summer Intern.** Veneer Division, Hartzell Inc., Piqua, OH.

1976-1979 **U.S. Army.** Heavy equipment operator. Honorable Discharge.

PROFESSIONAL MEMBERSHIPS

Forest Products Society
International Society of Tropical Foresters
Organization for Tropical Studies
World Affairs Council
Xi Sigma Pi National Forestry Honor Society, Alpha Chapter

AWARDS

2004 PCMI Leadership and Service Award, UW Dan Evans School of Public Affairs
2002 UW Nominee for the Carnegie Scholars Fellowship
2000 CINTRAFOR Faculty of the Year Award
1999 Canadian Embassy Faculty Research Grant
1997 Canadian Embassy Faculty Enrichment Grant
1996 CINTRAFOR Faculty of the Year Award
1994 CINTRAFOR Faculty of the Year Award
1994 Center for International Business Education and Research (CIBEAR) Faculty Scholarship Award, University of Southern California
1992 CINTRAFOR Doctoral Student of the Year Award
1990 Fulbright Doctoral Research Fellowship Award

ACADEMIC, COMMUNITY AND PROFESSIONAL SERVICE

UW-CFR Representative to the Summit of Forest Research in the 21st Century. Shepardstown, WV (2006)

Member, Board of Directors, Evergreen Building Products Association, 2004

US Representative, ITTO Experts Panel Meeting on LUS Database Project. Forest Research Institute of Malaysia, Kuala Lumpur, Malaysia. February 26th-28th, 2001.

President, Softwood Export Council, Advisory Board, 1999-2001

Member, Softwood Export Council Advisory Board, 1998-current

UW-CFR Representative to PNW University Wood Science Strategy Board, 2000- Current

Conference Moderator, 3rd International Value-Added Wood Processing Conference, Sheraton Wall Centre Hotel, Vancouver, BC. October 14-15, 1999.

Conference Co-Chair and Moderator, 15th Annual Marketing Forest Products in the Pacific Rim Conference, SeaTac Marriott Hotel, December 7-8, 1998.

Conference Co-Chair and Moderator, Forest Products Marketing Session, 26th Annual Hardwood Symposium, National Hardwood Lumber Association. Cashiers, North Carolina. May 4-7, 1998.

Member, UW Early Identification Program Presidential Scholarship Selection Committee, 1998.

Division Coordinator, Management Division, Forest Products Society, 1997-2000.

Secretary, Tropical Woods Technical Interest Group, Forest Products Society, 1994-1997.

Member, Washington State Technical Advisory Team, Secondary Wood Products Worker Skill Standards Development Project, 1996-2003.

Member, Editorial Board, Ghana Journal of Forestry, 1995-present.

Manuscript Reviewer, Pertanika Journal of Social Science and Humanities, 1995-present.

Member, UW Fulbright Selection Committee, 1991-present

Session Chair and Moderator, Globalization of Wood: Supply Process, Products and Markets Conference, Forest Products Society (1996), Portland, OR.

Chairman, 1995 FPS Annual Meeting Committee, Industry Focus Program.

Member, Advisory Board, WoodNet Wood Manufacturers Association, 1993-1996.

PUBLICATIONS DURING THE PAST FIVE YEARS (2001-2006)

Books and Book Chapters

2005 Innovative Fence Designs from Small Diameter Timber: Adding Value Through Design. Publisher: Watermark Publishing. Seattle, WA. 73 pages.

Peer Reviewed Journals and Conference Proceedings

2006 Gaston, C., D. Cohen and I. Eastin. Wood Market Trends in China. FORINTEK Special Publication XX. Vancouver. (in review)

2006 Gaston, C., D. Cohen and I. Eastin. Wood Market Trends in Japan. FORINTEK Special Publication 43. Vancouver.

2005 Eastin, I.L. and J. Garth. Softwood Lumber Substitution in the Residential Construction Industry: 2001. Forest Products Journal (submitted).

2005 Eastin, I.L., I. Ganguly, and R. Cantrell. Factors that Influence the Use of Structural Finger Jointed Lumber by Home Builders. Forest Products Journal (submitted).

2005 Eastin, I.L. and S. Gardner. NTFPs and Rural Economic Development in the Philippines: A Case Study of Abaca Fibers. in: Forests and Society: Sustainability and Life Cycles of Forests in Human Landscapes by Vogt, K.A., Honea, J.M., Vogt, D.J., Edmonds, R.L., Patel-Weynand, T., Sigurdardottir, R. and Andreu M.G. CABI Publishing, CAB International, Oxfordshire, United Kingdom.

2005 Janssens, E., Nicolai Burdin, and I.L. Eastin. Wood-based Panels Markets 2004-2005. UNECE/FAO Forest Products Annual Market Review. Timber Bulletin V(*L VIII*). Geneva. pp:65-72.

2005 Does Wood Quality Really Matter to Builders? Proceedings of the Productivity of Western Forests Conference. Oregon State University.

2005 Roos, Joseph and I.L. Eastin. Market Segmentation and Analysis of Japan's Residential Post and Beam Construction Market. *Forest Products Journal*. V(55)N(4). pp:1-7.

2004 Eastin, I.L., J. Roos and K. Cunningham. Factors that Influence the Export Success of Forest Products Firms in the PNW. *Forest Products Journal*. V(54)N(7/8). pp:29-34.

2004 Eastin, I.L., J. Roos, and P. Boardman. A Technical Assessment of the Market for Wood Windows in Japanese Post and Beam Construction. *Forest Products Journal* V(54)N(6). pp:23-30.

2003 Eastin, I.L. and J. Perez-Garcia. Discrepancies in Forest Products Trade Statistics. *Forestry Chronicle V(79), N(6).*

2003 Eastin, I.L. Towards the More Effective Marketing of Lesser-Used Tropical Timber Species: A Theoretical Framework. *Ghana Journal of Forestry V(10).*

2003 Eastin, I.L. and S. Gardner. NTFPs and Rural Economic Development in the Philippines: A Case Study of the Marketing of Abaca Fibers. Oregon State University Case Study Series.
2002 Eastin, I.L. and J.Perez-Garcia. An Assessment of Trade Discrepancies in the Forestry Sector. Proceedings of the International Tropical Timber Organization Ministerial Meeting. November, 2002. Yokohama, Japan.
2001 Eastin, I.L. and J. Fukuda. The Impact of Regulatory Changes on the International Competitiveness of the Canadian Softwood Lumber Industry. Forestry Chronicle *V(77)N(2).* pp:1-9.
2001 Eastin, I.L., S. Fleishman, and S. Shook. Softwood Lumber Substitution in the Residential Construction Industry: 1998. Forest Products Journal *V*(51)N(9). pp:30-37.
2001 Shook, S. and I. Eastin. A Characterization of the US Residential Deck Material Market. Forest Products Journal *V*(51)N(4). pp:28-36.

Non Peer Reviewed Publications and Proceedings

2005 Eastin, I.L. The Impact of China on the Forest Products Industry in the PNW. Published Testimony before the US-China Economic and Security Review Commission. Seattle, WA.
2005 Eastin, I.L., I. Ganguly and J. Roos. Material Use and Contractor Preferences. Professional Deck Builder. July/August. pp:66-68.
2005 Eastin, I.L., I. Ganguly, S. Shook and A. Brackley. An Assessment of the Market Potential for Alaskan Species in Decking Applications in the US. CINTRAFOR Working Paper No. 98. University of Washington, Seattle.
2004 Boardman, P., I.L. Eastin and J. Perez-Garcia. Global Emerging Market Opportunities for Structural and Other Wood Products. Final Report Submitted to the American Forest and Paper Association. 83 pages.
2004 Eastin, I.L. and J. Perez-Garcia. Discrepancies in Forest Products Trade Statistics. CINTRAFOR News, Fall.
2004 Ganguly, I. and I. Eastin. India's Forest Products Industry. CINTRAFOR Working Paper No. 94. University of Washington, Seattle. (in review)
2004 Eastin, I.L. and J. Perez-Garcia. Discrepancies in Forest Products Trade Statistics. CINTRAFOR Working Paper No. 95. University of Washington, Seattle.
2004 Eastin, I.L. Current Status of the Softwood Lumber Dispute Between the US and Canada. CINTRAFOR News, Summer.
2004 Garth, J., I.L. Eastin, and J. Edelsen. Material Substitution Trends in Residential Construction: 1995,1998 and 2001. CINTRAFOR Working Paper No. 93. University of Washington, Seattle.
2004 Eastin, I.L. Structural Analysis of Post and Beam Homes In Japan. CINTRAFOR NEWS Winter.
2004 Eastin, I.L. and C. Larsen. Branding Douglas-fir Lumber in Japan: Switching from a Commodity to a Niche Market Focus. CINTRAFOR News Winter
2003 Eastin, I.L., J. Roos, and P. Tsournos. Niche Market Opportunities for Alaskan Forest Products in Japan. CINTRAFOR Working Paper 91. University of Washington, Seattle, WA.
2003 Eastin, I.L. Discrepancies in Forest Products Trade Statistics. CINTRAFOR News, Winter. pp:4-5.
2003 Roos, J. and I.L. Eastin. A Survey of the Post and Beam Industry in Japan. CINTRAFOR News, Winter. pp:6-7.
2002 Eastin, I.L. and M. Jacobs. Using Small Diameter Timber For Innovative Fence Designs Can Reduce Forest Fires and Improve Forest Health. Fencepost Magazine.

2002 Eastin, I.L. Market Opportunities for Alaska Yellow Cedar and Western Red Cedar in Japan. Final Project Report Submitted to the Alaska Manufacturers Association. 71 pages.
2002 Gardner, S. and I. Eastin. A Country Profile of the Forestry and Wood Products Sectors in Chile. CINTRAFOR Working Paper 90. University of Washington, Seattle, WA.
2002 Cunningham, K. and I. Eastin. Factors that Influenced the Export Success of Forest Products Companies in the Pacific Northwest During the 1997-1998 Japanese Economic Downturn. CINTRAFOR Working Paper 89. University of Washington, Seattle, WA.
2001 Eastin, I.L. The Market Outlook for Softwood Lumber in Japan. In: Proceedings of the Conference on Value Chain Management in the Forest products Industry. Edmonton, Alberta. pp: 158-175.
2001 Eastin, I.L., P. Boardman, and J. Perez-Garcia. An Update on Japan's Proposed Safeguard Action Against Softwood Lumber Imports. CINTRAFOR News V(19)N(1). pp:4-6.
2001 Eastin, I., P. Boardman, and J. Perez-Garcia. JAPAN WOOD MARKET RESEARCH STUDY: A Competitive Assessment of the Japanese Forestry and Forest Product Sectors. CINTRAFOR Working Paper 87. University of Washington, Seattle, WA.
2001 Eastin, I., J. Roos, and P. Boardman. A Technical Evaluation Of The Market For US Wood Windows Within The Japanese Post And Beam Construction Industry. CINTRAFOR Working Paper 84. University of Washington, Seattle, WA.
2001 Eastin, I.L., C.M.C. Garcia, and E.C. Cortiguerra. Some Considerations For The More Effective Production And Marketing Of Non-Timber Forest Products In The Philippines. . Final Report submitted to FPRDI and ITTO for the FPRDI-ITTO Project PD 15/96 Rev. 2. 112 pages.
2001 Eastin, I.L. Impact of Regulatory and Market Changes on Competitiveness of Softwood Lumber Exports to Japan. Progress Report Submitted to the Softwood Export Council. Portland, OR.
2001 Eastin, I. and R. Braden. Opportunities for Alaskan Wood Products In Japan. CINTRAFOR Working Paper 81. University of Washington, Seattle, WA.

FUNDED RESEARCH IN THE LAST FIVE YEARS (2001-2006)

2005 China Sourcebook Update: Doing Business in China. Sponsor: WA State Department of Community, Trade and Economic development ($2,500)
2005 Material Substitution in the US Residential Construction Industry. Sponsors: Western Wood Products Association ($2,500), West Coast Lumber Inspection Bureau ($2,500), Pacific Lumber Inspection Bureau ($2,500)
2005 Distribution Channels for Value-Added Wood Products In China. Sponsor: Evergreen Building Products Association ($57,000)
2005 Support for International Market Research. Sponsor: Softwood Export Council ($48,000)
2005 Support for US-China Build Market Research and Program Administration. Sponsor: Washington State Office of Trade and Economic Development ($31,992)
2005 Industry Support for CINTRAFOR Research Programs. Sponsors: (Weyerhaeuser: $35,000, Simpson Timber: $3,000, Boise Cascade: $15,000, Rayonier: $500)
2005 Competitiveness of International Forest Products. Sponsor: USDA Cooperative State Research, Education, and Extension Service ($255,383)
2004 A Market Assessment of the Glulam Beam Industry in the US. Sponsor: USFS Wood Utilization Center ($30,000)
2004 Support for US-China Build Market Research and Program Administration. Sponsor: Washington State Office of Trade and Economic Development ($31,992)

2004 An Assessment of the Market Potential for Alaskan Species in Decking Applications in the US, Part II. Sponsor: USFS Wood Utilization Center ($10,000)
2004 Market Opportunities for Value-Added Wood Products from Washington State. Sponsor: WA State Office of Trade and Economic Development ($71,892)
2004 Assessing the International Competitiveness of Forest Products Companies in the State of Washington. Sponsor: State of Washington ($37,400.00)
2004 Support for International Market Research. Sponsor: Softwood Export Council ($45,000)
2004 Industry Support for CINTRAFOR Research Programs. Sponsors: (Weyerhaeuser: $35,000, Simpson Timber: $3,000, Boise Cascade: $15,000)
2004 Competitiveness of International Forest Products. Sponsor: USDA Cooperative State Research, Education, and Extension Service ($238,829)
2003 Support for US-China Build Market Research and Program Administration. Sponsor: Washington State Office of Trade and Economic Development ($31,992)
2003 Support for International Market Research. Sponsor: Softwood Export Council ($44,000)
2003 An Assessment of the Market Potential for Alaskan Species in Decking Applications in the US. Sponsor: USFS Wood Utilization Center ($20,000)
2003 An Assessment of Public Forest Management Regulations in the Pacific Northwest and British Columbia. Sponsor: Japan Wood Products Information Center ($15,000)
2003 Competitiveness of International Forest Products. Sponsor: USDA Cooperative State Research, Education, and Extension Service ($263,063)
2003 Market Opportunities for Value-Added Wood Products from Washington State. Sponsor: WA State Office of Trade and Economic Development ($122,465)
2003 Industry Support for CINTRAFOR Research Programs. Sponsors: (Weyerhaeuser: $35,000, Simpson Timber: $5,000, Boise Cascade: $15,000)
2002 Support for International Market Research. Sponsor: Softwood Export Council ($32,000)
2002 An Assessment of Trade Discrepancies in the Forest Sector. International Tropical Timber Organization ($10,000)
2002 Market Opportunities for Value-Added Wood Products from Washington State. Sponsor: WA State Office of Trade and Economic Development ($102,500)
2002 Global Emerging Markets Study: A Competitive Assessment of Global Markets for US Structural Softwood Lumber. Sponsor: American Forest and Paper Association ($94,000)
2002 Competitiveness of International Forest Products. Sponsor: USDA Cooperative State Research, Education, and Extension Service ($267,661)
2002 Survey of Green Building Codes for Residential Construction in the US. Sponsors: APA-The Engineered Wood Association and Canadian Wood Council ($10,000) and The Canadian Wood Council ($10,000)
2002 Survey of Japanese Opportunities for Western Red Cedar and Alaskan Yellow Cedar Trim and Sill Plates. Sponsor: Alaska Manufacturers' Association ($19,874)
2001 Economic and Market Assessment of Small-Diameter Timber for Suburban Fencing. Sponsor: USDA Forest Service, Community Assistance and Economic Action Programs ($50,139)
2001 Japanese Builders Use and Perceptions of Engineered Wood Products in Residential Construction. Sponsor: American Plywood Ass'n.-The Engineered Wood Association ($17,000)
2001 Support for Japan Market Research (3 Trips). Sponsor: Softwood Export Council ($9,345.76)
2001 A Competitive Assessment of the Japanese Forestry and Forest Products Sectors. Sponsor: American Forest & Paper Association ($57,658.80)

2001 An Evaluation of the Technical Specifications for Structural and Non-structural Wood Products in the Japanese Residential Construction Industry. Sponsor: Alaska Wood Utilization Research Center ($28,387)

PROFESSIONAL CONSULTANCIES

2003-04 An Analysis of the US Decking and Fencing Markets. Client: Mendocino Forest Products, LLC.

2003 Niche Opportunities for US Wood Products in Japan. Client: Russ Taylor and Associates.

2002 Identification of Trade Discrepancies in the Forestry Sector. Client: International Tropical Timber Organization.

2001 Evaluation of a Lesser-Used Tropical Timber Database. Client: International Tropical Timber Organization.

2000 A Characterization of the Mix of Sustainable Wood Products. Client: Cascadia Consulting.

1999-00 Marketing of Non Wood Timber Products in the Philippines. Client: International Tropical Timber Organization/Philippines Forest Products Research and Development Institute.

1999-00 Impact Of Increased Utilization Of Lesser Used Species: Draft ITTO Guidelines On The Conservation, Management And Sustainable Utilization Of Lesser Used Species. Client: International Tropical Timber Organization/Timber Export Development Board of Ghana.

1996-97 Marketing of Lesser-Used Tropical Hardwoods. Client: International Tropical Timber Organization/Philippines Forest Products Research and Development Institute.

1994 Material Substitution in the U.S. Residential Housing Market. Client: Plum Creek Timber Company, Seattle, WA.

1993-98 Marketing Strategies for Introducing Lesser-Used Tropical Timber Species. Client: International Tropical Timber Organization/Forestry Research Institute of Ghana.

1992 An Assessment of the Environmental Impact of the Furniture Industry in Ghana. Client: U.S. Agency for International Development, Washington, DC.

1990 Production and Trade in Tropical Hardwoods: An Asian-Pacific Case Study. Client: Food and Agriculture Organization of the UN, Rome, Italy.

1989 An Assessment of Potential U.S. Markets for Lenga (Nothofagus pumilio): A Lesser-Known Chilean Hardwood Species. Client: Fundacion Chile, Santiago, Chile.

E. David Ford

Professor of Plant Ecophysiology and Spatial Analysis
Adjunct Professor, Department of Biology
Adjunct Professor, Department of Statistics
Adjunct Professor, Department of Applied and Computational Mathematical Sciences

EDUCATION

B.S. Botany, University College London, 1963 (Honors)
Ph.D. Botany (Ecology), University College London, 1967
D.Sc. Plant Ecology, University of London, 1994

PROFESSIONAL EXPERIENCE

2001– present: Adjunct Professor, Department of Applied Mathematics, University of Washington
1993-1999: Chair, Graduate Program in Quantitative Ecology and Resource Management
1991-1992: Associate Director for Instruction, School of Fisheries, University of Washington
1986-present: Adjunct Professor, Department of Statistics, University of Washington
1985-present: Professor, College of Forest Resources, University of Washington
1985-1993: Director, Center for Quantitative Science, in Forestry, Fisheries and Wildlife, University of Washington, Seattle, Washington
1970-1985: Research Scientist, Institute of Terrestrial Ecology, Edinburgh, Scotland
1967-1970: Lecturer in Production Ecology, Department of Forestry and Natural Resources, University of Edinburgh

CURRENT GRANTS AND CONTRACTS

Canopy Dynamics of Old-Growth Forest. Andrew W. Mellon Foundation $260,000 through September 2003.

Identification of physiological traits responsible for increased yield in maize. With Professor Van Volkenburgh. Pioneer Hi-Bred International, Des Moines, IA. $400,000 10/1/01 through 9/30/03

Development and Assessment of Ecological Process Models. National Science Foundation. $100,000 9/15/01 through 9/14/03

Spatial Analysis of Squirrel Distributions. Forest Service. $35,500. Sep 2003 through September 2004.

Optimizing stand treatment distribution to minimize forest fire spread. With Dr. Agee. Forest Service. $105,000. July 2004 through September 2005.

An Ecological Restoration Experiment in the Cedar River Municipal Watershed Seattle Public Utilities Watershed Mgt Division $500,000 04/04/05 - 03/31/10

PUBLICATIONS DURING THE PAST FIVE YEARS (2001-2006)

Peer Reviewed Journals

Fellner M, Cocke A, Horton L, Ford ED, Cohen JD, Van Volkenburgh E. 2001. Possible involvement of light and auxin in plant-plant interaction. Developmental Biology **235**: 457.

Ford, E. D. and Ishii, H. 2001. The method of synthesis in ecology. Oikos **92**: 153-160.

Freeman, E. A. and Ford, E. D. 2001. Effects of data quality on analysis of ecological pattern using the $\hat{K}(d)$ statistical function. Ecology **83**: 35-46.

Ishii, H. and Ford, E. D. 2001. The role of epicormic shoot production in maintaining foliage in old *Pseudotsuga menziessi* (Douglas-fir) trees. Canadian Journal of Botany **79**: 251-264.

Ishii, H., Ford, E. D., Boscolo, M. E., Manriquez, A. C., Wilson, M. E. and Hinckley, T. M. 2002. Variation in specific needle area of old-growth Douglas-fir in relation to needle age, within-crown position and epicormic shoot production. Tree Physiology **22**: 31-40.

Aumann, C. A. and Ford, E. D. 2002. Modeling tree water flow as an unsaturated flow through a porous medium. Journal of Theoretical Biology. **149**: 415-429.

Aumann, C. A. and Ford, E. D. 2002. Parameterizing a model of Douglas fir water flow using a tracheid-level model. Journal of Theoretical Biology. **149**: 431-462.

Ishii, H. and Ford, E. D. 2002. Persistence of *Pseudotsuga menziessi* (Douglas-fir) in temperate coniferous forests of the Pacific Northwest Coast, USA. Folia Geobotanica **37**: 63-69.

Ishii, H., Ford, E. D. and Dinnie, C. E. 2002. The role of epicormic shoot production in maintaining foliage in old *Pseudotsuga menziesii* (Douglas-fir) trees. II. Basal reiteration from older branch axes. Canadian Journal of Botany **80**: 916-927.

Fellner M, Horton L. A., Cocke A. E, Stephens N. R., Ford, E. D., and Van Volkenburgh, E. 2003. Light interacts with auxin during leaf elongation and leaf angle development in young corn seedlings. Planta 216 (3): 366-376.

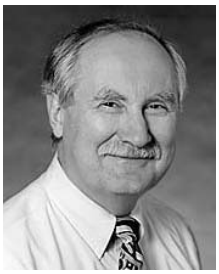
Edelstein, Z. R. and Ford, E. D. 2003. Branch and foliage morphological plasticity in old-growth Thuja plicata. Tree Physiology 23: 649-662.

Kennedy, M. C., Ford, E. D. and Ishii, I. 2004. Model analysis of the importance of reiteration for branch longevity in Pseudotsuga menziesii compared with Abies grandis. Canadian Journal of Botany 82: 892-909.

Reynolds, J.M. and Ford, E. D. 2005. Improving competition representation in theoretical models of self-thinning: a critical review. Journal of Ecology 93: 362-372.

Aumann, C. A. and Ford, E. D. 2006. Simulation of effects of wood microstructure on water transport. Tree Physiology 26: 285-301.

Jerry Forest Franklin



Professor of Ecosystem Analysis and Forest Management

EDUCATION

B.S. Forest Management, Oregon State University, 1959
M.S. Forest Management and Statistics, Oregon State University, 1961
Ph.D. Botany and Soils, Washington State University, 1966
LLD (Honorary), Simon Fraser University, 2001

MAJOR PROFESSIONAL EXPERIENCE

1986 to present	Professor of Ecosystem Analysis, College of Forest Resources, University of Washington, Seattle, WA
1993 to present	Director, Wind River Canopy Crane Research Facility
2004 to present	Co-Principal Investigator, National Science Foundation Grant ($6 million/2 years) to Plan National Ecological Observatory Network
1975 to 1991	Chief Plant Ecologist, USDA Forest Service Pacific Northwest Research Station, Corvallis, OR
1975 to 1992	Professor, Departments of Botany and Plant Pathology and of Forest Sciences, Oregon State University, Corvallis, OR
1973 to 1975	Director, Ecosystem Studies Program, National Science Foundation, Washington, DC
1959 to 1975	Research Forester, USDA Forest Service Pacific Northwest Research Station, Corvallis, OR

OTHER PROFESSIONAL EXPERIENCE

1993 to 1996	Appointee, Sierra Nevada Ecosystem Project (congressional commission)
1993 to 1995	Appointee, Scientific Panel for Sustainable Forest Practices in Clayoquot Sound (British Columbia provincial commission)
1993 to 1994	President, Ecological Society of America
1993	Participant, White House Forest Conference
1993	Appointee, Forest Ecosystem Management Assessment Team (presidential commission)
1992 to 1995	Organizer and Chair, International Long-Term Ecological Research Program
1991 to 1993	Appointee, Indian Forest Management Assessment Team (congressional commission)
1991 to 1996	Board of Directors, Ecotrust Inc.
1991 to present	The Wilderness Society Governing Board
1991	Appointee, Scientific Panel for Late Successional Forest Ecosystem ("Gang of Four") (congressional commission)
1989	Appointee, Commission on Old Growth Alternatives for Washington's Forest Trust Lands (state commission)
1986 to 1991	Scientific Advisory Board, Mount St. Helens National Volcanic Monument
1982 to 1995	Chair and Network Director, Long-Term Ecological Research (LTER) Program

1978 to 1988	Board of Governors, The Nature Conservancy
1975 to 1986	Director, H. J. Andrews Ecosystem Research Project
1969 to 1973	Deputy Director, Coniferous Forest Biome Project, International Biological Program

HONORS AND AWARDS

2006	Honorary Degree of Doctor of Science, Lakehead University, Thunder Bay, Ontario
2005	Heinz Foundation, Award for the Environment
2004	LaRoe Award for lifetime scientific contributions to conservation biology, Society for Conservation Biology
2001	Leadership in Action Award, US Chapter of International Association for Landscape Ecology
2001	Honorary Degree of Doctor of Laws, Simon Fraser University, Burnaby, British Columbia
1996	William B. Greeley Award, American Forests Association
1995	Philip C. Hamm Award, Monsanto Agricultural Co. and College of Agricultural, Food and Environmental Sciences, University of Minnesota
1992	The George Melendez Wright Award for Excellence, George Wright Society
1992	Howard Vollum Award, Science and Technology, Reed College, Portland, OR
1992	Conservationist of the Year, Pacific Rivers Council, Portland, OR
1988	Olaus & Mardy Murie Award for meritorious government service, The Wilderness Society
1986	Charles Bullard Fellow for Forest Research, Harvard University
1986	Barrington Moore Award for outstanding achievement in forest research, Society of American Foresters
1986	Superior Service Award, U.S. Department of Agriculture
1972	Arthur S. Flemming Award, outstanding young person in the Federal government
1971	Distinguished Scientist Award, Northwest Scientific Association
1970	Superior Service Award, U.S. Department of Agriculture

PROFESSIONAL SOCIETIES

Fellow of American Association for the Advancement of Science
Ecological Society of America
American Institute of Biological Sciences
British Ecological Society
Society of Conservation Biology
International Association of Landscape Ecologists

PUBLICATIONS DURING THE PAST FIVE YEARS

Franklin, J.F. (2005) Reconfiguring disturbance, succession, and forest management: the science of Mount St. Helens. In: Dale, V. H., F. J. Swanson, and C. M. Crissafulli (editors), Ecological responses to the 1980 eruptions of Mount St. Helens, p. v-vii. Springer-Verlag: New York.

Franklin, J. F. (2005) Spatial pattern and ecosystem function: reflections on current knowledge and future directions. In: Lovett, G. M., C. G. Jones, M. G. Turner, and K. C. Weathers (editors), Ecosystem function in heterogeneous landscapes. Springer-Verlag: New York. Pp. 427-441.

Frenzen, P., K. Hadley, J. Major, M. Weber, J.F. Franklin, J. Hardison, and S. Stanton. (2005) Geomorphic change and vegetational development on the Muddy River mudflow deposit. In: Dale, V. H., F. J. Swanson, and C. M. Crissafulli (editors), Ecological responses to the 1980 eruptions of Mount St. Helens. Springer-Verlag: New York. Pp. 75-91.

Hessburg, P. F., J. K. Agee, and J. F. Franklin. (2005) Dry forests and wildland fires of the inland Northwest USA: Contrasting the landscape ecology of the pre-settlement and modern eras. Forest Ecology and Management 211: 117-139.

Keeton, W. S. and J. F. Franklin. (2005) Do remnant old-growth trees accelerate rates of succession in mature Douglas-Fir forests? Ecological Monographs 75(1): 103-118.

Larson, A. J. and J. F. Franklin (2005) Patterns of conifer tree regeneration following an autumn wildfire event in the western Oregon Cascade Range, USA. Forest Ecology and Management 218: 25-36.

Belovsky, G. E., D. B. Botkin, T. A. Crowl, K. W. Cummins, J. F. Franklin, M. L. Hunter, Jr., A. Joern, D. B. Lindenmayer, J. A. MacMahon, C. R. Margules, and M. J. Scott. (2004) Ten suggestions to strengthen the science of ecology. BioScience 54: 345-351.

Brown, R. T., J. K. Agee, and J. F. Franklin. (2004) Forest restoration and fire: principles in the context of place. Conservation Biology 18: 903-912.

Chen, J., B. Song, M. Rudnicki, M. Moeur, K. Bible, M. P. North, D. C. Shaw, J. F. Franklin, and D. M. Braun. (2004) Spatial relationship of biomass and species distribution in an old-growth Pseudotsuga-Tsuga forest. 50: 364-375.

DellaSala, D. A., J. E. Williams, C. Deacon Williams, and J. F. Franklin. (2004) Beyond smoke and mirrors: a synthesis of fire policy and science. Conservation Biology 18(4): 976-986.

Franklin, J. F. (2004) Old-growth forests, owls, and conservation paradigms. Society of Conservation Biology Newsletter 11(3): 1, 18, 19.

Franklin, J. F. and K. N. Johnson. (2004) Forests face new threat: global market changes. Issues in Science and Technology 20(4): 41-48.

Franklin, J. F. and R. Van Pelt. (2004) Spatial aspects of structural complexity in old-growth forests. Journal of Forestry 102(3): 22-28.

Harmon, M. E., J. F. Franklin, F. J. Swanson, P. Sollins, S. V. Gregory, J. D. Lattin, N. H. Anderson, S. P. Cline, N. G. Aumen, J. R. Sedell, G. W. Lienkaemper, K. Cromack. Jr. and K. W. Cummins. (2004) Ecology of coarse woody debris in temperate ecosystems. In: H. Caswell (ed.), Advances in Ecological Research: Classic Papers, 34. New York: Academic Press. Pp. 59-234.

Keeton, W. S. and J. F. Franklin. (2004) Fire-related landform associations of remnant old-growth trees in the southern Washington Cascade Range. Canadian Journal of Forest Research 34: 2371-2381.

Lindenmayer, D. B., D. R. Foster, J. F. Franklin, M. M. Hunter, R. F. Noss, F. A. Schmiegelow, and D. A. Perry. (2004) Salvage harvesting policies after natural disturbance. Science 303: 1303.

Lindenmayer, D. B., J. F. Franklin, and D. R. Foster. (2004) Salvage harvesting fire-damaged wet eucalypt forests in south-eastern Australia: some ecological perspectives. Australian Forestry 67(2): 131-136.

Oakley, B. B., M. P. North, J. F. Franklin, B. P. Hedlund, and J. T. Staley. (2004) Diversity and distribution of Frankia strains symbiotic with Ceanothus in California. Applied and Environmental Microbiology 70(11): 6444-6452.

Parker, G., G., M. E. Harmon, M. A. Lefsky, J. Chen, R. Van Pelt, S. B. Weiss, S. C. Thomas, W. E. Winner, D. C. Shaw, and J. F. Franklin. (2004) Three-dimensional structure of an old-growth Pseudotsuga-Tsuga canopy and its implications for radiation balance, microclimate, and gas exchange. Ecosystems 7(5): 440-453.

Shaw, D. C., J. F. Franklin, K. Bible, J. Klopatek, E. Freeman, S. E. Greene, and G. G. Parker. (2004) Ecological setting of the Wind River old-growth forest." Ecosystems 7(5): 427-439.

Suchanek, T. H., H. A. Mooney, J. F. Franklin, H. Gucinski, and S. L. Ustin. (2004) Carbon dynamics of an old-growth forest. Ecosystems 7(5): 421-426.

Franklin, J. F. (2003) Challenges to temperate forest stewardship—focusing on the future. In: D. B. Lindenmayer and J. F. Franklin (eds.), Towards Forest Sustainability. Collingwood, Australia: CSIRO Publishing. Pp. 1-13.

Franklin, J. F. and J. K. Agee. (2003) Forging a Science-Based National Forest Fire Policy. Issues in Science and Technology 20(1): 59-66.

Gordon, J., J. Berry, M. Ferrucci, J. F. Franklin, K. N. Johnson, C. Mukumoto, D. Patton, J. Sessions, M. Sterner, and D. Meyers. 2003. An assessment of indian forests and forest management in the United States. 134 p. Intertribal Timber Council: Portland, OR.

Lindenmayer, D. B. and J. F. Franklin (editors). (2003) Towards forest sustainability. Washington, D.C.: Island Press. 231 p.

Lindenmayer, D. B. and J. F. Franklin. (2003) Transitions to ecological sustainability in forests—a synthesis. In: D. B. Lindenmayer and J. F. Franklin (eds.), Towards forest sustainability. Washington, D.C.: Island Press. Pp. 205-213.

Oakley, B. B., M. P. North, and J. F. Franklin. (2003) The effects of fire on soil nitrogen associated with patches of the actinorhizal shrub Ceanothus cordulatus. Plant and Soil 254: 35-46.

Bond, B. J. and J. F. Franklin. (2002) Aging in Pacific Northwest forests: a selection of recent research. Tree Physiology 22: 73-76.

Franklin, J. F. and G. H. Aplet. (2002) Wilderness ecosystems. In: J. C. Hendee and C. P. Dawson (eds.), Wilderness management: stewardship and protection of resources and values, Edition 3. Golden, CO: Fulcrum Publishing. Pp. 263-285.

Franklin, J. F., T. A. Spies, R. Van Pelt, A. B. Carey, D. A. Thornburgh, D. R. Berg, D. B. Lindenmayer, M. E. Harmon, W. S. Keeton, D. C. Shaw, K. Bible, and J. Chen. (2002) Disturbances and structural development of natural forest ecosystems with silvicultural implications, using Douglas-fir forests as an example. Forest Ecology and Management 155: 399-423.

Lindenmayer, D. B. and J. F. Franklin. (2002) Conserving forest biodiversity: a comprehensive multiscaled approach. Washington, D.C.: Island Press.

Smithwick, E. H., M. E. Harmon, S. M. Remillard, S. A. Acker, and J. F. Franklin. (2002) Potential upper bounds of carbon stores in forests of the Pacific Northwest. Ecological Applications 12: 1303-1317.

Winter, L. E., L. B. Brubaker, J. F. Franklin, E. A. Miller, and D. Q. DeWitt. (2002) Canopy disturbances over the five-century lifetime of an old-growth Douglas-fir stand in the Pacific Northwest. Canadian Journal of Forest Research 32(6): 1057-1070.

Winter, L. E., L. B. Brubaker, J. F. Franklin, E. A. Miller, and D. Q. DeWitt. (2002) Initiation of an old-growth Douglas-fir stand in the Pacific Northwest: a reconstruction from tree-ring records. Canadian Journal of Forest Research 32(6): 1039-1056.

RESEARCH FUNDING DURING THE PAST FIVE YEARS

Agency	Yr Awarded	Amount	**External**	Internal
Crane 74-1402	2001	65,000		x
	2002	50,000		x
	2003	50,000		x
	2004	50,000		x
	2005	50,000		x
Hogan - NEON 75-1470	2001	15,000		x
Dean, CFR - NEON	2001	5,000		x
USDA Eco Mgmt 4 61-9367	**2001**	**502,000**	x	
USDA Eco Mgmt 5 62-8183	**2002**	**526,000**	x	
	2003	**98,132**	x	
USDA Eco Mgmt 6 62-7942	**2003**	**404,197**	x	
	2004	**502,000**	x	
	2005	**502,000**	x	
USDA-PSW - Teakettle Exp 62-0235	**2001**	**27,120**	x	
	2002	**28,204**	x	
	2003	**5,577**	x	
USDA - McIntire-Stennis 61-0700	**2005**	**31,248**	x	
USDA - Natural Stand Dev 62-9426	**2004**	**32,054**	x	
NSF Subcontract via AIBS - Dev of NEON 66-9675	**2005**	**36,030**	x	

Total External Funding	**2,694,562**
Total Internal Funding (Ofc of Research, CFR Dean)	285,000
Total Funding, 2001-2005	*2,979,562*

Robert I. Gara

Professor of Entomology

EDUCATION

B.S. Forest Management, Utah State University, 1953
M.S. Forest Entomology and Forestry, Oregon State University, 1962
Ph.D. Forest Entomology, Oregon State University, 1964

PROFESSIONAL EXPERIENCE

1973- Present	Professor, College of Forest Resources, University of Washington.
1968-1973	Associate Professor, College of Forest Resources, University of Washington.
1966-1968	Assistant Professor to Associate Professor of Forest Entomology, State College of Forestry, Syracuse, New York.
1964-1966	Boyce Thompson Institute for Plant Research Inc., Project Leader, Beaumont, Texas. Adjunct Professor of Forest Entomology, Stephen F. Austin State University, Nacogdoches, Texas.
1963-1964	Boyce Thompson Institute for Plant Research Inc., Acting Project Leader for newly established Texas laboratory.
196l-1963	Boyce Thompson Institute for Plant Research, Senior Scientist, spring and summer research for M.S. and Ph.D.
1957-1960	Kirby Lumber Corp., Project Forester.
1953-1957	USAF navigator and electronics instructor: to Captain
1951-1953	US Forest Service, summers, Smoke Jumper

SELECTED MISCELLANEOUS ACTIVITIES

1968 (3 mos.)	Course Coordinator for Organization of Tropical Studies course (taught in Honduras, Costa Rica and Panama) "An Introduction to Tropical Forestry" (April-June).
1969-1970	Six months United Nations Development Program (FAO). Consultant, Turrialba, Costa Rica.
1969-1982	Yearly 3-month trips to Chile as U.S. Peace Corps Forestry Consultant.
1977-1978	13-month teaching and research assignment as Visiting Professor with Universidad Austral de Chile and UNDP/FAO program.
1983 (3 mos.)	Consultant to USAID Mission in Ecuador. Analyzed forest insect and disease problems.
1984 -1985	1 year USAID/Ecuadorian Forest Service assignment. Designed a national forest protection plan and began a forest fire management curriculum at the National University of Loja.
1985	Served as principal advisor for 3 months in suppression of forest fire on Isabela Island of the Galapagos Islands International Park
1986 - 1991	Continued participation in the USAID Ecuadorian project.
1987 - 1989	Peace Corps/U.S. Department of State consultant in Chile: establishment of an integrated pest management program for the Chilean forest industry.
1990 – 1991	UNDP/FAO forestry consultant in Vietnam.

1992 (1 mo.) USAID Seminar participant and organizer in Costa Rica
1993 (3 mo.) USAID sponsored research in Ecuador
1995 (6 mos.) Fulbright Fellowship to teach and do research at Universidad de los Andes, Merida, Venezuela
1999 (3 mos.) Fulbright Fellowship to study the ecology of mangroves at Universidad de Guayaquil, Ecuador

PUBLICATIONS DURING THE LAST FIVE YEARS (2001-2006)

Minakawa, N., R.I. Gara, and J.M. Honea. 2002. Increased individual growth rate and community biomass of stream insects associated with salmon carcasses. J. N. Am. Benthol. Soc. 21:651-659.

Healey, S.P. and R.I. Gara. 2003. The effect of a teak (Tectona grandis) plantation on the establishment of native species in an abandoned pasture in Costa Rica. For. Ecol. and Mgt. 176:497-507.

Minakawa, N., and R.I. Gara 2003. Effects of chum salmon redd excavation on benthic communities in a stream in the Pacific Northwest. Transactions of the American Fisheries Society. 132:598-604.

Ruiz, C., Dolly Lanfranco, D.L. Mausel, and R.I. Gara. 2003. Una contribución conocimiento de los musculos indirectos de vuelo de Hylurgus ligniperda (Coleoptera:Scolytidae). Rev. Chilena Entomol. 29:39-42.

Miniakawa, N. and R.I. Gara. 2005. Spatial and temporal distribution of coho salmon carcasses in a stream in the Pacific Northwest, USA. Hydrobiologia (in press).

Richard R. Gustafson

Professor of Paper Science and Engineering
Adjunct Professor, Department of Chemical Engineering
Faculty Chair

EDUCATION

B.S. Wood and Fiber Science, University of Washington, 1977
Ph.D. Chemical Engineering, University of Washington, 1982

PROFESSIONAL EXPERIENCE

1980	Visiting Scientist, Weyerhaeuser Company, Seattle, Washington. Applied pulping model developed in Ph.D. work to commercial digester situations.
1982-1986	Development Scientist, Union Carbide Corp. (Now Amoco Performance products), Parma, Ohio. Research and development to produce higher performance carbon fibers.
1986-1990	Assistant Professor of Paper Science and Engineering, University of Washington, Seattle, Washington
1990-1995	Associate Professor of Paper Science and Engineering, University of Washington
1993–present	Denman Professor of Paper Science and Engineering
1995–present	Professor of Paper Science and Engineering, University of Washington
1997–2003	Chair of Management and Engineering Division, University of Washington
2003-present	Faculty Chair, College of Forest Resources, University of Washington

CONSULTING

9/1986	Weyerhaeuser Company
4/1991	Beloit Corp.
10/1991	Rust Engineering
6/1992	Kamyr Inc.
5/1993	Potlatch Corp.
5/1996	Jupiter Chemical
1996 - 1999	Clariant Corp.
1999 - 2000	Agrisol

SELECTED PUBLICATIONS DURING THE PAST FIVE YEARS (2001-2006)

Seidler, G.T., Gustafson, R.R., et al., Applications of Synchrotron X-ray Microtomography to Mesoscale Materials" Advances in Complex systems, 4(4), pp.481-490 (April, 2001)

Walkush, Kevin; Gustafson, Richard R.; "Application of pulping models to investigate the performance of commercial continuous digester", Tappi Journal, v 1, n 7, July, 2002, p 13-19
Gustafson, Richard R.; Robert Lewis, J.; "Dynamic modeling of the D_0 stage of a $DE_{OP}D$ bleach sequence," TAPPI Fall technical Conference and Trade Fair, 2002, p 343-354

Robinson, J.K., Gustafson, R.R., Callis, J.B., Bruckner, C., "Measurement of Kappa Number Variability on the Fiber Level" TAPPI Journal 1, no. 10: 3 - 7 (Dec. 2002).

Malkov, Sergey; Tikka, Panu; Gustafson, Richard; Nuopponen, Mari; Vuorinen, Tapani; "Towards complete impregnation of wood chips with aqueous solutions. Part 5: Improving uniformity of kraft displacement batch pulping", Paperi ja Puu/Paper and Timber, v 85, n 4, 2003, p 215-220

Mathews, Jeffery; Gustafson, Richard; Hodgson, Kevin; "A Method to Determine the Charge Demand of Single Pulp Fibers", Nordic Pulp and Paper Research Journal, 19(4), pp. 453-459, 2004

Kumar, Saket; Barbour, R. James; Gustafson, Richard R.; "Kraft Pulping Response and Paper Properties of Wood From Densely Stocked Small-diameter Stands" Forest Products Journal, 54(5), pp. 50-56, May, 2004

Rayal, Gaurav; Gustafson, Richard; Arvela, Marianna; Rantamaki, Jukka; "On the relationship between pulping temperature and kraft pulp kappa uniformity at the single fiber level" Paperi ja Puu/Paper and Timber, v 87, n 5, 2005, p 329-332

RESEARCH GRANTS DURING THE PAST FIVE YEARS

6/2000 - 6/2001	Eka Nobel, $94,000, "Assessment of Chlorine Dioxide Pretreatment for Alkaline Pulping."
9/2000 – 9/2001	Weyerhaeuser, $30,000 (gift), "Measurement of surface charge using fluorescent probes."
10/2000 – 9/2001	CPAC, $30,000, "Application of an Imaging Flow-Through Particle Analyzer-2"
10/2001 – 9/2002	CPAC, $30,000, "Application of an Imaging Flow-Through Particle Analyzer-3"
7/2002 – 6/2004	WTC/Systematix, $95,000, "Commercial Fiber Analyzer"
10/2002 – 9/2003	CPAC, $30,000, "Application of an Imaging Flow-Through Particle Analyzer-4"
6/2004 – 6/2006	Helsinki University of Technology, $81,500 (gift) "Fundamental Kraft Pulping"
6/2004 – 6/2008	Lower Columbia College (NSF), $160,000 "Operator Training Models"

Robert Boyd Harrison

Professor of Soil and Environmental Science

EDUCATION

B.S. Soil Science, North Carolina State University, 1978
M.S. Soil Science, University of New Hampshire, 1981
Ph.D. Soil Science, Auburn University, 1987

PROFESSIONAL EXPERIENCE

2000-pres.	Appointed to Full Professor
1996-pres.	Nutrition Research Project Coordinator for Northwest Stand Management Cooperative
2003	Professor Universitante Visitante; Department of Soil Science, State University of Sao Paulo, Botucatu, Sao Paulo, Brazil.
1995-1996	Professor Titular (highest rank) in the Forest Engineering Department at the Federal University of Viçosa, Minas Gerais, Brazil.
1993-2000	Appointed to Associate Professor with Tenure
1988-pres.	Appointed to the Graduate Faculty of the University of Washington
1987-1993	Assistant Professor, College of Forest Resources, University of Washington
1985-1987	Post Doctoral Research Associate, Oak Ridge National Laboratory
1982-1985	Research Associate and Instructor, Auburn University
1981-1982	Peace Corps Volunteer and Subdistrict Forestry Officer, Karatu, Tanzania
1978-1980	Research Associate and Instructor, University of New Hampshire

ELECTED POSITIONS

2004-pres	Chair Promotion, Merit and Tenure Committee of Col. Forest Resources
2000-2001	Chair of Computer Technology Section of American Society of Agronomy
1999-pres	Secretary of the Northwest Forest Soils Council
1997-1999	Chair of Forest Soils Division of Soil Science Society of America

APPOINTED POSITIONS

1998-2002	Agronomy Society of America Board of Directors
1998-2002	Soil Science Society of America Computer Software Applications Committee
1999-2001	Soil Science Society of America Presidential Selection Committee
1999-2001	Soil Science Society of America S-7 Chair Nominating Committee
2000-2001	Soil Science Society of America Fellows Selection Committee
1994,1998	Session Chair for Soil Science Society of America Meetings
1987-2000, 2001-pres	Director of Col. Forest Resources Analytical Laboratory

PROFESSIONAL SOCIETIES

Soil Science Society of America
International Society of Soil Science
American Society of Agronomy
Washington State Environmental Health Association
Soil and Water Conservation Association

Washington Society of Professional Soil Scientists
Northwest Forest Soils Council
Society of American Foresters
American Geophysical Union
Brazilian Association of Soil Scientists
Xi Sigma Pi (advisor to Alpha chapter at UW since 1990)
Sigma Xi associate member, Gamma Sigma Delta

RESEARCH ORGANIZATIONS AND COOPERATIVES

Northwest Stand Management Cooperative (serving as nutrition project manager)
W-170 Regional Committee on Use of Organic Wastes as Soil Amendments

AWARDS RECEIVED INDIVIDUALLY AND FOR RESEARCH PROGRAMS

2004 Soil Science Society of America **Madison, WI**
With Brian Strahm. Two awards for best presentations and poster of sessions, S-7 Division, in Seattle, Washington.

2004 College of Forest Resources, Univ. of Washington **Seattle, WA**
Award for highest teaching load in College.

2003 College of Forest Resources, Univ. of Washington **Seattle, WA**
Award for highest teaching load in College.

2002 College of Forest Resources, Univ. of Washington **Seattle, WA**
Award for highest teaching load in College.

2000 Academy for Teaching Excellence **Seattle, WA**
Awarded $1000 stipend and participated in week-long intensive workshop for teachers of extremely large classes at the University of Washington. Personal teaching project.

1994 Soil Science Society of America **Madison, WI**
Award for best presentation of session (9 papers) at 1992 annual meeting.

1992 Soil Science Society of America **Madison, WI**
Award for best presentation of session (12 papers) at 1991 annual meeting in Denver, CO.

1992 U.S. Environmental Agency **Washington, DC**
Award presented to the Organic Waste Beneficial Use Program at the College of Forest Resources, University of Washington for excellence in research in utilization of biosolids as a soil amendment. This award is presented to one research program in the U.S. each year that demonstrates national leadership in research on beneficial use of biosolids.

1992 Association of Metropolitan Sewerage Agencies **Washington, DC**
Special award presented to W-170 (Western regional, USDA) Committee for contributions in developing scientifically-based CFR503 national regulations for utilization of sewage sludge as a soil amendment.

1991 Soil Science Society of America **Madison, WI**
Award for best presentation of session (11 papers) at 1990 annual meeting in Anaheim, CA.

1991 U.S. Environmental Agency **Washington, DC**
Award presented to W-170 (Western regional, USDA) Committee for excellence in research program on beneficial utilization of sewage sludge. This award is presented to a single research program that demonstrates national leadership in research.

1988 Soil Science Society of America **Madison, WI**
Award for best presentation of session (17 papers) at 1987 annual meeting in Atlanta, GA.

PRIZES AND SCHOLARSHIPS

Post-graduate Research Fellowship 1985-1987 (Oak Ridge National Laboratory)
Graduate Research Assistantship 1982-1985 (Auburn University)
Graduate Research Assistantship 1978-1980 (Univ. New Hampshire)
Ruth Farrington Fund Award (cash award for travel for research presentation)
Inducted into Xi Sigma Pi, Gamma Sigma Delta, Sigma Xi
Graduated with Honors 1978 (North Carolina State University)
William's Hall Award for high GPA in Soil Science 1978 (North Carolina State University)

EXTERNAL TO CFR, UW COMMITTEES AND ACTIVITIES,

1997-present Global and Environmental Geochemistry Committee, University of Washington

EDITORIAL DUTIES:

1999-present Editor and Systems Operator of WWW site for Northwest Forest Soils Council http://soilslab.cfr.washington.edu/NWFSC/

1995-present Editor and Systems Operator of WWW site for Forest Soils http://soilslab.cfr.washington.edu/S-7/

1996-1999 Editor and Systems Operator of WWW site for Organic Waste Utilization http:// soilslab.cfr.washington.edu/W-170/

1996-1999 Member of the editorial board (Associate Editor) of the journal "Water, Air and Soil Pollution".

1991-1996 Editor of Newsletter for South Puget Sound Chapter of Society of American Foresters

1991-1993 Editor of Newsletter WETLAND NEWS

GRANT FUNDING SUPPORT (2001-2006):

Principle Investigator or Co-PI: Active at present time

Source: US Forest Service, Agenda 2020 Program.
Period: February 15, 2005 to December 31, 2008
Amount: $150,000
Title: Effects of organic matter retention and management on long-term forest productivity. Cooperative project with UW, USFS and Oregon State University

Source: National Council for Air and Stream Improvement.
Period: Feb 2, 1998 to December 31, 2005
Amount: $312,000
Title: Effects of organic matter retention and management on long-term forest productivity.

Source: US Forest Service, Pacific SW lab. with Dave Briggs
Period: January 1, 2005 to December 31, 2008
Amount: $100,000
Title: Creation of database for Long-term Soil Productivity Study.

Source: Stand Management Cooperative (Industry, Government, University Coop). with Dave Briggs
Period: Continuing research support
Amount: about $600,000 per year
Title: Research on Forest Stand Management in Douglas-fir Region

Finished Grants

Source: University of Washington Educational Outreach
Period: September1, 2002 to Dec. 31, 2004
Amount: $1,889,772
Title: Funding for development and teaching of online course in Environmental Science

Source: "King County Roads"
Period: Jan 1, 2001 to Dec. 31, 2001
Amount: $5,000
Title: Digital Map of King County Soils

Source: "US Forest Service"
Period: July 1, 2000 to Dec. 31, 2003
Amount: $54,000
Title: Management Impacts on Long-term Productivity.

Source: Department of Energy
Period: March 1, 2000 to May 31, 2003
Amount: $135,000
Title: Northwest Center for Carbon Sequestration Research in Managed Forests.

Source: Olympic Natural Resources Center
Period: June 1, 1999 to May 31, 2002
Amount: $10,000
Title: Effects of organic matter retention and management nutrient availability and loss from Northwest coastal Douglas-fir Plantations.

Source: Olympic Natural Resources Center
Period: June 1, 1998 to May 31, 2001
Amount: $10,000
Title: Effects of organic matter retention and management on long-term forest productivity of Pacific Northwest coastal Douglas-fir Plantations.

Source: Oak Ridge National Laboratory, Department of Energy
Period: March 1, 1998 to May 31, 2002
Amount: $60,000
Title: A modeling approach to increasing forest productivity.

Source: Various private and public firms through UW Stand Management Cooperative.
Period: July 1, 1997 to July 31, 2001
Amount: $65,298
Title: Carryover Effects of Nitrogen Fertilization on Douglas-fir Stands.

PUBLICATIONS DURING THE PAST FIVE YEARS (2001-2006)

Adams, A.B., R. B. Harrison, R.S. Sletten, B.D. Strahm, E.C. Turnblom and C.M. Jensen. 2005. Nitrogen-fertilization impacts on carbon sequestration and flux in managed coastal Douglas-fir stands of the Pacific Northwest. Forest Ecology and Management 220:313-325.

Harrison, R.B., M.F. Gordon, A.R. Sidell, B.L. Flaming., G.L. Wagoner, T. Breid, and P.A. Carpenter. Long-term effect of biosolids application on growth and biomass distribution of Douglas-fir in a coarse-textured outwash soil in Western Washington. In preparation for Forest Ecology and Management.

Harrison, R.B., J.G. Bagbee, R. Kloss, T. Lenihan, and D. Xue. Wastewater irrigation of a high-altitude coniferous forest: Nitrogen transformations in the soil profile and nutrient retention. In preparation for Journal of Environmental Quality.

Harrison, R.B., X. Dongsen, A.B. Adams, A.L. Angert, T.L. Bauerle, J.L. Evans, F.R. Knight, Jr., A.L. LevySmith, C.W. Licata, G. Scherer, S.P. Severtson, S.G. Weidner, W.R. Welzenbach and N.J. Whitney. Effect of Compost Amendment on Nutrients and Trace Metal Concentrations of Onion, Tomatos, Green Beans, Lettuce and Broccoli in a Home Garden Setting. In preparation for Compost Science and Utilization.

Harrison, R.B., M.G.F. Reis, G.G. Reis, D.J. Firme and A.L. Bernardo. Effect of spacing on K, Ca and Mg distribution in Eucalyptus camaldulensis, E. pellita and E. urophylla in southeastern Brazil. Submitted to Forest Ecology and Management

Brian D. Strahm,* Robert B. Harrison, Barry L. Flaming, Thomas A. Terry, Christopher W. Licata and Kyle S. Petersen. Soil-solution nitrogen concentrations and leaching rates as influenced by organic matter retention on a highly productive Douglas-fir site. Submitted to Soil Science Society of America Journal.

R.B. Harrison, T.A. Terry, C.W. Licata, B.L. Flaming, R. Meade, I.A. Guerrini, B.D. Strahm, D. Xue, A.B. Adams, M.R. Lolley, A. Sidell, G.L. Wagoner, D. Briggs, E.C. Turnblom. Predicting the biomass of a Douglas-fir/western hemlock plantation in the coastal hemlock zone of Washington: Accounting for bias. Submitted to Forest Science.

Prietzel J, Wagoner G.L., Harrison R.B. 2004. Long-term effects of repeated urea fertilization in Douglas-fir stands on forest floor nitrogen pools and nitrogen mineralization. Forest Ecology & Management 193:413-426.

R.B. Harrison, A.B. Adams, C. Licata, B. Flaming, G.L. Wagoner, P. Carpenter and E.D. Vance. 2003. Quantifying Deep-soil and coarse-soil fractions: Avoiding sampling bias. Soil Sci. Soc. Am. J. 67:1602-1606.

Harrison, R.B., E.C. Turnblom, C.L. Henry, P. Leonard, R. King, and R. Gonyea. 2002. Response of three young Douglas-fir plantations to forest fertilization with low rates of municipal biosolids. Journal of Sustainable Forestry 14:21-30.

Skinner, M.F., D. Zabowski, R.B. Harrison, A. Lowe and D. Xue. 2001. Measuring the cation exchange capacity of forest soils. Communications in Soil Science and Plant Analysis: 32:1751-1764.

Verberg, P.S.J., D.W. Johnson and R.B. Harrison. 2001. Long-term nutrient cycling patterns in Douglas-fir and red alder: A simulation study. Forest Ecology and Management 145:203-217.

Rosenfeld, P.E., C.L. Henry, R.L. Dills and R.B. Harrison. 2001. Comparison of odor emissions from three different biosolids applied to forest soil. Water, Air and Soil Pollution 127:173-191.

Harrison, R.B., M.G.F. Reis, G.G. Reis, D.J. Firme and A.L. Bernardo. 2001. Effect of spacing on N and P distribution in Eucalyptus camaldulensis, E. pellita and E. urophylla in southeastern Brazil. Forest Ecology and Management 133:167-177.

Harrison, R.B., J. Krejsl, N.S. Turner, J.A. Hoyle and C.L. Henry. 2001. Treatment of septic effluent for fecal coliform and nitrogen in coarse-textured soils: use of soil-only and sand filter systems. Water, Air and Soil Pollution 124:205-215.

Robert G. Lee

Professor of Forest Resources

EDUCATION

B.S. Forestry, University of California, Berkeley, 1964
M.F.S. Sociology, Ecology, and Philosophy, Yale University, 1969
Ph.D. Wildland Resource Science, University of California, Berkeley, 1973

PROFESSIONAL EXPERIENCE

1964-1967	Forest Manager, Rockport Redwood Company, Rockport, California
1970-1972	Research Sociologist, USDI National Park Service, Washington, D.C. with duty station in San Francisco, California
1972	Teaching Associate, University of California, Berkeley
1973-1978	Assistant Professor of Forestry, Assistant Resource Sociologist in the Agricultural Experiment Station, College of Natural Resources, University of California, Berkeley
1978-1983	Associate Professor of Forest Resources (Sociology of Natural Resources), University of Washington
1983-1988	Chair, Division of Forest Resource Management and Professor of Forest Resources (Sociology of Natural Resources), University of Washington
1988-1994	Professor of Forest Resources (Sociology of Natural Resources), University of Washington
1994-1997	Associate Dean for Academic Affairs, College of Forest Resources, University of Washington
1997-present	Professor of Forest Resources (Sociology of Natural Resources), University of Washington

FELLOWSHIPS AND AWARDS

Sigma Xi National Lecturer (1982-1984)
University of California Regents Fellowship (1970-1971)
University of California Schwabacher Fellowship (1969-1970)
Phi Beta Kappa
Sigma Xi
Xi Sigma Pi

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Rural Sociological Society
Phi Beta Kappa
Sigma Xi

EDITORSHIPS

1976-1979	Associate Editor, *Leisure Sciences*
1977-1978	Editorial Board, *Landscape*
1981-Present	Editorial Board, *Journal of World Forest Resources Management*
1987-1993	Editorial Advisory Board, *Society and Natural Resources*

EXTERNAL COMMITTEES AND BOARDS

1973-1976 University of California, Coordinator for and Advisor to APROFON (Forest Resource Development Agency, Nayarit, Mexico
1973-1977 Member, Technical Forestry Advisory Committee, Santa Rosa Junior College, Santa Rosa, California
1974-1976 Member, Science Advisory Panel for Lake Tahoe Area Research Coordination Board
1976 Reviewer, University of Michigan, School of Natural Resources Recreation Program
1976 Delegate, Inter-University Symposium on Renewable Natural Resource Planning and Programming, Pajaro Dunes, California
1976-1977 Member, RPG-2, Western Regional Planning Group Task Force on Forest Recreation
1980 Member, CSRS Review of Parks and Recreation Department, Michigan State University
1984 Member, CSRS Review of School of Natural Resource, University of Michigan, Ann Arbor
1986 Member, Wildfire Strikes Home Task Force sponsored by National Fire Protection Association, U.S. Forest Service and National Fire Administration, Boston, Massachusetts
1987-89 Member, Directorate for MAB-2 (Man and the Biosphere, Temperate Forest Ecosystems
1987-1988 Member, National Society of American Foresters Task Force on Community Stability
1988-1989 Chair, U.S. MAB-2 Directorate, Temperate Forest Ecosystems
1988-1989 Technical Advisor to Interagency Fire Policy Review Team appointed by Agriculture Secretary Lyng and Interior Secretary Hodel
1989-1990 Member, National Academy of Sciences Committee on Onshore Oil and Gas Development Policy
1989-1992 Vice Chair, U.S. MAB Temperate Ecosystems Directorate
1989-1991 Member, Pacific Northwest Strategy
1989-1993 Founding Member, Consortium for Social Values of Natural Resources
1990-1996 Task Force on Persistence of Rural Poverty, Rural Sociological Society
1990-1991 Scientific Advisor, Temperate Forest Foundation
1991-Present Chair of Board, Temperate Forest Foundation
1993 Consultant to FEMAT (Forest Ecosystem Management Assessment Team)
1994-1995 Member of Review Team for Department of Forest Management, University of British Columbia, Vancouver, Canada

SPECIAL ASSIGNMENTS AND COMMUNITY SERVICE

1976 Present testimony to Committee of Scientists formulating regulations for implementing National Forest Management Act
1984 Moderator, Debate between candidates for Washington State Land Commissioner, Washington State Forestry Conference
1987 Present testimony to Washington State Legislature on Timber Jobs Enhancement Bill
1987-1988 Promote national support for Urban/Forest Interface Initiative at University of Washington
1987-1989 Local Arrangements Committee for 1989 Annual Meeting of Rural Sociological Society, Seattle Washington
1987-1988 Chair Elect, South Puget Sound Chapter, Society of American Foresters
1990 Presented Congressional testimony and provided consultation on social and cultural impacts of implementing Spotted Owl conservation strategy.
1992 Member, U.S. Forest Service Task Force on Integrating Fire Management in Ecosystem Management

1993	Invited panelist for President Clinton's Forest Conference, Portland, Oregon
1994	Invited advisor to ad hoc commission charged with restructuring the U.S. Man and the Biosphere Program

CONSULTATIONS

1973	Sociological Consultant, Sasaki-Walker and Associates, Master Plan for Sequoia National Park
1975	Sociological Consultant, Visitor Use Patterns, Golden Gate National Recreation Area, USDI, National Park Service, San Francisco, California
1975-1977	Sociological Consultant, Carrying Capacity Team, Yosemite Master Planning Team, USDI, National Park Service
1975-1977	Sociological Consultant, Visitor Use Component of Lake Cunningham Master Plan, George S. Nolte and Associates, San Jose, California
1975-1976	Sociological Consultant, Executive Fire Management Training Seminar, U.S. Forest Service and National Wildfire Coordinating Committee
1977-1980	Sociological Consultant, Lake Mead and Lake Mohave Recreational Carrying Capacity Studies, USDI, National Park Service
1977	Sociological Consultant, Committee of Scientists , USDA, Secretary's Advisory Committee on Regulations for National Forest Systems, December
1977	Advise Washington Office Renewable Resource Planning Team on procedures for Social Impact Assessment in 1980 Renewable Resource Program for U.S. Forest Service
1978	Sociological Consultant, USDA, Forest Service, Region 5 Social Impact State for 1980 RPA Program Statement
1978	Evaluator, National RARE II Conference/Symposium, Missoula Montana, August 4-5
1979	Sociological Consultant, USDI, National Park Service, Lake Mead and channel Islands Carrying Capacity Studies
1979-1980	Sociological Consultant, USDI, National Park Service, Santa Monica Mountains
1980	University of Washington Representative, St. Helens Forest Land Research Cooperative Technical needs Workshop – September 4-5
1980	Advisor to USDA Forest Service, Chief's office, regarding revision of social assessment procedures for forest plans
1980-1981	Sociological Consultant, Envirosphere Company, Bellevue Washington- prepare sociological overviews for Wenatchee, Mount Baker, Snoqualmie and Colville National Forests for national forest plans.
1981-1984	Sociological Consultant to Forestry Department, Food and Agriculture organization of the United Nations, Rome
1982-1983	Sociological Consultant to California Department of Forestry, Sacraments, California
1986-1988	Advise U.S. Forest Service National Office on Strategies for Urban/Forest Interface Initiative
1987	Sociological Consultant to Urban Planning Associates for forest recreation habitat assessment at Priest Point Park, Olympia Washington
1990	Sociological Consultant to Mason, Bruce and Girard to study social and cultural impacts of implementing Spotted Owl conservation strategy
1990-1991	Forest Sector, Old Growth Committee, British Columbia
1991-1992	Sociological Consultant to Association of O&C Counties, Social Impacts of Spotted Owl Conservation

1993	Sociological Consultant to Northwest Forest Council, Assessment of social impacts of federal timber reservation
1994	Sociological Consultant to Daniels Research, British Columbia, Special Assessment of Wood-Producing Communities in Cariboo-Chilcotin region of interior B.C.
1994-1995	Sociological Consultant to Interior Lumber Manufacturers Association, assessment of social consequences of timber harvest deadline in British Columbia
1994-1995	Sociological Consultant, Western Forest Association, assessment of opportunities for strengthening local economies by targeting federal timber sales
1995	Sociological Consultant to Moresby Consulting to advise development of interviewing for assessment of social impacts on Queen Charlotte Islands
1999	Sociological Consultant, Moore-McFadden; review of recreational carrying capacity study for Snake River
1998-1999	Sociological Consultant, Association of Oregon and California Counties, monitoring of Northwest Forest Plan
1999	Sociological Consultant to Association of Oregon and California Counties monitoring Effects of Spotted Owl Conservation
2003-2005	Sociological Consultant to Coast Information Team to prepare Cultural Spatial Analysis of Central and North Coasts and Haidi, Gwaii, Queen Charlotte Islands, British Columbia, Canada

PUBLICATIONS DURING THE PAST FIVE YEARS (2001-2006)

Lee, R. G. 2001. "Integrating Socioeconomic and Biological Monitoring". In proceedings of BRIM Meeting, UNESCO, Man and the Biosphere Program, Rome, Italy.

Lee, R. G. 2001. "Collaboration and the Creation of Trust". Western Forester. May.

Calhoun, J. and R. G. Lee. 2001. "Organizational Learning: Adaptive Management and Salmon Conservation". Proceedings of conference of same name. University of Washington, Seattle Washington.

Lee, R. G. and P. Eckert. 2002. "Establishment Size and Structural Stability in Logging and Sawmilling: A Comparative Analysis". Canadian Journal of Forest Research. 32(1):67-80.

Lee, R. G. 2003. "Myth and Reality of Forest Land Use in the United States". NACASI Conference Proceedings, Portland, Oregon, March 29.

Jackson, E, R. G. Lee, and P. Sommers. 2004. Monitoring the Community Impacts of the Northwest Forest Plan: Proposing an Alternative to Social Indicators". Society and Natural Resources 17(3):223-233.

Lee, R. G. 2004. "Cultural Spatial Analysis of the Central Coast, North Coast, and Haida Gwaii/Queen Charlotte Islands, British Columbia". CIT (Coastal Information Team), Ministry of Sustainable Resource Management, Victoria, B.C., Canada.

Cold-Ravnkilde, S.M.., J. Singh, and R. G Lee. Forthcoming 2006. "Cascadia – the Reconstruction of a Bi-national Space". Journal of Borderline Studies.

Lee, R. G. and D. R. Field, eds. 2005. "Communities and Forests: Where People Meet the Land". Corvallis Oregon: Oregon State University Press.

Lee, R. G. and S. Wilke. 2005. "Forest as *Volk: Ewiger Wald* and the Religion of Nature in the Third Reich". Journal of Social and Ecological Boundaries. 1(1):23-49.

Lee, R. G. and S. Wilke. Forthcoming. "Forest as *Volk: Ewiger Wald* and the Religion of Nature in the Third Reich". Reprint of journal article in edited German volume on film in Nazi Germany.

R. G. Lee and Donald R. Field, eds. 2005. "Communities and Forests: Where People Meet the Land." Corvallis: Oregon State University Press.

Dorothy Paun

Associate Professor of Forest Marketing and Business Performance
Adjunct Associate Professor, Department of Pharmacy

EDUCATION

B.S. Natural Resources, University of Wisconsin, 1982
M.B.A. International Business and Finance, Universiteit of Leuven, Belgium, 1984
Ph.D. International Marketing, University of Oregon, 1993

PROFESSIONAL EXPERIENCE

University of Washington
- Fulbright Distinguished Chair, 2004-2005
- Associate Professor, College of Forest Resources, 1999 and continuing
- Affiliate Faculty, Henry M. Jackson School of International Studies, 2003 and continuing
- Acting Associate Dean, College of Forest Resources, 2000
- Adjunct Professor, School of Pharmacy, 2000-continuing
- Associate Director, School of Business, Retail Management Program, 2000-2002
- Assistant Professor, College of Forest Resources, 1993-1999

University of British Columbia, Canada
- Visiting Professor, Faculty of Forestry, 2004 and continuing

Università Bocconi, Italy
- Visiting Professor, School of Business, International Marketing, 2003

Helsinki School of Economics and Business, Finland
- Visiting Professor, International M.B.A. Program, 1995-1999

Joko Executive MBA Education Ltd., Finland
- Visiting Professor, International Executive M.B.A. Program, 1999

University of Oregon
- Graduate Teaching Fellow, 1989-1990

University of San Francisco
- Lecturer, 1986-1989

Tanana Valley Community College
- Lecturer, 1984-1986

PROFESSIONAL EXPERIENCE PRIOR TO ACADEMIC CAREER

Stockbroker, Shearson/American Express
Business Analyst, Management International
Park Ranger, Alaska State Parks
Fire Fighter, U.S.D.A. Forest Service
Naturalist, Wisconsin Department of Natural Resources
Plant Taxonomy Assistant, University of Wisconsin
Park Technician, Dade County Parks

PUBLICATIONS DURING THE PAST FIVE YEARS

Paun, Dorothy (2005), "A Longitudinal Study of Business Values and Performance in the Canadian and U.S. Paper Industry: Convergence and Divergence," Fifth Interdisciplinary U.S.-Canada Colloquium (accepted for publication).

Paun, Dorothy (2005), A Case Study on How To Conduct a Paper Industry Performance Review. Corvallis, Oregon: Oregon State University Press (March), 44 pages.

Paun, Dorothy (2005) "A Longitudinal Study of Debt to Equity in the U.S. and Canadian Pulp, Paper, and Packaging Industry," PaperMoney Journal, Volume 2, Number 9 (February). Accessed February 8, 2005, http://www.globalpapermoney.org/appipm/issues/2005-02-15/4.html.

Paun, Dorothy (2005) "A Five Year Investigation of Paper Industry Performance in the US and Canada," PaperMoney Journal, Volume 2, Number 6 (January). Accessed January 21, 2005, http://www.globalpaper money.org/tappipm/issues/2005-01-04/4.html.

Paun, Dorothy, Vivek Srivastava, Peter Stroble, Dan Thomson, Elizabeth Scott, Abhilash Reddy, Reinier Voorwinde, Nan Hu, and Bill Spohnholtz (2005), "Paper Industry Growth, Returns, and Leverage-2002," Solutions, Volume 88, Number 1 (January), pages 23-26. Accessed January 25, 2005, http://tappi.org/index.asp?rc=1&pid=31598&ch=1&ip=.

Paun, Dorothy, Vivek Srivastava, Elizabeth Scott, Nan Hu, Reinier Voorwinde, Peter Stroble, Dan Thomson, Abhilash Reddy, and Bill Spohnholtz (2004), "2004 Performance Survey of the North American Paper Industry," TAPPI Journal, Volume 3, Number 12 (December), 26 pages. Accessed December 31, 2004, http://tappi.org/index.asp?rc=1&pid=31230&ch=1&ip=.

Cantrell, Randall, Dorothy Paun, and Susan L. LeVan-Green (2004), "An Empirical Analysis of an Innovative Application for an Underutilized Resource: Small Diameter Roundwood in Recreational Buildings," Forest Products Journal, Volume 54, Number 9 (September), pages 28-35.

Paun, Dorothy, Vivek Srivastava, John Garth, Elizabeth Scott, Karen Black, Andrew Dodd, Linda Nguyen, Indroneil Ganguly, Jason Rice, Hyun Deok Seok (2004), "2003 Financial Review of the North American Paper Industry," TAPPI Journal, Volume 3, Number 1 (January), 20 pages. Accessed January 1, 2004, http://tappi.org/index.asp?rc=1&pid=28430&ch= 1&ip=.

Pulp, Paper, and Packaging Industry," PaperMoney Journal, Volume 2, Number 3 (November). Accessed November 19, 2004, http://www.globalpapermoney.org /tappipm/issues/2004-11-16/23.html.

Paun, Dorothy (2004) "Sales Trends in the North American Paper Industry," PaperMoney Journal, Volume 2, Number 1 (October), http://www.globalpapermoney.org /tappipm/issues/2004-10-19/30.html.

Paun, Dorothy, Randall Cantrell, and Susan L. LeVan-Green (2004), Assessing the Market Potential for Roundwood Recreational Buildings. Madison, Wisconsin: USDA, Forest Service Report FPL-GTR-144, (February), 9 pages.

Paun, Dorothy (2004) "1997-2002 Trend Analysis of Capital Expenditures in Canada and the U.S.: The

Paun, Dorothy, Vivek Srivastava, Indroneil Ganguly, John Garth, Linda Nguyen, Karen Black, Elizabeth Scott, Andrew Dodd, Jason Rice, and Hyun Deok Seok (2003), "Paper Industry Performance in the U.S. and Canada," Solutions, Volume 87, Number 1, (January), 28 pages. Accessed January 10, 2003, http://tappi.org/index.asp?rc=1&pid=28477&ch =1&ip=.

Paun, Dorothy, Cameron Crump, and Paul Boardman (2002), "Managerial Perceptions of Using Competitive Advantages to Moderate Entry Barriers in China," in Proceedings of the Eighth

Cross-Cultural Research Conference, Scott Smith, editor, Provo, UT: Brigham Young University.

Crump, Cameron, Dorothy Paun, and Paul Boardman (2002), "China's Non-Structural Building Materials Market," Seattle, Washington: Center for International Trade in Forest Products, Fact Sheet 49, (February), 2 pages.

Paun, Dorothy (2002), Conducting an Annual Performance Review of the Pulp, Paper, and Packaging Industry, Center for Paper Business and Industry Studies, Atlanta, Georgia: Institute of Paper Science and Technology. Accessed August 20, 2002, www.paperstudies .org/news_events/ events/seminars.

Paun, Dorothy, Pantipa Tachawachira, Tracy Ho, Chavonda Jacobs-Young, Barb Miele, Jeff Comnick, Shelley Gardner, Randy Cantrell, and Jason Cross (2001), "A Performance Assessment of the North American Paper Industry," Solutions, Volume 84, Number 12 (December), 27 pages. Accessed June 12, 2001, http://tappi.org/index.asp?rc=1&pid=20254&ch=1&ip=.

Paun, Dorothy and David Wright (2001), "Small Diameter Timber: A Review of the Literature," Seattle, Washington: Center for International Trade in Forest Products, Special Paper 38, 55 pages.

Crump, Cameron, Dorothy Paun, and Paul Boardman (2001), "How Competitive Advantages Can Lower Entry Barriers in China: Case Studies in the Interior Building Products Industry," Seattle, Washington: Center for International Trade in Forest Products, Special Paper 85 (December), 43 pages.

Paun, Dorothy, Pantipa Tachawachira, Chavonda Jacobs-Young, Shelley Gardner, Randy Cantrell, Barb Miele, Jeff Comnick, Jason Cross, and Tracy Ho, (2001), "An End of the Millennium Performance Review of the North American Paper Industry," Seattle, Washington: Center for International Trade in Forest Products, Special Paper 39, 33 pages.

Paun, Dorothy, Chavonda Jacobs-Young, Olivier Trendel, Karl Howard, Edie Sonne, Kevin Ceder, Cameron Crump, and Chad Oliver (2000), "Pulp, Paper, and Packaging Industry Financial Performance Review." Accessed September 2000, www.tappi.org.

Paun, Dorothy and Gerry Jackson (2000), "Potential for Expanding the Small-Diameter Timber Market." Madison, Wisconsin: USDA, Forest Service Report FPL-GTR-120 (November), 28 pages.

Paun, Dorothy, Chavonda Jacobs-Young, Olivier Trendel, Karl Howard, Edie Sonne, Kevin Ceder, Cameron Crump, and Chad Oliver (2000), "A Financial Analysis of North American Pulp and Paper Companies," TAPPI Journal, Volume 83, Number 7 (July), 32 pages. Accessed July 20, 2000, http://tappi.org/index.asp?rc=1&pid=6338&ch=1&ip=.

EXTERNAL GRANTS AND OTHER RESEARCH FUNDING DURING THE LAST FIVE YEARS

Canadian Studies Center
Canadian Embassy and Consulate General Grant
Center for Paper Business and Industry Studies
Center for International Business Education and Research
Fulbright Scholar Program
Idaho Rural Partnership
U.S.D.A., Forest Service, Forest Products Laboratory
U.S. Department of State, Bureau of Educational and Cultural Affairs

GRANTS AND CONSULTING

Academy of Finland
Attachmate Corporation
Calvin Reed and Merle Smith Center for Marketing
Canadian Embassy and Consulate General, Canadian Studies Grant
Center for Paper Business and Industry Studies
Cooperative Forestry National Investment Program
Danish Research Academy
Finnish Research Institute
Fulbright Foreign Scholarship Board
Institute Paper Science and Technology
Idaho Rural Partnership
J. C. Penney Corporation
McIntire-Stennis Program
Olympic Natural Resources Center
Oregon Economic Development Department
Total Energy Services
U.S.D.A., Forest Service, Forest Products Laboratory
U.S.D.A., Forest Service, Pacific Northwest Research Station
University of Oregon, International Business Center
University of Washington, Office of Development and Alumni Relations

AWARDS AND HONORS

Who's Who of American Women
Alpha Kappa Psi Research Award, Academy of Marketing Science
European Union Research Fellowship
Fulbright Scholar Distinguished Chair Award
Laurel Award for Scholarly Excellence
Networking Award, Center for International Trade in Forest Products
President's Award, Shearson/American Express
University of Helsinki Forest Products Faculty Consortium

UNIVERSITY, PROFESSIONAL, AND PUBLIC SERVICE CONTRIBUTIONS

Member, Canadian Studies Foreign Language Fellowship Selection Committee, 2004
Member, Development Team for the USDA Challenge Grant Proposal for Core Curriculum Redesign, 2002-2003
Volunteer, Gilda's Club Seattle, 2003
Volunteer, Washington Women's Employment and Education Organization, 2003
Participant, Institute for Teaching Excellence, 2002
Volunteer, Woodland Park Zoo Society, 2002
Associate Director, Retail Management Program, School of Business, 2000-2002
Volunteer, Northwest Organ and Tissue Donation Awareness, 2002
Member, Senate Committee on Planning and Budgeting, 2001-2002
Invited Speaker, University of Washington, Development Directors, Professional Selling Seminar, 2002
Member, Large Classroom Instruction, College of Forest Resources, 2001-2002
Volunteer, Fred Hutchinson Cancer Research Center, 2002
Adjunct Associate Professor, School of Pharmacy, 2000-2002

Invited Participant, University of Washington Collegium on Large Classes, 2001
Senator, University of Washington Faculty Senate, 1999-2001
Member, Committee on Negotiations Between University of Washington Administrations and Graduate Student Employee Coalition, 2001
College Marshall, Graduation Ceremony, College of Forest Resources, 2001
College Marshall, Executive MBA Gradation Ceremony, School of Business Administration, 2001
Participant, University of Washington, School of Business, NIBEN Workshop, 2001
Volunteer Librarian, Carl G. Jung Society (analytical psychology education and outreach organization), 1999
Representative, College of Forest Resources, at the Pinchot Institute Symposium on "Facilitating the Evolution in Forestry Education," 1999
Representative, School of Business Administration, Center for International Business Education and Research Center, World Trade Organization Meetings, 1999
Member, Publication Committee, Forest Products Society, 1998
Program Representative, Graduate Student Orientation, 1998
Faculty Advisor, Freshman Interest Group Program, University of Washington, 1995-1996
Conference Moderator, Third International Symposium on Pulp and Paper, "What is Determining International Competitiveness in the Global Pulp and Paper Industry?," University of Washington, 1994
Secretary, Forest Products Society, International Marketing Interest Group, 1993-1994
Member, Program Planning Group, Third International Symposium on Pulp and Paper, "What is Determining Competitiveness in the Global Pulp and Paper Industry?" University of Washington, 1993-1994
Conference Moderator, "Landscape Management Systems Symposia: How Can We Integrate Technology Policy?" Center for International Trade in Forest Products, 1993

John M. Perez-Garcia

Associate Professor of Forestry and Agricultural Economics

EDUCATION

B.S. Natural Resource Management/Forestry, Rutgers University, 1977
M.S. Agricultural Economics, University of Puerto Rico, 1983
Ph.D. Forest Economics, Yale University, 1991

PROFESSIONAL EXPERIENCE

1996-	Associate Professor, Center for International Trade in Forest Products, College of Forest Resources, University of Washington
1993-1996	Assistant Professor, Center for International Trade in Forest Products, College of Forest Resources, University of Washington
1990-1993	Research Assistant Professor, Center for International Trade in Forest Products, College of Forest Resources, University of Washington
1982-1985	Natural Resource Specialist, Department of Natural Resources, Forest Service of Puerto Rico, Puerta de Tierra, Puerto Rico
1981-1982	Research Assistant, Department of Agricultural Economics, University of Puerto Rico
1977-1980	Peace Corps Volunteer, El Salvador

RESEARCH EMPHASIS DURING THE PAST FIVE YEARS

2005	AF&PA, FRAC ($34,000) Harvested wood products accounting and competitiveness in forest products trade
2005	CORRIM Components Analysis ($20,000) USDA Forest Service
2004	Clallam County Economic Development Council ($15,000) Value-added products in Clallam County
2004	Olympic Natural Resource Center ($31,886) Factors affecting timber values on the Olympic Peninsula
2004	USDA Forest Service ($6,935) Supplemental to trade in forest products update
2003	USDA Forest Service ($13,446) Trade in forest products update.
2003	USDA Forest Service $31,763) Timber supply in Washington State
2002	AF&PA and FAS ($80,000) with Paul Boardman and Ivan Eastin. Emerging markets study for forest products
2002	Oregon Department of Forestry: ($45,000). An analysis of Oregon forests and forestry in the US and international context.
2002	ITTO ($20,000) with Ivan Eastin. Trade discrepancies in forest products statistics.
2002	Dewey Ballantine ($20,000). An analysis of softwood lumber prices and trade policy between US and Canada.

2001 American Forest and Paper Association: ($59,000) with Ivan Eastin and Paul Boardman. A Competitiveness Analysis of the Japanese Forest Product Sectors.

PUBLICATIONS DURING THE PAST FIVE YEARS (2001-2006)

Perez-Garcia, John, B. Lippke and J. Wilson 2005. The environmental performance of renewable building materials in the context of residential construction. *Wood Fiber Science* 37 (5): 3-17

Perez-Garcia, John, B. Lippke, J. Comnick and C Manriquez. 2005. Energy displacement and wood products market substitution using life cycle analysis. *Wood Fiber Science* 37 (5): 140-148

Perez-Garcia, John (2005) Resource Inventory, Market Assessment and Analysis for Forest Products in Clallam and Jefferson Counties. CINTRAFOR Working Paper 97. Center for International Trade in Forest Products, College of Forest Resources, University of Washington, Seattle, 48 pgs

Perez-Garcia, J. 2005. How will new large scale nature reserves in temporary and boreal forests affect the globe structural wood products sector? In: Innes, J.L., G.M. Hickey and H. F. Hoen (eds) Forestry and Environmental Change: Socioeconomic and Political Dimensions, CABI Publishing, New York, pgs 169-182.

Perez-Garcia, J. 2005. A preliminary assessment of the lumber manufacturing sector in Washington State. In: Deal, R., and S. White (eds) Understanding key Issues of Sustainable Wood Production in the Pacific Northwest, General Technical Report PNW GTR 626, USDA Forest Service, Pacific Northwest Research Station, Portland, OR, pgs 20-25.

Perez-Garcia, J. , J. Kent Barr and J. Daniels. 2005. Washington's sawmilling sector analysis: capacity utilization rates and timber outlook. CINTRAFOR Working Paper 99. Center for International Trade in Forest Products, College of Forest Resources, University of Washington, Seattle, 48 pgs

Robbins, A and J. Perez-Garcia 2005. Consumer willingness to pay for renewable building materials: an experimental choice analysis and survey. Working Paper 96. Center for International Trade in Forest Products, College of Forest Resources, University of Washington, Seattle.

Eastin, I, J. Perez-Garcia. (2004) Discrepancies in forest products trade statistics. Working Paper 95. Center for International Trade in Forest Products, College of Forest Resources, University of Washington, Seattle

Robbins, A, P. Boardman, J. Perez-Garcia, R. Braden. (2004)China Source Book: An introduction to the Chinese Residential Construction and Building Materials Market. Working Paper 94. Center for International Trade in Forest Products, College of Forest Resources, University of Washington, Seattle

B. Lippke, J. Wilson, J. Perez-Garcia, J. Bowyer, J. Meil. (2004). CORRIM Life cycle environmental performance of renewable building materials. *Forest Products Journal* 54(6):8-19

Meil, J., B. Lippke, J Perez-Garcia, J. Bowyer and J. Wilson. (2004). Environmental impacts of a single family building shell from harvest to construction. Module J in CORRIM Phase I Final Report. College of Forest Resources, Seattle, WA.

Perez-Garcia, J., B. Lippke, J. Comnick and C. Manriquez. (2004). Tracking carbon from sequestration in the forest to wood products and substitution. Module N in CORRIM Phase I Final Report. College of Forest Resources, Seattle, WA.

Bowyer, J., D. Briggs, B. Lippke, J. Perez-Garcia, J. Wilson, L. Johnson, J. Marshall, M. Puettman, E. Sakimoto, E. Dancer, B. Kasal, P. Huelman, M. Milota, I. Hartley, C. West, E. Kline, J. Meil, P. Winistorfer, C. Zhanging, C. Manriquez, J. Comnick and N. Stevens. 2004. Life Cycle

Environmental Performance of Renewable Building Materials in the Context of Residential Building Construction. CORRIM Phase I Final Report. College of Forest Resources, Seattle, WA.

Perez-Garcia, J. 2003. The importance of Oregon's forests in US and international markets: Meeting the future needs of consumers of forest products and environmental services. Working Paper 92. Center for International Trade in Forest Products, College of Forest Resources, University of Washington, Seattle. 95 pages.

Perez-Garcia, J, J. Edelson and H. Rodgers. 2003. Economic incentives for carbon storage in western Washington's forested riparian management areas. In: Peterson, D.L. and J.L. Innes (editors). 2003. Climatic change, carbon and forestry in northwestern North America. USDA Forest Service General Technical Report GTR-PNW. Pacific Northwest Research Station, Portland, OR.

Eastin, I and J. Perez-Garcia. 2003. Discrepancies in forest products trade statistics. *Forestry Chronicle* 79:6. pg 1084-1092.

Ismariah, A. and J. Perez-Garcia. (in review). Tropical forestland use and the economics of CO_2 emissions. (submitted to IUFRO World Forestry Congress XII).

Xu, Weihuan, B. Lippke and J. Perez-Garcia. 2003. Valuing biodiversity, aesthetics and job loss implications of ecosystem management using stated preferences. *Forest Science* 49(2):247- 257

Bowyer, J., D. Briggs, B. Lippke, J. Perez-Garcia, J. Wilson, L. Johnson, J. Marshall, M. Puettman, E. Sakimoto, E. Dancer, B. Kasal, P. Huelman, M. Milota, I. Hartley, C. West, E. Kline and J. Meil. 2002. Life Cycle Environmental Performance of Renewable Building Materials in the Context of Residential Building Construction: Phase I Interim Research Report. CORRIM INC. Box 352100, Seattle WA, 98102.

Meil, J., B. Lippke, J. Perez-Garcia and J. Bowyer. 2002 Environmental impacts of a single family building shell—from harvest to construction. Appendix G in: Bowyer, J., D Briggs, B. Lippke, J. Perez-Garcia and J. Wilson. 2002. Lifecycle environmental performance of renewable materials in the context of residential building construction. CORRIM Phase 1 Interim Research Report.

Perez-Garcia, John M., Linda A. Joyce, A David McGuire, and Xiangming Xiao. (2002). Impacts of climate change on the global forest sector. *Climatic Change* 54: 439-461

Perez-Garcia, J. and Scott Marshall 2002 Assessing implications of international trade and global investments in timberlands and manufacturing with respect to southern timber supplies. CINTRAFOR Working Paper 88 and SOFAC Research Report. Southern Research Station. Asheville, NC

Perez-Garcia, John., Linda A. Joyce, and A. David McGuire. 2002 Temporal Uncertainties of Integrated Ecological/Economic Assessments at the Global and Regional Scales. *Forest Ecology and Management* 162(2002) 105-115

Perez-Garcia, John. 2001. Structural changes in the global forest sector in the 21st century. CINTRAFOR News, 18(4): pgs. 1,3

Boardman, Paul, Ivan Eastin and John Perez-Garcia 2001. Japan Wood Market Research Study: A Competitive Assessment of the Japanese Forestry and Forest Product Sectors Report submitted to AF&PA and also CINTRAFOR Working Paper 89.

Luo, Juan and John Perez-Garcia. 2001. China's Housing Market: A Policy Assessment and Outlook for Wood Consumption. CINTRAFOR Working Paper 83.

Perez-Garcia, John. 2001. Cost benefit analysis for new proposed forest practices rules implementing the Forests and Fish report. Department of Natural Resources, Olympia WA 18 pps.

Perez-Garcia, John M. Jane Edelson and Kevin Zobrist 2001. Small business economic impact statement for new proposed forest practices rules implementing the Forests and Fish report. Department of Natural Resources, Olympia WA. 37pps.

Perez-Garcia, John M., 2001. The effects of a tariff elimination policy on the forest sector. CINTRAFOR Working Paper 79. College of Forest Resources, University of Washington, Seattle.

PROFESSIONAL ACTIVITIES

2004 Consultant to Clallam County Economic Development Council. Potential Investment Opportunities for Wood Processing Industries in Clallam County.

2001 Consultant to Dewey Ballantine, The extent of Lumber Markets and Effects of countervailing and dumping duties.

1999 Consultant to Department of Natural Resource. Own Price Demand Elasticity for Timber (with Shon Kraley)

1999 Consultant to Weyerhaeuser Company, World Timber Supply

1999 Consultant to Champion International Corp, World Timber Supply

1998 Consultant to John Hancock Timber Resource Group, Factors Determining Timber Prices (with Bruce Lippke).

1997 Expert Witness, Committee on Resources, Congress Role of Forests in Carbon Sequestration.

1996 Consultant to Dewey Ballantine, The Effect of Log Export Restrictions on Timber Prices

1996 Reviewer for Rocky Mountain Research Station research priorities in Climate Change.

1994 Visiting Scholar, International Institute for Applied Systems Analysis, Laxenburg, Austria. An Assessment of the Former Soviet Union's Forest Sector

1994 Consultant to Boise Cascade Corp, World Log Costs.

1994 American Cultural Exchange: International Training and Development Institute. Intensive course work in forest economics for Mr. Raja Zarif.

1993 Consultant to Russell McVeagh, McKenzie, Bartleet & Co. New Zealand. Global Prices for Sawlogs (with Bruce Lippke)

1993 Consultant to Washington Citizens for World Trade. Log Export Ban and Tax Impacts (with Bruce Lippke)

1992 Consultant to USAID/QUITO. International Markets for Wood and the potential to Develop New Markets for Ecuador

1992 Consultant to Jaakko Poyry/World Bank. Tropical Deforestation in Asia and Markets for Wood. International Trade in Tropical Hardwoods: The Impacts of Supply Reductions, Substitution, Trade Liberalization, and Carbon Emission Policy

1992 Consultant to International Institute for Environment and Development, London Environmental Economics Centre. Measuring the Impacts of Tropical Timber Supply Constraints, Tropical Timber Trade Constraints and Global Trade Liberalization.

1992 Consultant to Dewey Ballantine. Evaluation of Log Export Restriction Impacts on Log Costs in Canada (two reports submitted: one for Western Canada and a second for Eastern Canada).

1992 Consultant to Japan Wood Products Information and Research Center (JAWIC). An Assessment of US Log Export Restrictions on Japan.

1992 Discussant on panel of Developing Country Issues for FAO Review of World Timber Outlook Study.

MEMBERSHIPS (CURRENT AND PAST)

Society of American Foresters
Western Forest Economist Association
Southern Forest Economist Association
Western Economics Association
American Association for the Advancement of Science

David L. Peterson

Professor of Forest Ecology

EDUCATION

B.S. Zoology, University of Illinois, Urbana, 1976
M.S. Botany, University of Illinois, Urbana, 1977
Ph.D. Forest Ecology, University of Illinois, Urbana, 1980

PROFESSIONAL EXPERIENCE

2001- present	Research Biologist, USDA Forest Service, Pacific Northwest Research Station, Fire and Environmental Research Applications Team; and Professor, College of Forest Resources, University of Washington, Seattle, WA
1989-01	Research Biologist (Field Station Leader), U.S. Geological Survey, Cascadia Field Station; and Professor, College of Forest Resources, University of Washington, Seattle, WA
1984-89	Research Ecologist, USDA Forest Service, Atmospheric Deposition Effects Research Work Unit, Pacific Southwest Research Station, Riverside, CA; Unit Leader 1988-89
1981-84	Research Ecologist, USDA Forest Service, Fire Management Planning Research Work Unit, Pacific Southwest Research Station, Riverside, CA
1980-81	Visiting Assistant Professor, Department of Forestry, University of Illinois, Urbana

PUBLICATIONS DURING THE PAST FIVE YEARS (2001-2006)

Case, M.J. and D.L. Peterson. 200x. Fine-scale variability in growth-climate relationships of lodgepole pine, North Cascade Range, Washington. Northwest Science in review.

Peterson, D.L., L. Evers, B. Gravenmier, and E. Eberhardt. 2006. Analytical and decision support for hazardous fuels management. USDA Forest Service General Technical Report PNW-GTR-xxx. Pacific Northwest Research Station, Portland, OR. In press.

Holman, M.L. and D.L. Peterson. 200x. Sensitivity of forest growth to climatic variability in the Olympic Mountains, Washington. Canadian Journal of Forest Research in press.

Johnson, M.C., Peterson, D. L., and C.L. Raymond. 2006. Guide to fuel treatments in dry forests of the western United States: assessing forest structure and fire hazard. USDA Forest Service General Technical Report PNW-GTR-xxx. Pacific Northwest Research Station, Portland, OR. In press.

Keeley, J.E., G. Aplet, N.L. Christensen, S.G. Conard, E.A. Johnson, P.N. Omi, D.L. Peterson, and T.W. Swetnam. 2006. Ecological foundations for fire management in North America. Ecological Applications in press.

Nakawatase, J.M. and D.L. Peterson. 200x. Spatial and temporal variability in forest growth-climate relationships in the Olympic Mountains, Washington. Canadian Journal of Forest Research in press.

Stephenson, N., C. Allen, J. Baron, D. Fagre, D. McKenzie, D. Peterson, and K. O'Brian. 200x. Response of Western mountain ecosystems to climatic variability and change: the Western Mountain Initiative. Park Science in press.

Tyler, M.W. and D.L. Peterson. 200x. Vascular plant species diversity in low-elevation coniferous forests of the western Olympic Peninsula: a legacy of land use. Northwest Science in press.

Case, M.J. and D.L. Peterson. 2005. Fine-scale variability in growth-climate relationships of Douglas-fir, North Cascade Range, Washington. Canadian Journal of Forest Research 35:2743-2755.

Johnson, M.C. and D.L. Peterson. 2005. Forest fuel treatments in western North America: merging silviculture and fire management. Forestry Chronicle 81:365-368.

Littell, J. and D.L. Peterson. 2005. A method for estimating vulnerability of Douglas-fire growth to climate change in the northwestern U.S. Forestry Chronicle 81:369-374.

Peterson, D.L. M.C. Johnson, J.K. Agee, T.B. Jain, D.M. McKenzie, and E.R. Reinhardt. 2005. Forest structure and fire hazard in dry forests of the western United States. USDA Forest Service General Technical Report PNW-GTR-628. Pacific Northwest Research Station, Portland, OR.

Peterson, D.L. and J. Littell. 2005. Biological change in the global greenhouse – Climate Change and Biodiversity. Book review. Conservation Biology in press.

Raymond, C.L. and D.L. Peterson. 2005. Fuel treatments alter the effects of wildfire in a mixed-evergreen forest, Oregon, USA. Canadian Journal of Forest Research in press.

Strom, A., R.C. Francis, N.J. Mantua, E.L. Miles, and D.L. Peterson. 2005. Preserving low-frequency climate signals in growth records of geoduck clams (Panopea abrupta). Palaeo 228:167-168.

Raymond, C.L. and D.L. Peterson. 2005. How did prefire treatments affect the Biscuit Fire? Fire Management Today 65:18-22.

Fagre, D.B., S.W. Running, R.E. Keane, and D.L. Peterson. 2004. Assessing climate change effects on mountain ecosystems using integrated models: a case study. In H. Bugmann and U. Huber (eds.), Global Change and Mountain Regions. Kluwer Academic Publishing, Dordrecht, The Netherlands.

Gedalof, Z. D.L. Peterson, and N.J. Mantua. 2004. Atmospheric, climatic and ecological controls on extreme wildfire years in the northwestern United States. Ecological Applications 15:154-174.

Gedalof, Z. D.L. Peterson, and N.J. Mantua. 2004. Columbia River flow and drought since 1750. Journal of the American Water Resources Association 40:1579-1592.

Hessl, A.E., C. Milesi, M.A. White, D.L. Peterson, and R.E. Keane. 2004. Ecophysiological parameters for Pacific Northwest trees. USDA Forest Service General Technical Report PNW-GTR-618. Pacific Northwest Research Station, Portland, OR.

McKenzie, D, Z. Gedalof, D.L. Peterson, and P. Mote. 2004. Climatic change, wildfire, and conservation. Conservation Biology 18:890-902.

Strom, A., R.C. Francis, N.J. Mantua, E.L. Miles, and D.L. Peterson. 2004. North Pacific climate recorded in growth rings of geoduck clams: a new tool for paleoenvironmental reconstruction. Geophysical Research Letters 31: L0626, doi: 10.1029/2004GL019440.

Edmonds, R.L., R.C. Francis, N.J. Mantua, and D.L. Peterson. 2003. Sources of climatic variability in river ecosystems. Pages 11-37 in R.C. Wissmar and P.A. Bisson (eds.), Strategies for Restoring River Ecosystems: Sources of Variability and Uncertainty in Natural and Managed Systems. American Fisheries Society, Bethesda, MD.

Elman, E. and D.L. Peterson. 2003. Post-harvest regeneration of high-elevation forests in northern Washington, USA. Forestry Chronicle 79:268-272.

Fagre, D.B., D.L. Peterson, and A.E. Hessl. 2003. Taking the pulse of mountains: ecosystem responses to climatic variability. Climatic Change 59:263-282.

McKenzie, D., D.W. Peterson, and D.L. Peterson. 2003. Predicting conifer species distribution in mountain forests of Washington state, USA. Forestry Chronicle 79:253-258.

McKenzie, D., D.W. Peterson, D.L. Peterson, and P.E. Thornton. 2003. Climatic and biophysical controls on conifer species distributions in mountain forests of Washington state, USA. Journal of Biogeography 30:1093-1108.

McKenzie, D., S.J. Prichard, A.E. Hessl, and D.L. Peterson. 2003. Empirical approaches to modeling wildland fire in the Pacific Northwest region of the United States: methods and application to landscape simulation. Pages 85-97 in A. Perera and L. Buse (eds.), Emulating Natural Forest Landscape Disturbances. Columbia University Press, New York.

Mote, P.W., E.A. Parson, A.F. Hamlet, W.S. Keeton, D. Lettenmaier, N. Mantua, D.W. Peterson, D.L. Peterson, R. Slaughter, and A.K. Snover. 2003. Preparing for climatic change: the water, salmon, and forests of the Pacific Northwest. Climatic Change 61:45-88.

Sanscrainte, C.L. and D.L. Peterson. 2003. Carbon storage in subalpine tree islands, North Cascade Range, Washington. Northwest Science 77:255-268.

Sanscrainte, C.L. and D.L. Peterson. 2003. Carbon storage and soil properties in late-successional and second-growth subalpine forests in the North Cascade Range, Washington. Northwest Science 77:297-307.

Tyler, M.W. and D.L. Peterson. 2003. Effects of forest policy on landscape pattern of late-seral forest of the western Olympic Peninsula, Washington. Agriculture, Ecosystems and Environment 101:289-306.

Fagre, D.B. and D.L. Peterson. 2002. Modeling and monitoring ecosystem responses to climate change in three North American mountain ranges. Pages 249-259 in C. Körner and E. Spehn (eds.), Global Mountain Biodiversity: Changes and Threats. Springer-Verlag, Berlin.

Gedalof, Z., N.J. Mantua, and D.L. Peterson. 2002. A multi-century perspective of variability in the Pacific Decadal Oscillation: new insights from tree rings and coral. Geophysical Research Letters 29:2204-2207.

Peterson, D.W., D.L. Peterson, and G.J. Ettl. 2002. Growth responses of subalpine fir (Abies lasiocarpa) to climatic variability in the Pacific Northwest. Canadian Journal of Forest Research 32:1503-1517.

Diaz-Avalos, C., D.L. Peterson, E. Alvarado C., S.A. Ferguson, and J.E. Besag. 2001. Space-time modeling of lightning-caused forest fires in the Blue Mountains, Oregon. Canadian Journal of Forest Research 31:1579-1593.

Ettl, G.J. and D.L. Peterson. 2001. Genetic variation of subalpine fir (Abies lasiocarpa) in Olympic National Park, WA, USA: differentiation in response to an elevation gradient. Silvae Genetica 50:145-153.

McKenzie, D., A.E. Hessl, and D.L. Peterson. 2001. Recent growth in conifer species of western North America: assessing spatial patterns of radial growth trends. Canadian Journal of Forest Research 31:526-538.

Norheim, R.A. and D.L. Peterson. 2001. Vegetation mapping for San Juan Island National Historical Park, Washington. In Proceedings, Environmental Systems Research Institute 2001 User Conference, San Diego, CA.

Peterson, D.L. and R.D. Hammer. 2001. From open to closed canopy: a century of change in a

Douglas-fir forest, Orcas Island, Washington. Northwest Science 75:262-269.

Peterson, D.W. and D.L. Peterson. 2001. Mountain hemlock growth responds to climatic variability at annual and decadal scales. Ecology 82:3330-3345.

Rochefort, R.M. and D.L. Peterson. 2001. Genetic and morphologic variation in Phyllodoce empetriformis and P. glanduliflora (Ericaceae) in Mount Rainier National Park, Washington. Canadian Journal of Botany 79:179-191.

Schmoldt, D.L. and D.L. Peterson. 2001. Strategic and tactical planning for managing national park resources. Pages 67-79 in D.L. Schmoldt, J. Kangas, G. Mendoza, and M. Pesonen (eds.), The Analytic Hierarchy Process in Natural Resource and Environmental Decision Making. Kluwer Academic Publishing, Dordrecht, The Netherlands.

Schmoldt, D.L. and D.L. Peterson. 2001. Efficient group decision making in workshop settings. Pages 97-114 in D.L. Schmoldt, J. Kangas, G. Mendoza, and M. Pesonen (eds.), The Analytic Hierarchy Process in Natural Resource and Environmental Decision Making. Kluwer Academic Publishing, Dordrecht, The Netherlands.

Sullivan, T.J., D.L. Peterson, C.L. Blanchard, S.J. Tannenbaum, K. Savig, and D. Morse. 2001. Assessment of air quality and air pollutant impacts in Class I national parks of California. National Park Service, Air Resources Division, Denver, CO.

Clare M. Ryan

Associate Professor of Natural Resource and Environmental Policy
Adjunct Associate Professor, Daniel J. Evans School of Public Affairs
Adjunct Associate Professor, School of Marine Affairs

EDUCATION

B.S. Environmental Science, Western Washington University, 1983
M.S. Natural Resource Policy and Administration, University of Michigan, 1990
Ph.D. Natural Resource and Environmental Policy, University of Michigan, 1996

PROFESSIONAL EXPERIENCE AND APPOINTMENTS

Assistant/Associate Professor. University of Washington, College of Forest Resources. 1998-present

Visiting Scholar. USDA Forest Service, PNW Research Station. Rural-Urban Interactions Team. Seattle, WA. 2004-2005.

Lecturer and Teaching Assistant. University of Michigan, School of Natural Resources and Environment.

Environmental Scientist. U.S. Environmental Protection Agency, Office of Air and Radiation, National Vehicle and Fuel Emissions Laboratory. Ann Arbor, MI. August 1990-March 1993.

National Network for Environmental Management Studies Fellow. U.S. Environmental Protection Agency, Water Division. Seattle, WA. May-August, 1989.

Environmental Scientist/Estuary Program Specialist. U.S. Environmental Protection Agency, Water Division, Office of Puget Sound. Seattle, WA. 1986-1988.

Water Quality/Solid and Hazardous Waste Specialist. Washington State Department of Ecology. 1983-1986.

FUNDED RESEARCH IN THE LAST FIVE YEARS

Fire Science Application: Assessing Information Dissemination and Use, UW Royalty Research Fund. $27,375 (3/06-4/07)

* *Graduate Studies in Conservation of Living Systems*, Seattle Biotech Legacy Foundation. $30,000 (7/05-7/06)

Capacity for Using New Knowledge in Resource Management, US Forest Service. $130,450. (9/03 – 6/05)

**Ross Lake Social Science Needs*, North Cascades National Park. $6,900. (7/03 – 12/04)

Fisheries Training Grant, U.S. Dept. of Commerce, NOAA. $100,000. (9/02 - 9/05)

* *Managing Editor of CMER Scientific Review*, WA Dept. of Natural Resources. $59,583. (6/01 - 6/02)

* *Urban Ecology Initiative.* National Science Foundation, IGERT Program. $3.2 million. (9/01 - 12/06)

Collaborative Watershed Planning. NOAA/WA Sea Grant. $125,000. (1/01 – 9/04)

Integrated Research and Management. USDA Forest Service. $40,000. (1/00 – 6/05)

* *Urban Ecology Initiative*. UW Tools for Transformation. $320,000. (9/99 – 9/01)

* *Nonpoint Source Pollution in Riparian Areas*. USDA Forest Service. $40,000. (9/99 – 12/02)

** Impact of Urban Patterns on Ecosystem Dynamics*. National Science Foundation. $425,884. (9/99 – 9/02)

Lessons from Adaptive Management. USDA Forest Service. $27,000. (8/98 – 12/02)

** Co-Principal Investigator*

PUBLICATIONS DURING THE PAST FIVE YEARS (2001-2006)

Refereed Journal Articles

Ryan, C. M., and J. Klug. 2005. "Collaborative Watershed Planning in Washington State: Implementing the Watershed Planning Act." *Journal of Environmental Planning and Management*. 48(4) 491-506.

Alberti, M., J.M. Marzluff, E. Shulenberger, G.A. Bradley, C. M. Ryan, C. Zumbrunnen. 2003. "Integrating Humans into Ecology: Opportunities and Challenges for Urban Ecology." *Bioscience* 53(12): 1169-1179.

Stankey, G. H., B.T. Bormann, C.M. Ryan, B. Shindler, V. Sturtevant, R.N. Clark, C. Philpot. 2003. "Adaptive Management and the Northwest Forest Plan: Rhetoric and Reality." *Journal of Forestry*. 101(1): 40-46.

Ryan, C.M. 2002. "Trends in Ownerships and Policies Relevant to Forest Resources." in *Encyclopedia of Life Support Systems*, UNESCO, EOLSS Publishers, Ltd.

Bash, J.S. and C.M. Ryan. 2002. "Stream Restoration and Enhancement Projects: Is Anyone Monitoring?" *Environmental Management*. 29(6):877-885.

Ryan, C.M. 2001. "Leadership in Collaborative Policy Making: An Analysis of Agency Roles in Regulatory Negotiations." *Policy Sciences*. 34:221-245.

Refereed Symposia Proceedings

Ryan, C. M., and R.D. Bidwell. 2005. "Collaborative Watershed Planning as a New Governance Strategy: Community-Based and Intergovernmental Approaches." *USGS Scientific Investigations Report*. Proceedings from the Institutional Analysis Workshop. Fort Collins, CO. January 2005.

Reviewed/Edited Book Chapters

Ryan, C.M. 2003. "The Ecosystem Experiment in British Columbia and Washington State." In: *Two Paths Toward Sustainable Forests: Public Values in Canada and the United States*. B. Shindler, B. Steel, and T. Beckley, Eds. Oregon State University Press.

Ryan, C.M., and S.M. Jensen. 2002. " Scientific, Institutional, and Individual Constraints on Restoring Puget Sound Rivers." In: *Restoration of Puget Sound Rivers*. D.R. Montgomery, S.M. Bolton, D. B. Booth, and L. Wall, eds. University of Washington Press.

Thorud, D.B., G.W. Brown, B.J. Boyle, and C.M. Ryan. 2002. "Issues to Be Confronted." In: *Land Stewardship Through Watershed Management: Perspectives for the 21st Century*. P.F.Ffolliott, M.B. Baker Jr., C.B. Bedminster, M.C. Dillon, and K.L. Mora, eds. Kluwer Academic/Plenum Publishers.

Other Professional and Edited Publications

Stankey, G.H., B.T. Bormann, C.M. Ryan, B. Shindler, V. Sturtevant, R. Clark, and C. Philpot. 2005. *Learning to Manage a Complex Ecosystem: Adaptive Management and the Northwest Forest Plan.* USDA Forest Service, PNW Research Station, General Technical Report. 224 pages.

PROFESSIONAL SERVICE ACTIVITIES

Associate Editor, *Society and Natural Resources*, 2003 – 2006.

National Science Foundation, IGERT proposal review panel member. 2002 – continuing.

National Oceanic and Atmospheric Administration (NOAA) proposal reviewer, 2002 – continuing.

Sustainable Natural Resources Foundation, Conference on Sustainability, Sept. 2000. Facilitate discussion sessions, assist preparation of conference proceedings and final report.

Program Committee, 8th International Symposium on Society and Resource Management, 1999-2000.

Peer-Reviewer: (Coastal Management, Island Press, Journal of Forestry, Journal of Natural Resources and Life Sciences Education, Society and Natural Resources)

AWARDS

Nominee: UW Distinguished Teaching Award. 2004.

College of Forest Resources Recognition Award: Exemplary Research Funding. Spring 2002.

College of Forest Resources Recognition Award. Spring 2000.

Honorable Mention. Willamette University College of Law, Negotiation Simulation Writing Contest, July 1999.

College of Forest Resources Award: Sustained and Productive Interdivisional Collaboration. June 1999.

School of Natural Resources and Environment Superior Teaching Award. 1995.

US EPA Bronze Medal for Commendable Service. 1992.

Samuel Track Dana Award (outstanding scholarship and service). 1992.

Stanley A. Cain Award (academic achievement and professional promise). 1990.

University of Michigan Rack ham Graduate School Fellowship. 1990.

National Network for Environmental Management Fellowship. 1989.

Center for Education of Women (CEW) Scholar. 1989-1990.

School of Natural Resources Merit Awards. 1988-1993.

PROFESSIONAL AFFILIATIONS

Association for Public Policy Analysis and Management
American Water Resources Association
Society of American Foresters
American Political Science Association
Western Political Science Association
American Society for Public Administration

Peter Schiess

Professor of Forest Engineering

EDUCATION

Diploma Forest Engineering, Swiss Federal Institute of Technology, 1968
Ph.D. Microclimatology, University of Washington, 1975

PROFESSIONAL EXPERIENCE

1994 - 1994 Scientific Advisor , Temperate Forest Foundation

1994-2001 Board of Directors, Forestry Training Center, Port Angeles. Center for training of mechanized harvesting equipment operators in thinning operation

1989 Professor of Forest Engineering, College of Forest Resources, University of Washington, Seattle, Washington 98195

1985-1987 Advisor to Department of Natural Resources on engineering training requirements and position classification; long term harvest planning and transportation needs.

1983-1989 Associate Professor of Forest Engineering,

1977-1983 Assistant Professor of Forest Engineering

1975-1977 Research Assistant Professor, College of Forest Resources

l969-l975 Research Associate, Microclimatology, College of Forest Resources, University of Washington, Seattle, Washington

1968-1969 Research Engineer, Federal Institute of Forest Research, CH-8903 Birmensdorf, Switzerland. Working on problems of saturated soil moisture movement and drainage of saturated soils

CONSULTANCIES

2001- Washington State Department of Natural Resources,
Expert witness on appropriate road construction practices as part of road failures and resulting damages.

1996-98 Washington State Department of Natural Resources
Expert witness on appropriate logging practices as part of forest fire investigations.

1993 Champion International Corporation
Expert witness in the area of historical logging practices, road construction development for railroad and truck logging.

1992-1996 Appointed by the Government of British Columbia, Canada, as a member of the

International Scientific Panel to review and develop forest harvesting standards in the Clayoquot Sound Area, Vancouver Island.

1987-89 Instructor for timber harvesting for tri-regional education in ecology and silviculture for Forest Service personnel. Colorado State University.

1987-1989 Food and Agriculture Organization, United Nations, Rome, Italy. Prepare handbook on road construction in sensitive watersheds for their professional field staff.

1985-present Advisor to Washington State Department of Natural Resources on engineering training requirements and position classification; long term harvest planning and transportation needs.

1985 ITT-Rayonnier Corporation.
Expert witness on logging operations and safety.

1984 Visit of the Forestry Universities at Beijing, Nanjing and Harbin at request of the Ministry of Forestry to review teaching and research programs in the area of harvest operations and road construction and design. Part of a four-member team from the U.S.

AWARDS

1999 Recipient of D & R McLachlan endowed professorship in Forest Engineering,
1993 Recipient of the Burlington Northern Foundation's Faculty Achievement Award for excellence in teaching

PUBLICATIONS DURING THE PAST FIVE YEARS (2001-2006)

Schiess, P., 2005. The application of spatially explicit digital elevation and canopy surface data for harvest planning: Moving from coarse digital elevation models and stand averages to detailed ground and canopy surface models in the design of forest transportation systems. Proceedings, FORMEC 2005, INNOVATIONEN IN DER FORSTTECHNIK DURCH WISSENSCHAFTLICHE KOOPERATION. University of Ljubljana, Ljubljana, SLO, 26-29 Sept. 2005.

Schiess, P and A. Mouton, 2005. North Fork Mineral Creek Access and Transportation Strategy. Techn. Report, University of Washington, Seattle, WA

K.A. Vogt, M.G. Andreu, D.J. Vogt, R. Sigurdardottir, R.L. Edmonds, P. Schiess and K. Hodgson. Societal Values and Economic Return Added for Forest Owners by Linking Forests to Bioenergy Production, 2005. J. of Forestry

Schiess P., F. Krogstad and F. Damian, 2004. Locating ditch relief culverts to reduce sediment deliveries to streams – an interactive design tool. Proceedings, Joint Conference of IUFRO 3.06 Forest Operations in Mountainous Conditions and the 12th International Mountain Logging Conference, Vancouver, B.C., Canada, June 13-16, 2004.

F. Krogstad and P. Schiess, 2004. The Allure and Pitfalls of Using LIDAR Topography in Harvest and Road Design. Proceedings, Joint Conference of IUFRO 3.06 Forest Operations in Mountainous Conditions and the 12th International Mountain Logging Conference, Vancouver, B.C., Canada, June 13-16, 2004

Schiess, P. and F. Krogstad, 2004. Forest Harvest and Transportation. IN: (T. G. Northcote & G.F. Hartman, eds.), Fishes and Forestry: Worldwide Watershed Interactions and Management. Blackwell Science, Oxford, UK.

Schiess, P and J. Tryall, 2003. Developing a Road System Strategy for the Tahoma State Forest. Techn. Report, University of Washington, Seattle, WA.

Schiess, P and F. Krogstad, 2003. LIDAR-Based Topographic Maps Improve Agreement Between Office-Designed and Field-Verified Road Locations. Proceedings of the 26th Annual Meeting of the Council on Forest Engineering,, Bar Harbor, Maine, USA, 7-10 September, 2003

Rogers, L. and P. Schiess, 2003. A new precision Forest Road Design and Visualization Tool: PEGGER. Proceedings, 2nd International Precision Forestry Symposium, University of Washington, Seattle, WA 98195, June 15-17, 2003.

Schiess, P and J. Tryall, 2002. Transportation & Road Management Requirements to Facilitate Habitat Restoration in the Tyee South Planning Area. Techn. Report, University of Washington, Seattle, WA.

Schiess, P. and F. Krogstad. 2001. 2001 – A forest engineering odyssey. Proceedings. . International Mountain Logging and eleventh Pacific Northwest Skyline Symposium, Dec. 2001. University of Washington, Seattle, WA.

Rogers, L.R and P. Schiess. 2001. Pegger & Roadview – A new GIS tool to assist Engineers in operations planning. IN (Schiess P. and F. Krogstad eds.) Proceedings, International Mountain Logging and eleventh Pacific Northwest Skyline Symposium, Dec. 2001. University of Washington, Seattle, WA.

Schiess, P. 2001. Road management strategies to reduce habitat impacts - a case for engineered cable yarding operations and harvest schedules. Proceedings, FAO/ECE/ILO Committee on Forest Technology, Management and Training, and International Union of Forest Research Organizations. 18 – 24 June, Ossiach, Austria.

Schiess, P and A. Arntzen, 2001. Assessment of Operational Feasibilities for Implementing the OESF Conservation Strategy. Techn. Report, University of Washington, Seattle, WA.

Eric C. Turnblom

Associate Professor of Mensuration
Silviculture Project Leader, Stand Management Co-op

EDUCATION

B.S. Forest Science, University of Illinois, 1983 (with Honors)
M.S. Forest Mensuration, University of British Columbia, 1986
Ph.D. Forest Biometrics, University of Minnesota, 1994

PROFESSIONAL EXPERIENCE

1982 — Forestry Technician, USFS, Siskiyou NF, Gold Beach, OR
Performed stand examination surveys, regeneration surveys, brush field surveys, provided preliminary silviculture prescriptions; manual back-pack sprayer application of herbicide for seedling release. Attended FS fire school.

1982 – 1983 — Lab Assistant, Forest Soils Lab, University of Illinois, Champain/Urbana, IL
Prepared and tested both plant and soil samples for various nutrient concentrations and pH. Experience calibrating spectral chromatography equipment.

1983 — Forestry Technician, US Forest Service, North Central For. Exp. Station, Chicago, IL
Assisted in the design and implementation of a complicated survey to estimate recreation user volume in Ned Brown Forest Preserve, Cook County, IL.

1984 – 1986 — Graduate Teaching Assistant, University of British Columbia, Vancouver, B.C., CAN
Assisted professor in introductory level forest mensuration class, introductory and senior level forest management classes. Lectured to senior level Forest Sampling class.

1986 – 1990 — Graduate Research/Teaching Assistant, University of Minnesota, St. Paul, MN
Cooperatively developed research strategies for projects with major professor, Tom Burk (40% time). Help install and maintain College microcomputer lab (30% time). Teaching Assistant for undergraduate forest biometrics class.

1990 – 1994 — Assistant Specialist, Dept. Forest Science, University of California, Berkeley, CA
Collaborated with principal investigators in developing models for tree, stand growth, and mortality and implementation methods for the CACTOS growth projection system. Focused on developing quasi-theoretical models for adjusting periodic growth predictions for varying levels of precipitation. Involves much FORTRAN programming and source code maintenance. Lectured to upper division natural resources sampling class. Teaching assistant during UCB natural resources inventory field studies.

1994 – 2002 — Assistant Professor of Forest Mensuration, College of Forest Resources, UW, Seattle, WA

50% research, 50% teaching. Research projects include investigations into the self-thinning dynamics of managed Douglas-fir plantations and other projects as Silviculture Project Leader for the Stand Management Co-op. Teaching duties include a graduate Forest Biometry course, an undergraduate Forest Measurements for Engineers course, and the Growth and Yield Estimation topic of Silviculture Institute XVII, Module 3, "Statistics & Forest Resource Monitoring."

1996 Acting Director, Stand Management Cooperative, CFR, UW, Seattle, WA
Duties of this important post are separately described in Section 8 of this CV.

1997 Journey Silviculturist Certification Panel member, USFS PNW Regional Office, Portland, OR
Reviewed and critiqued oral presentations of silviculture prescriptions made by Journey Silvicululturist candidates and provided oral exam questions. Provided input and voted in pass/fail decision.

2002 – 2004 Faculty Senator, University of Washington.
Elected by CFR Faculty as their representative in shared governance for two-year term. Attended Faculty Senate meetings every quarter, reviewed, helped revise and voted on all levels of legislation (C, B, and A, which affects Faculty Code).

2003 – 2004 Vice-chair (chair-elect), South Puget Sound Chapter, Washington State Society of American Foresters. Elected by membership June 2003. 1-yr term beginning 2003. Assisted chapter chair (Don Hanley) to plan and arrange for meeting places, develop speaker and activity programs.

2003 – 2004 Secretary, Society of American Foresters Biometrics (A3) Working Group. Elected by membership July 2002. 2-yr term beginning 2003.
Work with chair and chair-elect to develop newsletter, convention speaker program, and other regional conference events.

2004 Chair, South Puget Sound Professional Chapter, Washington State SAF.
Plan and arrange for meeting places, develop speaker and activity programs.

1994 – present Silviculture Project Leader, Stand Management Cooperative (SMC), CFR, UW, Seattle, WA
Responsible for proposing budget for continuing existing SMC field research trials; oversee planning and implementation of field work; lead the Silviculture Project Technical Advisory Committee (TAC); travel throughout western British Columbia, Washington, and Oregon to research sites to monitor field crews, to assess efficacy of treatment regimes and measurement protocols, to assess storm damage, etc.; co-supervise (with SMC Director) the SMC Database Specialist, and the SMC Database Manager and Research Forester; analyze collected data and report significant findings; design new research trials to test timely research hypotheses.

1997 – present Member of the Graduate Faculty, UW
Admittance to the Graduate Faculty attests to research excellence and capability to mentor Ph.D. graduate students.

2002 – present Associate Professor of Forest Mensuration, College of Forest Resources, UW, Seattle, WA.
40% research, 40% teaching, 20% service. Teach six classes (CFR 564, ESRM 304, ESRM 323, ESRM 368, Q SCI 482, Q SCI 486), perform research on topics including intensive silviculture options for plantations, forest growth and yield modeling, and impacts of climate and weather on forest tree growth, serve on various college committees, provide other service to CFR community, UW campus, and professionals in the region.

2003 – present Faculty Representative, UW Student Chapter, South Puget Sound (SPS) Chapter, SAF
Attend student chapter meetings; mentor students by providing advice and resources for field trips and speaker program development; report student chapter activities to SPS Chapter chair; attend monthly Washington State SAF Executive Committee meetings as needed.

AWARDS AND HONORS

Meritorious Achievement Award, USFS 1982
University Graduate Fellowship, U.B.C. 1984 - 86
Exceptional Achievement Fellowship, University of Minnesota, 1990
Appreciation Award, Chairing Organizing Committee, Western Mensurationists, 2002

PUBLICATIONS DURING THE PAST FIVE YEARS (2001-2006)

Refereed Journal Publications

Turnblom, E.C. and R.L. Collier. 2001. Response of coastal Douglas-fir to live crown reduction: Epicormic branching. West. J. Appl. For. 16(2):80-86.

Harrison, R.B., E.C. Turnblom, C.L. Henry, P. Leonard, R. King, R. Gonyea and. 2002. Response of three young Douglas-fir plantations to forest fertilization with low rates of municipal biosolids. Journal of Sustainable Forestry 14(2/3): 21 -30.

Turnblom, E.C. and R.L. Collier. 2003. Growth of Residual Branches on Pruned Coastal Douglas-Fir. West. J. Appl. For. 18(3):185 –188.

Pittman, S.D. and E.C. Turnblom. 2003. A study of self-thinning using coupled allometric equations: Implications for coastal Douglas-fir stand dynamics. Can. J. For. Res. 33:1661 – 1669.

Sonne, E., E.C. Turnblom, D.G. Briggs, and G. Becker. 2004. Log and lumber grades and value from a Douglas-fir stand 20 years after thinning and biosolids fertilization. West. J. Appl. For. 19(1): 34 –41.

Marshall, D.D. and E.C. Turnblom. 2005. Wood productivity of Pacific Northwest Douglas-fir: Estimates from growth-and-yield models. J. For. 103(2): 71 – 72.

Adams, A.B., R.B. Harrison, R.S. Sletten, B.D. Strahm, E.C. Turnblom, C.M. Jensen. 2005. Nitrogen-fertilization impacts on carbon sequestration and flux in managed coastal Douglas-fir stands of the Pacific Northwest. Forest Ecol. and Mgt. 220: 313-325.

Amoroso, M.M. and E.C. Turnblom. 2006. Production in mixed species plantations compared to pure: Douglas-fir and western hemlock in the Pacific Northwest. Can. J. For. Res. vv: p – pp. ACCEPTED.

Journal Publications In Revision, Submitted, or in Preparation

Briggs, D.G. and E.C. Turnblom. 2006. Effect of Pre-commercial Thinning on Number and Diameter of Branches in Coastal US Douglas-fir Plantations. For. Sci. vv:pp –ppp. ACCEPTED and IN REVISION.

Senger, M.J., E.C. Turnblom, R.L. Collier. ACCEPTED and IN REVISION. Modeling Curtis' Relative Density. W. J. Appl. For. vv: p – pp.

Turnblom, E.C. and T.E. Burk. 2006. Fitting a boundary relationship with reference to the self-thinning line. ACCEPTED and IN REVISION. Can. J. For. Res. vv:pp –pp.

Publications in Conference Proceedings

Turnblom, E.C and G. Becker. 2002. Cross-validation of alternative branch models for Douglas-fir using geographically disparate data sources from Europe and the Northwest U.S. Fourth workshop, IUFRO WP S5.01-04 "Connection between Forest Resources and Wood Quality: Modeling Approaches and Simulation Software." Harrison Hot Springs, B.C., Canada, 9 –13 Sep, 2002. 80 participants.

Briggs, D.G., E.C. Turnblom and O.A. Hoibo. 2002. Relationship between branch diameter growth and stem growth in young coastal Douglas-fir. Fourth workshop, IUFRO WP S5.01-04 "Connection between Forest Resources and Wood Quality: Modeling Approaches and Simulation Software." Harrison Hot Springs, B.C. Canada, 9 –13 Sep, 2002. 80 participants.

Hoibo, O.A., E.C. Turnblom, and D.G. Briggs. 2002. Vertical profile of branch and knot sizes in young coastal U.S. Douglas-fir plantations spaced to different densities. Fourth workshop, IUFRO WP S5.01-04 "Connection between Forest Resources and Wood Quality: Modeling Approaches and Simulation Software." Harrison Hot Springs, B.C. Canada, 9 –13 Sep, 2002. 80 participants.

Marshall, D.D. and E.C. Turnblom. 2004. Extrapolation of short-term research and operational results to long-term yield forecasts. College of Forestry Outreach Education, Oregon State University Symposium "Intensive Plantation Forestry in the Pacific Northwest: Assessment of Future Potential & Economic, Environmental and Social Implications, Jan 20-22, 2004, Portland, OR. Published < http://outreach.cof.orst.edu/plantation/agenda.htm>.

Technically Reviewed Publications and Reports

Turnblom, E. 2001. Growth of spaced, immature western hemlock stands: First growth period results. SMC Quarterly Newsletter 11(11): 2 –5. Newsletter of the Stand Management Cooperative, College of Forest Resources, University of Washington, Box 352100, Seattle, WA 98195-2100.

Turnblom, E.C. 2001. Silviculture Project Progress Report and Field Research Update. Stand Management Cooperative Annual Report: January–December 2000. Stand Management Cooperative, College of Forest Resources, University of Washington, BOX 352100, Seattle, WA. 98195-2100.

Turnblom, E. and Collier, R. 2001. Is epicormic branch formation a problem after pruning Douglas-fir? SMC Fact Sheet No. 5. Stand Management Cooperative, College of Forest Resources, University of Washington, BOX 352100, Seattle, WA 98195-2100.

Sonne, E., D. Briggs and E. Turnblom. 2001. The effect of biosolid fertilization and thinning on volume and value of a 55 year old, low site Douglas-fir stand. SMC Quarterly Newsletter 10(10): 1 –6. Newsletter of the Stand Management Cooperative, College of Forest Resources, University of Washington, Box 352100, Seattle, WA 98195-2100.

Flewelling, J., R. Collier, B. Gonyea, D. Marshall and E. Turnblom, 2001. Height-age curves for planted stands of Douglas-fir, with adjustments for density. Stand Management Cooperative, College of Forest Resources, University of Washington, BOX 352100, Seattle, WA 98195-2100. SMC Working Paper No. 1.

Turnblom, E.C. 2002. Silviculture Project Progress Report and Field Research Update. Stand Management Cooperative Annual Report: January–December 2001. Stand Management Cooperative, College of Forest Resources, University of Washington, BOX 352100, Seattle, WA. 98195-2100.

Turnblom, E. and M. Amoroso. 2002. Assessing Sequestered Carbon in the Forest Zone of King County, Washington, U.S.A. SMC Quarterly Newsletter 12(1):5. Newsletter of the Stand Management Cooperative, College of Forest Resources, University of Washington, Box 352100, Seattle, WA 98195-2100.

Turnblom, E. and M. Amoroso. 2002. Estimation of Sequestered Carbon in King County Forests. SMC Quarterly Newsletter 12(2):3 –5. Newsletter of the Stand Management Cooperative, College of Forest Resources, University of Washington, Box 352100, Seattle, WA 98195-2100.

Gehringer, K.R. and E.C. Turnblom. 2002. Tree list generation database user's guide and reference manual. Stand Management Cooperative, College of Forest Resources, University of Washington, BOX 352100, Seattle, WA 98195-2100. Final Report. 256 pp.

Turnblom, E.C., M.M. Amoroso, K.W. Ceder, B.R. Lippke, C.L. Mason, J.B. McCarter. 2002. Estimation of Sequestered Carbon in King County Forests. Final Research Report Submitted to Kathy Creahan, Forester, King County, Dept. Natural Resources. 23 p.

Turnblom, E.C. 2003. Silviculture Project Progress Report and Field Research Update. Stand Management Cooperative Annual Report: January–December 2002. Stand Management Cooperative, College of Forest Resources, University of Washington, BOX 352100, Seattle, WA. 98195-2100.

Turnblom, E.C. and M.J. Senger. 2003. Relating Relative Density to other stand density measures: Preliminary results. SMC Quarterly Newsletter 13(1):2 –5. Newsletter of the Stand Management Cooperative, College of Forest Resources, University of Washington, Box 352100, Seattle, WA 98195-2100.

Turnblom, E.C. 2003. Growth of residual branches on pruned Douglas-fir. SMC Quarterly Newsletter 13(3):4 –6. Newsletter of the Stand Management Cooperative, College of Forest Resources, University of Washington, Box 352100, Seattle, WA 98195-2100.

Pittman, S.G. and E.C. Turnblom. 2003. TreeLab version 1.0: User's guide and model description. Stand Management Cooperative, College of Forest Resources, University of Washington, BOX 352100, Seattle, WA 98195-2100. Final Report. 22 pp.

Harrison, R., R. Collier, R. Gonyea, E. Turnblom. 2003. Stand growth response of Douglas-fir to nitrogen and nitrogen + phosphorous for SMC growth plots at Victoria, Pilchuck and Armstrong tracts: Growth 8 years following fertilization. Stand Management Cooperative, College of Forest Resources, Univ. WA, BOX 352100, Seattle, WA 98195-2100. 19 p.

Turnblom, E.C. 2004. Silviculture Project Progress Report and Field Research Update. Stand Management Cooperative Annual Report: January–December 2003. Stand Management

Cooperative, College of Forest Resources, University of Washington, BOX 352100, Seattle, WA. 98195-2100.

Turnblom, E.C. and D.B. Briggs. 2004. On the Genetic Gain / Type IV (GGTIV) joint trials. SMC Quarterly Newsletter 14(3): 4 –5. Newsletter of the Stand Management Cooperative, College of Forest Resources, University of Washington, Box 352100, Seattle, WA 98195-2100.

Hill, A. and E.C. Turnblom, 2004. Changes in dominant height, basal area, and QMD four years after pruning young stands of coastal Douglas-fir. SMC Quarterly Newsletter 14(1): 2 –6. Newsletter of the Stand Management Cooperative, College of Forest Resources, University of Washington, Box 352100, Seattle, WA 98195-2100.

Amoroso, M.M., E.C. Turnblom, and D.G. Briggs. 2004. Growth and yield of Douglas-fir & western hemlock in pure and mixed planted stands. SMC Quarterly Newsletter 14(3): 6 –9. Newsletter of the Stand Management Cooperative, College of Forest Resources, University of Washington, Box 352100, Seattle, WA 98195-2100.

Turnblom, E.C., M. Senger and D.G. Briggs. 2004. Biological diversity in a Douglas-fir spacing trial after 14 years. SMC Quarterly Newsletter 14(4): 6 –9. Newsletter of the Stand Management Cooperative, College of Forest Resources, University of Washington, Box 352100, Seattle, WA 98195-2100.

Amoroso, M.M., E.C. Turnblom, and D.G. Briggs. 2004. Growth and yield of Douglas-fir & western hemlock in pure and mixed planted stands: Results at age 12 from the SMC Type III trials. Stand Management Cooperative, College of Forest Resources, University of Washington, BOX 352100, Seattle, WA 98195-2100. SMC Working Paper No. 3. 45 p.

Li, Yuzhen., Eric C. Turnblom, David G. Briggs. 2005. Effects of fertilization and density control on growth and yield of young Douglas-fir plantations: Results from SMC Type I installations. Stand Management Cooperative, College of Forest Resources, Univ. of Washington, Seattle, WA 98195-2100. SMC Working Paper No. 4.

Turnblom, E.C. 2005. Planting Density: A consideration in cost-effective reforestation. Western Forester 50(3): 12 – 13.

Turnblom, E.C., Y. Li, D.G. Briggs. 2005. Fertilization and Pre-Commercial Thinning Effects on Growth and Yield of Douglas-fir Plantations. Western Forester 50(3): 4 – 6.

PROFESSIONAL SOCIETY MEMBERSHIPS

XI SIGMA PI (Forest Science Honorary): 1982 to present.
Society of American Foresters (SAF): 1982 to present

RESEARCH ACTIVITIES IN THE PAST FIVE YEARS

Sponsored Research

Agricultural University of Norway; Hoibo, Turnblom, Briggs $50,000
(11/1/00 - 8/1/01)
"Branch profile modeling" (salary for visiting scientist)

Stand Management Cooperative; Briggs, Turnblom, Harrison, Lowell $570,000
(1/1/01 - 12/31/01)
"Forest Stand and Tree Nutrition, Silviculture, Quality and Modeling" (36%) for Turnblom

King County DNR, Eric C. Turnblom, Robert Harrison, David Briggs $22,159

(10/16/01 - 12/31/02)
"Assessing sequestered carbon in the Forest Zone of King County, WA" (100%) for Turnblom

Stand Management Cooperative; Briggs, Turnblom, Harrison, Lowell $529,000
(1/1/02 - 12/31/02)
"Forest Stand and Tree Nutrition, Silviculture, Quality and Modeling" (50%) for Turnblom

Olympic Natural Resources Center; Eric C. Turnblom, Bob Gara $36,886
(10/01/02 - 12/31/03)
"Mixed Red Alder-Sitka Spruce as a Silvicultural Approach to Prevent Damage by the Spruce-Tip Weevil in Riparian Ecosystems" (50%) for Turnblom

USDA FS FIA Program; Eric C. Turnblom $62,087
(10/01/02 - 6/15/05)
"Using Climate-Related Information to improve Short-term Growth Projections" (100%) for Turnblom

Stand Management Cooperative; Briggs, Turnblom, Harrison, Lowell $529,000
(1/1/03 - 12/31/03)
"Forest Stand and Tree Nutrition, Silviculture, Quality and Modeling" (50%) for Turnblom

Stand Management Cooperative; Briggs, Turnblom, Harrison, Lowell $536,294
(1/1/04 - 12/31/04)
"Forest Stand and Tree Nutrition, Silviculture, Quality and Modeling" (50%) for Turnblom

Stand Management Cooperative; Briggs, Turnblom, Harrison, Lowell
(1/1/05 - 12/31/05)
"Forest Stand and Tree Nutrition, Silviculture, Quality and Modeling" (50%) for Turnblom

US Forest Service, PSW Research Station, Turnblom, Ritchie $43,480
(10/01/05 – 9/30/07)
"Simulating Growth of Young Douglas-fir Plantations" (100%) for Turnblom

Research (not sponsored)
Title: Precipitation level adjustments of northern California conifer estimated tree growth rates.
Collaborator: Dr. Lee C. Wensel, Professor, Univ. of CA, Berkeley

Title: Comparison and evaluation of tree-list aggregation algorithms
Collaborator: Dr. Greg S. Biging, Assoc. Prof., Univ. of CA, Berkeley

Title: Introducing climate effects into growth and yield models using a consistent modeling framework
Collaborator: Kevin R. Gehringer.

Title: Using a descriptive competition metric in differential equation systems simulating stand growth
Collaborator: Sam Pittman

Title: Stand yield and plot-to-plot variation in intensively tended Douglas-fir plantations in the PNW Coast Range.

Collaborators: R.E. Miller, J. Smith, H. Anderson, USFS PNW Res. Station

PROFESSIONAL CONSULTING DURING THE PAST FIVE YEARS

Northwest Indian Fisheries Commission, Olympia, WA, 2001.
Review proposed study design with focus on experimental design and sampling procedure. Critique procedures to determine site class and evaluate sample adequacy for overstory measurements. Identify areas that need to be revised, expanded or clarified. Provide written suggestions for addressing study design and sampling issues that are identified.

Boise-Cascade Timber Co. 2003.
Analyze, summarize and interpret data collected over the course of 20 years in a growth and yield study. Experiment included fertilization and thinning treatments in Douglas-fir stands of various ages. Submitted written report to Mr. Phil Cannon.

Scientific Review Committee, CMER. 2005.
Associate Editor for study plan titled *EXTENSIVERIPARIAN STATUS & TREND MONITORING PROGRAM*. Acquired three referees, then gathered, synthesized, and summarized reviews, adding additional comments where appropriate.

American Forest Management, Inc. 2006.
Provide enhanced decision support services for the Johns River timberlands managed by Forest Systems, Inc. In collaboration with R.B. Harrison.

Daniel John Vogt

Associate Professor of Soil and Ecosystem Ecology

EDUCATION

B.S. Biology, New Mexico State University, 1968
M.S. Agronomy, New Mexico State University, 1976
Ph.D. Forestry, University of Washington, 1987

PROFESSIONAL EXPERIENCE

2000-present	Associate Professor in Soils and Ecosystem Ecology, College of Forest Resources, University of Washington.
2004-present	Senior Consultant, INTERFOREST, LLC.
2003-present	Secretary and Consultant for Center for Adaptive Policy and Ecosystems (CAPE, Intl).
2001-present	Managing Editor of Scientific Review Committee (SRC), working with Cooperative Monitoring, Evaluation, and Research (CMER) and Washington state Department of Natural Resources.
1989-2000	Director of Greeley Analytical Laboratory at the School of Forestry and Environmental Studies, Yale University.
1987-2000	Lecturer in Soils and Ecosystem Ecology, and Research Scientist, School of Forestry and Environmental Studies, Yale University.
1981-1983	Associate Member of World Development Consultants, Inc., Seattle, Washington.
1973	Range Aide with Rocky Mountain Forest and Range Experiment Station. Assisted with regeneration of vegetation on coal-mine spoils, and the chemical and physical analyses of the overburden.
1972	Research Aide with New Mexico State University Entomology Department. Tested the effects of a Shell insecticide on "horn fly" populations around cattle.
1972	Cotton insect-pest management technician with New Mexico Extension Service-NMSU Entomology Department. Surveyed cotton fields weekly for cotton insect pests to help farmers in crop management decisions.
1971-1972	Assistant Plant Propagation Supervisor with North Haven Gardens in Dallas, Texas. Supervised personnel in plant propagation for wholesale and retail distribution and also managed the Interior Landscaping Department.
1968-1970	Field Artillery Officer in the U.S. Army. Served in Viet Nam as an artillery advisor to the South Vietnamese.

RESEARCH SUPPORT IN THE PAST FIVE YEARS

2005-2007	Headwater Stream Physical Processes. Funded by WaDNR. PI's Daniel J. Vogt and Robert L. Edmonds (College of Forest Resources) ($102,064/2yr)
2005-2006	Maintain 'Scientific Review Committee (SRC)' funded by the Cooperative Monitoring, Evaluation, and Research (CMER) committee of the Timber Fish Wildlife/Forests & Fish Report Committee and WaDNR. PI = DJ Vogt (CFR @ UW - $50,270)
2004-2005	Proposal to the Cooperative Monitoring, Evaluation, and Research (CMER) committee of the Timber Fish Wildlife/Forests & Fish Report Committee to create a 'Scientific Review Committee (SRC)'. SRC will review research designs submitted to CMER and the recommendations of CMER to TFW and FF for scientific credibility. PI = DJ Vogt (CFR @ UW - $87,434)
2003-2005	Experimental Manipulation of Forested Headwater Stream Buffers in Washington State. funded by USFS. PI's = R Edmonds & DJ Vogt ($55,000/2yr)
2004	Feasibility study of small-scale bioenergy system engineering efficiencies/economics compared to other sources of energy production. Lawrence Livermore internal dollars to support an initial feasibility study (~$250,000)
2004-2005	Using Forest Thinnings for Electrical Power Generation via Fuel Cells: Revitalizing Forest Dependent Communities. CFR New Initiatives Team. Forest Bioenergy Group: Kevin Hodgson; K Vogt; D Vogt; R Edmonds; M Andreu ($5,000)
2004-2005	Chemistry of Headwater Streams. Funded by Center for Water and Watershed Studies. PI's = G Liles, DJ Vogt, RL Edmonds ($1,000)
2004-2005	Influence of Riparian Harvesting on the Chemistry of Headwater Streams. Funded by Olympic Natural Resources Center. PI's = DJ Vogt, RL Edmonds and G Liles ($19,157)
2003-2005	Experimental Manipulation of Forested Headwater Stream Buffers in Washington State. funded by USFS. PI's = R Edmonds & DJ Vogt ($55,000/2yr)
2003-2004	Proposal to the Cooperative Monitoring, Evaluation, and Research (CMER) committee of the Timber Fish Wildlife/Forests & Fish Report Committee to create a 'Scientific Review Committee (SRC)'. SRC will review research designs submitted to CMER and the recommendations of CMER to TFW and FF for scientific credibility. PI's = DJ Vogt (CFR @ UW - $68,020)
2002-2003	Proposal to the Cooperative Monitoring, Evaluation, and Research (CMER) committee of the Timber Fish Wildlife/Forests & Fish Report Committee to create a 'Scientific Review Committee (SRC)'. SRC will review research designs submitted to CMER and the recommendations of CMER to TFW and FF for scientific credibility. PI's = DJ Vogt (CFR @ UW - $68,020)
2001-2002	Proposal to the Cooperative Monitoring, Evaluation, and Research (CMER) committee of the Timber Fish Wildlife/Forests & Fish Report Committee to create a 'Scientific Review Committee (SRC)'. SRC will review research designs submitted to CMER and the recommendations of CMER to TFW and FF for scientific credibility. PI's = DJ Vogt (CFR @ UW - $68,020)

2000-2003 USDA grant to doctoral student fellowship support for joint FES/NYBG program in Tropical Forest Management. PI=K Vogt, CoPIs= M Ashton, B Larson, R Mendelsohn, O Schmitz, T Siccama, D Vogt (Yale) and D Lentz (NYBG) ($70,000/3yrs).

MEMBERSHIP IN SCIENTIFIC SOCIETIES

American Institute of Biological Sciences
American Society of Agronomy
Association for Tropical Biology
Ecological Society of America
International Society of Soil Science
International Society of Root Research
Northwest Forest Soils Council
Sigma Xi
Soil Science Society of America
Society for Conservation Biology

FELLOWSHIPS, AWARDS, APPOINTMENTS, AND MEDALS

Hugo Winkenwerder Fellowship-Univ of Wa-1981
Soil Conservation Society of America - Student Chapter (NMSU) President-1974
Bronze Star and Air Medal (US Army)-Viet Nam 1969-70

PROFESSIONAL SERVICES

1995 Committee member of panel reviewing DOE, Global change postdoctoral fellowships

1997-2000 Member of the GIS and SSURGO committee of the Natural Resources Conservation Service, Northeast Cooperative Soil Survey.

2001-2002 Assoc Editor of Scientific Review Committee (SRC) in Washington State.

2001-present Managing Editor of Scientific Review Committee (SRC) in Washington State.

PUBLICATIONS DURING THE PAST FIVE YEARS (2001-2006)

Articles/Book Chapters

Vogt K.A., M. Grove, H. Asbjornsen, K. Maxwell, D.J. Vogt, R. Sigurðardóttir, B.C. Larson, L. Schibli, and M. Dove. 2002. Linking social and natural science spatial scales. In: (Jianguo Liu, W.M. Taylor, eds.) Integrating Landscape Ecology into Natural Resource Management. Cambridge University Press.

Vogt K.A., K.H. Beard, S. Himmann, J. O'Hara, D.J. Vogt, F.N. Scatena, and B. Parry. 2002. Indigenous knowledge informing management of tropical forests: the link between rhythms in plant secondary chemistry and lunar cycles. Ambio 31: 485-490.

Kulmatiski A, DJ Vogt, TG Siccama and KH Beard. 2003. Detecting Nutrient Pool Changes in Rocky Forest Soils. SSAJ 67(4):1282-1286

Beard K.H., A.K. Eschtruth, K.A. Vogt, D.J. Vogt, and F.N. Scatena. 2003. The effects of an amphibian, *Eleutherodactylus coqui*, on its prey and ecosystem processes: Experimental evidence from two scales. Journal of Tropical Ecology 19: 607-617.

Wargo P.M., K.A. Vogt, D.J. Vogt, Q. Holifield, J. Tilley, G.B. Lawrence and M.B. David. 2003. Vitality and Chemistry of Forest Floor Roots in Red Spruce, *Picea rubens* Sarg., Dominated Stands Characterized by a Gradient of Soil Al/Ca Ratios in the Northeastern United States. Can J For Res. 33: 635-652.

Palmiotto P.A., K.A. Vogt, P.M.S. Ashton, P.S. Ashton, D.J. Vogt, H. Semui, and L.H. Seng. 2004. Soils and gaps: the influence of habitat heterogeneity on diversity in a tropical rain forest, Sarawak, Malaysia. In: Forest Diversity and Dynamism. University of Chicago Press.

Palmiotto P.A., S.J. Davies, K.A.Vogt, P.M.S. Ashton, D.J. Vogt, and P.S. Ashton. 2004. Soil-related habitat specialization in dipterocarp rain forest tree species in Borneo. Journal of Ecology, 92: 609-623.

Palmiotto P.A., K.A. Vogt, P.M.S. Ashton, P.S. Ashton, D.J. Vogt, H. Semui, and L.W. Seng. 2004. Linking canopy gaps, topographic position and edaphic variation: implications for species diversity. In: E.C. Losos and E.G. Leigh Jr. (eds.), Tropical Forest Diversity and Dynamism: Findings from a Large-Scale Plot Network. University Chicago Press.

Kulmatiski A, D.J. Vogt, T.G. Siccama, J.P. Tilley, K. Kolesinskas, T.W. Wickwire, and B.C. Larson. 2004. Landscape Determinants of Soil Carbon and Nitrogen Storage in Southern New England. SSAJ 68(6) 2014-2022.

Vogt K.A., M.G. Andreu, D.J. Vogt, R. Sigurdardottir, R.L. Edmonds, P. Schiess and K. Hodgson. 2005. Societal Values and Economic Return Added for Forest Owners by Linking Forests to Bioenergy Production. Journal of Forestry 103(1):21-27.

Johnson, C.E., R.J. Smernik, T.G. Siccama, D.M. Kielmle, Z. Xu, and D.J. Vogt. 2005. Using ^{13}C Nuclear Magnetic Resonance Spectroscopy for the Study of Northern Hardwood Tissues. Can J For Res. 35(8):1821-1831.

Beard K.H., K.A. Vogt, D.J. Vogt, F.N. Scatena, A. Covich, R. Sigurdardottir, T.C. Siccama, and T.A. Crowl. 2005. Structural and functional responses of a subtropical forest to 10 years of hurricanes and droughts. Ecological Monographs 75(3): 345-361.

Vogt, Kristiina A., Robert I. Gara, Jon M. Honea, Daniel J. Vogt, Toral Patel-Weynand, Anna Fanzeres, Ragnhildur Sigurdardottir, and Patricia A. Roads. 2006. Chapter 1. Historical Perceptions and Uses of Forests. *In*: Forests and Society. Sustainability and Life Cycles of Forests in Human Landscapes. CABI International, United Kingdom. (Expected publication date July 2006)

Vogt, Kristiina A., Jon M. Honea, Daniel J. Vogt, Robert L. Edmonds, Ragnhildur Sigurdardottir, Toral Patel-Weynand, David G. Briggs, and Michael G. Andreu. 2006. Chapter 2. Global Societies and Forest Legacies Creating Today's Forest Landscapes. *In*: Forests and Society. Sustainability and Life Cycles of Forests in Human Landscapes. CABI International, United Kingdom. (Expected publication date July 2006)

Vogt, Kristiina A., Toral Patel-Weynand, Jon M. Honea, Robert I. Gara, Daniel J. Vogt, Ragnhildur Sigurdardottir, Anna Fanzeres, and Michael G. Andreu. 2006. Chapter 3. Human Dimensions of Forests: Democratization and Globalization of Forests. *In*: Forests and Society. Sustainability and Life Cycles of Forests in Human Landscapes. CABI International, United Kingdom. (Expected publication date July 2006)

Vogt, Daniel, Ragnhildur Sigurdardottir, Darlene Zabowski, and Toral Patel-Weynand. 2006. Chapter 6. Forests and the Carbon Cycle. *In*: Forests and Society. Sustainability and Life Cycles of Forests in Human Landscapes. CABI International, United Kingdom. (Expected publication date July 2006)

Vogt, Kristiina A., Toral Patel-Weynand, Michael G. Andreu, Gretchen K. Muller, Jon M. Honea, Daniel J. Vogt, Robert L. Edmonds, and Ragnhildur Sigurdardottir. 2006. Chapter 7. Emerging Issues in Forests. *In*: Forests and Society. Sustainability and Life Cycles of Forests in Human Landscapes. CABI International, United Kingdom. (Expected publication date July 2006)

Vogt, Daniel, and Patricia Roads. 2006. Chapter 8. It's a Small World After All. *In*: Forests and Society. Sustainability and Life Cycles of Forests in Human Landscapes. CABI International, United Kingdom. (Expected publication date July 2006)

Kulmatiski A., K.A. Vogt, P.M. Wargo, D.J. Vogt, J.P. Tilley, and R. Sigurdardottir. Forest response to cation remediation. (In revision Biogeochemistry)

Brokaw N., et al. K.A. Vogt, and D.J. Vogt. Ecosystem and species response to disturbance in the Luquillo Experimental Forest, Puerto Rico. *In*: Synthesis of LTER Research in Puerto Rico. (J. Zimmerman, T. Crowl, M. Willig, F. Scatena, eds.) Springer-Verlag. (accepted/revisions)

McDowell W.H., R.B. Waide, N.V. Brokaw, G.R. Camilo, A.P. Covich, D.J. Lodge, C.M. Pringle, B.A. Richardson, M.J. Richardson, F.N. Scatena, D.A. Schaefer, W.L. Silver, J. Thompson, D. Vogt, K. Vogt, M. Willig, and J. Zimmerman. Biocomplexity and disturbance: Synthesis of long-term ecological research in the Luquillo Experimental Forest, Puerto Rico. *In*: Synthesis of LTER Research in Puerto Rico. (J. Zimmerman, T. Crowl, M. Willig, F. Scatena, eds.) Springer-Verlag. (accepted/revisions)

Hecht B.P., K.A. Vogt, Þ. Eysteinsson, D.J. Vogt, and X. Lee. Changes in Air and Soil Temperatures in Three Icelandic Birch Forests with Different Land Use Histories. Arctic, Anarctic and Alpine Research (submitted)

Hecht B.P., K.A. Vogt, and D.J. Vogt. Early Warning Indicators of Ecosystem Change at Structural Edges in Betula pubescens Ecosystems at Three Forest Limit Sites in Iceland. Ecology Letters (submitted)

Hecht B.P., K.A. Vogt, D.J. Vogt, X. Lee, B.C. Larson, and Þ. Eysteinsson. Indicators of Ecosystem Change to Multiple Disturbances: A Case Study of Climate and Grazing in Betula pubescens Forests in Iceland. AMBIO (submitted)

Published Books

Vogt, Kristiina A., Jon M. Honea, Daniel J. Vogt, Robert L. Edmonds, Toral Patel-Weynand, Ragnhildur Sigurdardottir, and Michael G. Andreu (eds.). 2006. Forests and Society. Sustainability and Life Cycles of Forests in Human Landscapes. CABI International, United Kingdom. (Expected publication date July 2006)

Standard V: Students

Commitment to Quality Student Advising

The College is committed to high-quality student advising at both the undergraduate and graduate levels. Advising for all students is coordinated through the Office of Student and Academic Services, which is staffed by three full-time professional staff members—a Director, an Undergraduate Adviser, and a Graduate Adviser. The office strives to respond to student needs and provide the highest quality advising on campus. The office regularly solicits feedback; the exit survey that is administered to all graduating students specifically queries for feedback about the advising received during tstudents' academic careers. In addition, students are encouraged to regularly visit the office to share successes and challenges, and students are regularly informed of campus and community educational and career opportunities. The office maintains an open-door policy to provide drop-in service for College students and faculty.

Because the needs and types of advising differ greatly between graduate and undergraduate advising, the programs are described separately below.

Graduate Advising

Graduate student advising is done as a partnership between the College faculty and the Office of Student and Academic Services, under the guidance of the University's Graduate School.

The Graduate Adviser is a full-time professional staff person who administers the admissions process for the graduate program, helps coordinate graduate orientation, and guides students through the administrative processes of their graduate programs. The Graduate Adviser audits student files for compliance with University Graduate School policies and requirements, and assists students with setting up their faculty committees and filing forms.

The faculty chair and committee help students develop a program of study that will fulfill their educational goals and fit the requirements of the program. Students' committee chairs work closely with the students on graduate projects, theses, or dissertations, and help guide their research.

The University's Graduate School is the governing body of all University graduate programs. The Graduate School approves all programs and reviews them at a minimum of 10-year intervals, as well as establishes policies and minimum requirements for all University graduate programs. Any College policy is above and beyond the University's Graduate School's requirements; for example, the minimum number of credits for an M.S. degree at UW is 36, while the College requires 45 credits.

Another way the College is committed to high-quality graduate advising is by conducting a thorough graduate student orientation program. Upon entering the graduate program, each new graduate student is required to participate in the course CFR 500, Graduate Orientation. The orientation program is a two-day program, where students are presented with the various University and College policies and procedures, introduced to research and graduate study expectations, and given an opportunity to develop relationships and community with the incoming students. The orientation is conducted on campus and at the College's field site, C.L. Pack Experimental Forest, giving new students a good introductory perspective of the College and some of its supporting facilities.

Both the faculty and the Graduate Adviser use the College-produced *Graduate Student Guide* (also known as "The Red Book") to help administer the graduate program effectively by using the same guidelines and explaining University Graduate School policy. This guidebook can be found on-line at http://www.cfr.washington.edu/Acad/grad/redbook.pdf and is included in the back of this self-

evaluation. The key College forms used for advising are the Green Sheet (the program of study form) and the Committee Form, which is used to establish and change committee membership. These forms are in addition to any forms required by the Graduate School for general and final examinations.

Undergraduate Advising

Undergraduate students are centrally admitted by the University's Admissions Office and are placed in pre-major status. If a student decides upon the College's Environmental Science and Resource Management (ESRM) major, he or she makes an appointment to see the Undergraduate Adviser who helps the student declare the major and plan for academic requirements and program of study. If the student is a transfer student, the adviser will also evaluate the student's transfer coursework and help file any course requirement petitions, if appropriate (petitions are approved by the chair of the faculty).

During the advising appointment, the Undergraduate Adviser also helps the student explore the different course pathways within the ESRM major and how those may fit with the student's educational and professional goals. For example, if a student is interested in pursuing the MFR in Forest Management for a graduate degree, the student would work with the Undergraduate Advisor to prescribe and plan the coursework in the Sustainable Forest Management pathway that will apply to the MFR in Forest Management.

Undergraduate advising files are regularly audited and updated with coursework as it is completed. Students are notified of any potential problems, especially relating to focus or degree progress.

When a student is nearing graduation, he or she will make a final advising appointment to apply to graduate. A final degree audit is conducted and the application for the bachelor's degree is filed. Students are also informed about the College's Graduation Celebration and are encouraged to fill out an exit survey about the program.

Regular Services Provided by the Student and Academic Services Office

To help understand the variety of services provided by the Student and Academic Services Office, a list of regular office staff activities, organized by frequency, is provided below:

On a Daily/Weekly Basis
Advising—both graduate and undergraduate
Updating Job Board, Website, Publications
Data management
Answering questions and making referrals
Time schedule and room updates
Mailing packets and information
Transfer Thursdays

On a Quarterly Basis
Database updates—majors and on leave
Dean's List letters
Low scholarship letters
Satisfactory progress check-up
Checking scholarship recipient registration
Planning Time Schedule Quarterly
Disbursing Scholarship funds

Graduate student registration--full/part time
Enrollment status and analysis
New course/Course change applications
High school/Community College visits
Welcome letter to new students
Contacting inactive students
Advertising courses on campus
Visiting service courses for recruiting
Graduation applications/warrants
Updating degrees granted information
Transfer Student Orientation
RA/TA Appointment Process

On an Annual Basis
January Graduate Admissions
Graduate Student Orientation
Dawg Daze Events
Career Fair
FAEIS statistical reporting
College internal statistical reporting
UG Research Involvement Report
ABET Reviews for PSE
Environmental Opportunities Fair
Website Updating
Scholarship Luncheon
Adviser's Luncheon
College Graduation Celebration
UG Orientation (all summer)
Mailings to new UW freshmen
CC Advising Conference
Plan a Transfer Day
GRE/SAT/ACT Search
GEAR UP Events
General Catalog updates
April Scholarship Applications/Meeting/Notification

Recruitment and Retention

The University is committed to recruiting and reaching out to underrepresented students. The Office of Minority Affairs has recruitment and outreach, academic support services, and pre-college opportunities aimed at providing access to the University for diverse students and communities. The recruitment and outreach department is responsible for the recruitment and outreach activities for all undergraduate underrepresented students across Washington State. It provides outreach services during high school and community college visits, college fairs, student campus visitation programs, admissions, financial aid, and scholarship counseling, and college test preparation and educational workshops. The Graduate Opportunities and Minority Achievement Program (GO-MAP), a division of University's Graduate School, is committed to serving the needs of students of color and those from other underrepresented groups, while simultaneously providing opportunities for all students to learn and develop through experiences rich in cultural, ethnic, and racial diversity. GO-

MAP's primary goals are recruitment and outreach, enhancing scholarship and research, and building community on and off campus. To achieve these goals, GO-MAP offers programs, events, activities, and opportunities for students, faculty, staff, and the community to advance excellence in an equitable educational and social environment.

For the academic year 2004-2005, 54 underrepresented minorities made up 15% of the College's total student body and 156 women accounted for 42%. The College continually makes efforts to recruit and attract a diverse student body, and will increase efforts in the future. The College makes public the commitment to promoting diversity in our faculty, staff, and student body through both recruitment and retention. Additionally, the College developed a diversity plan to attract graduate students, which is described in the following memo[5]:

MEMORANDUM

TO: Johnnella E. Butler, Associate Dean
The Graduate School
From: Steve West, Associate Dean and Graduate Program Coordinator; Robert Gara, Professor and Alternate Graduate Program Coordinator; Michelle Trudeau, Director, Student Services, College of Forest Resources
Date: February 10, 2003
RE: 2003-2004 Graduate Opportunity Program Diversity Plan

The College of Forest Resources is grateful for receiving a GOP award for the 2002-2003 academic year, and would like to be considered for an award for this coming academic year. We have continued our efforts to increase the diversity of our graduate student population, and we are committed to nurturing an atmosphere of inclusiveness.

Dr. Gara, as one of the minority faculty at the College of Forest Resources, remains involved with the graduate programs at two levels. He is now the Program Area Leader for the Silviculture program as well as the Alternate Graduate Program Coordinator. Dr. Gara also remains involved in our minority recruitment and retention efforts.

The College feels strongly that the variety of perspectives and life experiences found in diverse students increases the value of the educational experience for all of our students. We are well aware that the field of forestry, no matter how broadly defined, has been very traditionally white male. Our diversity plan, outlined below, we hope will help change the face of forestry to one that more accurately reflects the diverse world in which we live.

Our Diversity Plan

Of the 38 new graduate students we enrolled in autumn of 2002, females were 55% and minorities were 21% of the total, including one Iranian American, seven Asian Americans and one Hispanic American (47% did not indicate their ethnicity). For the first time ever, the college has more new female graduate students than male, which for the traditionally male field of forestry, is remarkable. Nevertheless, we would like our underrepresented minority student numbers to increase, so we are continuing to implement our College-wide diversity efforts and plans.

We developed a Diversity website on our College's home page in fall 2002 (see attached printout) that clearly outlines our diversity program, which has goals as follows:

- *Track diversity efforts within CFR*
- *Seek new ways of recruiting diverse faculty, staff and students*

[5] Available at: http://www.cfr.washington.edu/People/Diversity/gop%20request%202003-04.htm.

- *Seek to find and remove barriers to diversity at CFR*
- *Formalize mentoring efforts*
- *Create partnerships with other diversity efforts, both on and off campus*
- *Involve diverse members of CFR*

We have maintained good ties with several northwest Native American tribes, including Yakama, Colville, and Quinault. We attended the Education Summit in Omak hosted by the Colville Tribe in August 2002, which had a recruitment fair and discussion about many issues with Native American education. Furthermore, we house the STEP (Science and Tribes Educational Partnership) program, which offers summer science education to high school youth at targeted tribal schools. We are also staying in contact with our recent graduates so that they can help with our recruiting efforts on the reservations.

Our cooperative agreement with Tuskegee University in Alabama is also going well, and Louis Black will be visiting us on March 18th, 2003 with two prospective students. Our two African American graduate students are a result of this program, and we hope to utilize their expertise and experience to continue this effort.

We attended the MANRRS (National Society for Minorities in Agriculture, Natural Resources, and Related Sciences) national conference in Portland, OR in April 2002. Two of our African American graduate students, Morris Johnson and Johnny Grady, attended along with three other staff members, including the Director of Student Services. We helped sponsor the conference and hosted a recruitment booth. The cost of attending this event is high, but we see it as an essential part of our diversity plan.

Some of our other efforts that are working to increase the yield of underrepresented and minority students include:

- We encourage our undergraduate underrepresented and minority students to apply for our graduate program. This effort works very well for us on a continuing basis.
- We do not have any formal visiting days for graduate applicants, but we encourage our applicants to participate in the GO-MAP Prospective Student Days and let them know we will be open for visiting during that time.
- We utilized the GRE graduate student search service again this year, which focused on attracting diverse students. We have not participated in the Western and National Name Exchange for a few years, mainly because we were not very aware of this resource. We will add the Name Exchange to our search effort. We also advertise our programs in the Peterson's Guide, but the results of these efforts are difficult to track with the I-200 restrictions.

Lastly, the college always matches the GOP award with a second year of funding, usually from our endowed fellowships or a research assistantship. We do not have a lot of funding, so making a two-year package with the GOP often makes the difference in recruitment of top minority and underrepresented students.

2002-2003 GOP Awardee Information

[redacted] was awarded the GOP research assistantship for 2002-2003. She is an outstanding student, receiving a BS degree in Biology from Purdue with honors and a BA in French, with an overall GPA of 4.0. She has also received several awards, including the National Merit Scholarship and the Association of Women Students VIP Award for Political Involvement. Furthermore, [redacted] is also an outstanding citizen, and was involved in her co-curricular activities her studies, including mentoring in the Women in Science Program, Directing the Purdue Students Against Sweatshops group, and serving as President of the Iranian Cultural Club.

[redacted] entered the competitive Social Science graduate program with GRE scores of 590/750/780, as well as extensive undergraduate research and teaching experience. She is currently studying with Dr. Anne Kearney, who says she is progressing very well, and stated, "She has been doing very well in her classes (4.0) and is currently exploring research topics for her thesis. She is also pursuing a joint master's degree at the Evans School." She is very pleased with [redacted], and coupled the GOP award with a Research Assistantship award for her second year of study.

[redacted] is Iranian, an ethnic group that is very underrepresented in US higher education, especially in the traditionally European American male field of forest resources. We are very pleased to be able to recruit students like [redacted] with the GOP award, and hope such efforts will help to change the face of our field. We are very appreciative to the GOP program for providing us with this wonderful opportunity.

The College of Forest Resources thanks you for consideration of our request.

Graduate Students

Recruitment to College's of graduate program is currently done largely by individual research programs and through the College's website. The College participates in the National Name Exchange for under-represented students and is listed on *GradSchools.com* (http://www.gradschools.com/). In the past, GRE searches were performed, but the outcome did not produce the students the College was seeking. Overall, the College receives far more quality applications than available slots, so graduate recruitment has not been an issue.

Top applicants are often recruited to the College's graduate program through the many fellowships offered; fellowships are the equivalent of a Research Assistant (RA) or Teaching Assistant (TA) appointment, but without the 19-hour/week work requirement. These awards (usually lasting one-year) are often coupled with RA or TA appointments to make an attractive package for the highest-quality applicants. The College has a consistent track record of recruiting and retaining these top students.

Another successful method used to promote the College's graduate programs is by providing support for graduate student research posters and presentations at regional and national meetings. The Dean's office funds most, if not all, student travel costs to local and international conferences. The College also supports an annual Graduate Student Symposium, which showcases the research of the College's diverse graduate student population.

Each quarter, in order to maintain high-quality graduate students at the College, faculty are asked if their graduate students are performing up to standard. If a student is not performing up to standard, either in coursework or research progress, there is a process—conducted in partnership with the Graduate School—for placing students on probation and eventually dropping them from the program, if appropriate. Fortunately, this has not been an issue in recent history, but it is a standardized process that is available if necessary.

Undergraduate Students

The ESRM major is fairly new, so active recruiting and retention is key to increasing enrollment over the next few years. Thus, the College has implemented an active undergraduate recruiting program that focuses both on- and off-campus. Classes related to the ESRM major are visited to present the College's programs, and various events are held for University students. The College reaches out to other University advisers (housed in the different colleges and departments on campus) through a luncheon, e-mail advertising, and information sessions. Visits are regularly made to local community

colleges to recruit and advise potential transfer students. Additionally, the College has a close partnership with the Universty's Admissions Office to ensure that students interested in the College's program are provided assistance and guidance during the admission process into the University and the College.

To retain undergraduate students, the College depends largely on the quality of advising and outreach to current students. The University automatically puts students who are performing below a 2.0 level on academic probation, and those students are contacted to develop a plan for future success with assistance from faculty and the College's Office of Student and Academic Services. If the plan is unsuccessful, a student will eventually be dropped from the University, but with a chance for reinstatement via petition.

Current Enrollment Information

As described in Standard I, the College recently underwent a major curriculum consolidation effort. Previously, undergraduate students were offered eight majors to choose from and graduate students were offered eleven different degree programs. Similar to many natural resource colleges and universities throughout the country, steep declines in student enrollment (especially at the undergraduate level) led the College to undertake a restructuring of both the graduate and undergraduate programs (See discussion in Standard I).

The College now offers an undergraduate degree in two curricula, Environmental Science and Resource Management (ESRM) and Paper Science and Engineering (PSE), and one graduate degree, with interest areas selected at the time of application. These new programs require innovative ways of reporting and tracking enrollment information; thus, all enrollment information presented in this self-evaluation will refer to College-wide enrollment. Figures 1 and 2, however, break down the different undergraduate and graduate enrollments by major and interest areas before and after the adoption of the new degree programs. The first students entered the ESRM degree program in 2004, and the older degree programs are being phased out as previously enrolled students graduate. Note the decline in Forest Management majors since 1995; the hope is that the new ESRM major, and the option to follow the Sustainable Forest Management pathway, will increase the number of students who might be originally drawn to this type of degree program.

Since the MFR (Forest Management) will be a brand-new degree program in Fall 2006, Document G only shows projected enrollment numbers for the program. Document G does, however, present data about the entire student population of the College.

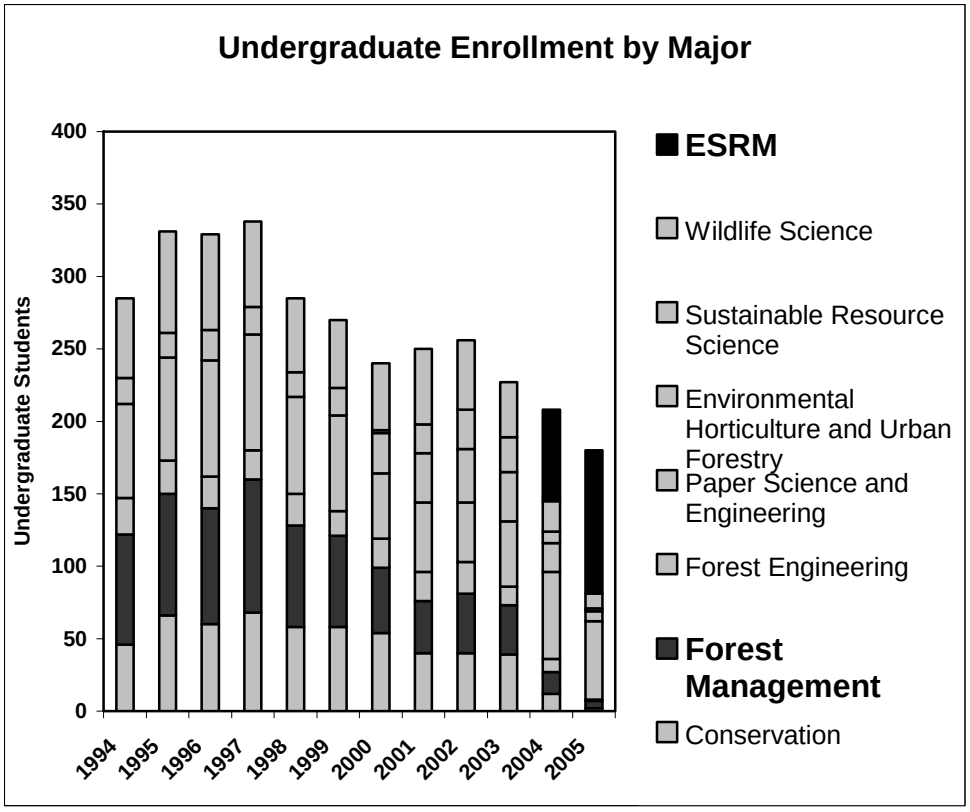


Figure 1. Undergraduate Enrollment by Major

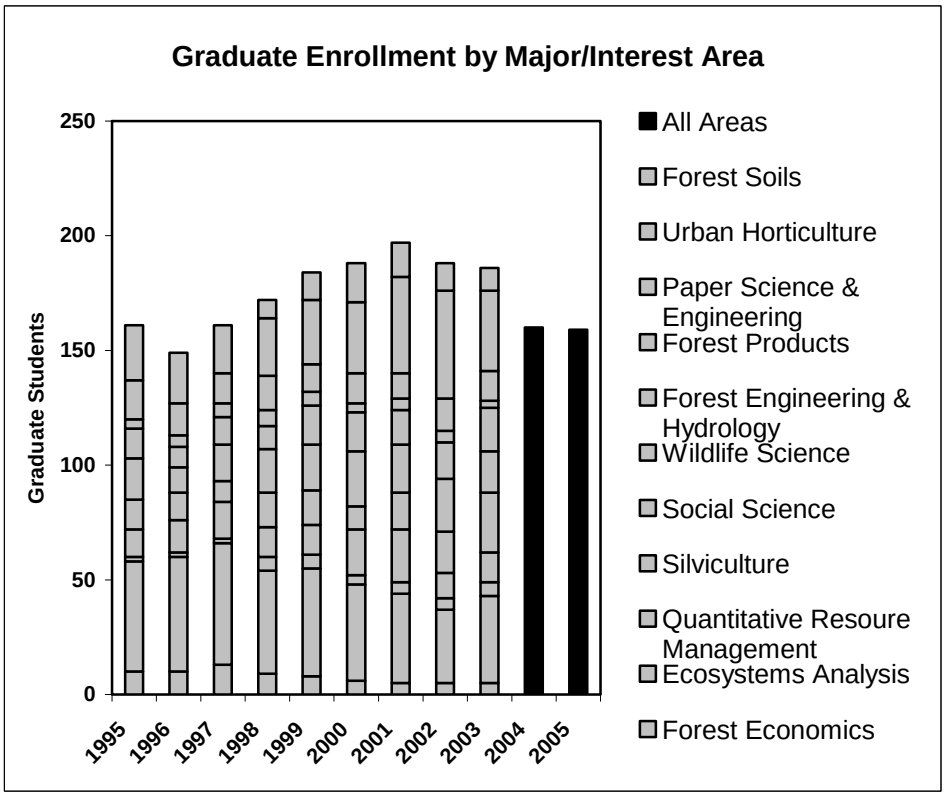


Figure 2. Graduate Enrollment by Program Area

Since the MFR in Forest Management will be in its first year beginning in Fall 2006, there are no graduates of the program. Instead, employment information for the recent graduates from the discontinued Forest Management degree program—the undergraduate program most similar in coursework and objectives to the MFR program presently seeking accreditation—is presented in Document F.

Document F: Forestry Graduate Employment Summary

Institution Name: UW College of Forest Resources

Official Degree Program Title: Forest Management (no longer offered)

Official Option Title:

Post Graduation Status	Yr: 2001		Yr: 2002		Yr: 2003		Yr: 2004		Yr: 2005		Total Graduates
	#	%	#	%	#	%	#	%	#	%	
Employed permanent: Forestry	4	33%	2	25%	3	33%	7	70%	2	50%	**18**
Forestry-related					2	22%					**2**
Other employed			1	13%	1	11%					**2**
Employed temporary: Forestry	1	8%									**1**
Forestry-related							1	10%			**1**
Other employed											**0**
Graduate Study:			1	13%	1	11%			1	25%	**3**
Unemployed:	1	8%									**1**
Unknown:	6	50%	4	50%	2	22%	2	20%	1	25%	**15**
Total Number and Percentage of Graduates	**12**	**100%**	**8**	**100%**	**9**	**100%**	**10**	**100%**	**4**	**100%**	**43**

Document G: Student Data Summary for Entire College

Institution Name: UW College of Forest Resources Academic Year: 2005-06

Official Degree Program Title: All Programs

Official Option Title:

STUDENTS ENROLLED	Freshman		Sophomore		Junior		Senior		Graduate		Total	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	**Female**	**Male**
Current Enrollment	0	9	7	17	15	27	21	26	81	78	**146**	**193**
Last Year	3	17	7	15	24	38	49	57	80	86	**156**	**212**
Two Years Ago	5	10	13	8	38	42	50	61	89	97	**195**	**218**
Three Years Ago	5	5	17	21	41	42	52	72	97	102	**212**	**238**

STUDENTS ENROLLED	TOTAL NUMBER OF STUDENTS					
	African American	Asian/Pacific Islander	Caucasian	Hispanic	Native American	Other/Unknown/ International
Current Enrollment	5	23	236	11	7	57
Last Year	5	25	249	15	9	65
Two Years Ago	7	27	304	11	6	58
Three Years Ago	7	24	315	15	5	84

Projected Total Enrollment for Next Three Years	*Year: 2006-2007*	*Year: 2007-2008*	*Year: 2008-2009*
	225 undergraduates 170 graduates	**275 undergraduates 175 graduates**	**325 undergraduates 175 graduates**

GRADUATING CLASS	TOTAL NUMBER OF GRADUATING STUDENTS (UNDERGRADUATES/GRADUATES)							
	Female	Male	African American	Asian/Pacific Islander	Caucasian	Hispanic	Native American	Other/Unknown /International
Current Graduating Class								
Last Year	37/26	29/25	1/0	3/0	47/33	3/0	0/0	10/18
Two Years Ago	37/30	43/26	1/1	4/4	60/36	2/0	1/0	12/15
Three Years Ago	38/27	29/25	1/0	5/1	50/34	0/2	1/2	10/13

Projected Total Graduates for Next Three Years	*Year: 2006-2007*	*Year: 2007-2008*	*Year: 2008-2009*
	68 undergraduates 51 graduates	**82 undergraduates 53 graduates**	**98 undergraduates 54 undergraduates**

Master of Forest Resources (Forest Management)

Projected Total Enrollment for Next Three Years	*Year: 2006-2007*	*Year: 2007-2008*	*Year: 2008-2009*
	5	**10**	**10-12**

Standard VI: Parent Institution Support

Parent Institution Funding

Founded in 1861, the University of Washington is the oldest state-assisted institution of higher education on the Pacific coast. From its original site on a 10-acre tract of wooded wilderness that is now downtown Seattle, the relocated Seattle campus has grown to comprise 680 acres of trees, landscape, and buildings. Two other campuses are now well established in the neighboring cities of Tacoma and Bothell.

The University employs 33,000 people and educates over 40,000 students in its regular program and 120,000 additional students both statewide and globally through its Educational Outreach programs. It brings over $2 billion in additional revenue to the State of Washington each year through federal, foundation, and industry grants and contracts; gifts; and hospital and athletics revenue. It has spawned more than 200 new companies from the technology created by faculty and transferred to the business community, ranking fifth among U.S. universities in launching start-up companies. Faculty creativity has yielded more than 500 new patents. The University's international community numbers over 5,500, bringing diversity and global experience to the state. The University's total economic impact exceeds $6 billion annually, with over $4.8 billion occurring within the state. Job generation by the University exceeds 56,000 annually in addition to its own faculty and staff.

Although salaries for both faculty and staff are not at peer or market levels, the sustained distinction of the University among America's premier research universities fortunately continues to draw highly qualified employees. Tenured/tenure-track faculty members numbering 3,490, augmented by 600 research-funded faculty bring honors and distinction. The faculty boasts three winners of the National Medal of Science, nine MacArthur Fellows, eight recipients of the Gairdner International Awards, 75 members of the National Academies, and 48 members of the American Academy of Arts & Sciences. Since 1989, six University faculty members have won Nobel Prizes in physics and medicine, and one received the 1990 National Book Award for fiction.

Insurance benefits. In the region, the University is generally regarded as providing excellent insurance benefits to its employees. The State of Washington provides a uniform program of medical, dental, life, accidental death/dismemberment, and long term disability insurance, as well as optional programs, including home and automobile insurance. Current benefit load rates are 23.2% for instructional and research faculty; 13.4% for graduate student appointments; 30.8% for classified staff; 27.10% for professional staff; and 11.1% for hourly appointments.

Financial benefits. Non-salary financial benefits include the University's own retirement plan (UWRP) for faculty and professional staff (separate state plans serve classified staff), a voluntary investment program, flexible spending accounts, and housing resources. The UWRP provides matching contributions from between 5% and 10%, depending on the age of the faculty or staff member. The University contribution to the UWRP for most faculty averages 8.3% over a career; a recent University accreditation report, however, notes that some peer institutions offer far more generous contributions—in some cases as high as 15%.

Institutional integrity. Evidence of institutional integrity is reflected in the extensive documentation of policies and procedures in written reports and web pages. More important is the attitude of the community toward the values of integrity. At every level, from students to Regents, candor, openness, and honesty are expressed values. Additionally, the College has its own core values of open communication, respect, and accountability.

Transformation and modernization initiatives. Turning the Odegaard Undergraduate Library into a Digital Commons, providing a location where students utilize information technology 24 hours a day to advance their learning, is one example of new services for students. The University's institutional computer systems, transmitting over 1.6 trillion bytes of information each day, support everything from e-mail to high-speed computing. And the creation of a relational database allowing for the sharing of information across the University fosters a new approach to management. The idea that 'ownership of knowledge is power' is an outdated mode of operation that has been set aside in favor of sharing data to allow all units throughout the University to know about each other so they can better manage their resources based on common information.

An entrepreneurial atmosphere. Declining state support has necessitated an entrepreneurial approach to resource shortages. In a serendipitous and counter-intuitive turn of events, the positive force of this entrepreneurial revolution has created an energy and excitement that has reinvigorated the campus. The Executive Vice President and representative service unit managers agree that facing the reality of changing State funding priorities, embracing strategies for more effective and efficient management, and making better use of technology have created better financial and business management for the campus.

Quality improvement environment. Campus service units under the Executive Vice President (EVP) have a long history (in most cases well over a decade) in effecting continuous quality improvement, with impressive results. As part of this continuous quality improvement initiative, the EVP has developed a rolling group of champions across the campus to invest in developing a web-based mechanism providing access to legacy administrative systems. The most recent example is a new financial reporting tool, MyFinancial.desktop, which enables users to have up-to-date access to financial information needed to make informed business decisions. The tool was developed by campus-wide user task groups, led by the University Services Renewal (USER) Project. One of the keys to success of a USER-led project is the involvement of campus units, central offices, and key business owners in the planning, design, development, and implementation of the product. There have been several USER projects in recent years, leading to increased job satisfaction and effectiveness on the part of staff. Other completed projects include improvements to the payroll system, on-line grant proposal submission, and an evolving on-line grant proposal routing system.

Work/Life benefits. These include elder and adult care, flexible work arrangements, and UW CareLink. UW CareLink is a confidential assistance program offering such services as confidential counseling, legal and financial services, and critical incident assistance and debriefing. All services are available to faculty and staff and their dependents and family or household members in any location nationwide; in addition, employees may bring into counseling sessions anyone who may be involved in their issue (e.g., friend or relative). For employees who accrue leave, the University provides release time for the first session relating to a particular concern.

Cultural and intellectual benefits. All University employees have ready access to a wide and diverse array of cultural and intellectual events. The University encourages cross-disciplinary interactions in a number of ways. One example is the UW Science Forum Colloquium, a monthly event for the past six years where faculty are invited to share their research with colleagues outside their discipline. The monthly talks are pitched at an interdisciplinary technical level, accessible to faculty and graduate students in all fields. To many who attend, learning about state-of-the-art research directly from creative, eloquent colleagues is one of the most thrilling aspects of being at the Univeristy. For graduate students, the talks also present new ways of thinking about research and various career paths. This year's program includes such topics as Genomic Views of Human History, Ghrelin and

the Regulation of Appetite and Body Weight, Sun-Earth Climate Connection, Automating Tactile Graphics Translation—Opening a Door to Science for Blind Students, and Tsunami Geology: Splashy Science and the Sands of Time.

Computing. In the late 1980s and early 1990s the University made several critical strategic technology decisions that have shaped its current technology environment and enabled technology advancements that have given it a competitive advantage in learning and research, and have been critical to its success. One of the most important decisions was the University's Computing and Communications' (C&C) focus on creating an institution-wide infrastructure, with the top priorities being universal networking, messaging, web services, and other electronic forms of collaboration based on Internet protocols. As part of this strategy, the University also graduated from five separate, constituency-based networks that could not communicate with one another to a single, institution-wide, high availability, high performance "network utility" that has enabled communication and collaboration both within the institution and externally.

Today the University has over 1,200 computer servers that are managed centrally by C&C, over 55,000 computers on the campus network, and 3,000 miles of fiber optic cable transmitting over 1.6 trillion bytes per day of information. The University encompasses all the technologies of a small city, with police, sports, and performance venues, multiple major hospitals and clinics, and a major research university with three campuses plus external experimental sites and regional partnerships. At the same time, campus units have taken on responsibility for their own locally-based operations supported by college and/or departmental computing staff. This approach has enabled collaborations between C&C and other University units and external partners that have enhanced teaching and learning.

Equipment. In addition to their regular operating allotments, University units also receive an annual equipment allocation from central sources. Recent history of allocations to the College is shown below. Although the numbers are not large, they represent an important source to meet highest priority needs for instruction and infrastructure support.

Fiscal Year	State-Funded General Equipment
FY 2002	$55,055
FY 2003	$55,055
FY 2004	$80,744 (+ $26,245 for research)
FY 2005	$43,071 (+ $16,243 for research)
FY 2006	$43,071 (+ $12,594 for research)

There has been a "general equipment" allocation for many years, with the amount varying from year to year. Currently there is a $4 million annual equipment allocation built into the base Core Education Budget; in some years, that amount has been supplemented with one-time allocations from the fund balance. In FY 2004, the University began to distinguish between the Core Education Budget and the Restricted Programs Budget, which includes the Indirect Cost Recovery Budget; the primary purpose of making this distinction was to insure that incremental increases in indirect cost recovery revenue were being allocated to appropriate research support purposes, consistent with indirect cost study procedures.

Spatial information technologies. The College, in collaboration with the College of Engineering, created the Precision Forestry Cooperative to conduct pioneering research in forest production, management, and manufacturing using technology at a new scale of resolution and accuracy with the goal of producing economic and environmental benefits. Precision Forestry is defined as using high

technology sensing and analytical tools to support site-specific economic, environmental, and sustainable decision making for the forestry sector. This research unit brings to the College knowledge of and experience with a wide range of technological tools in addition to GIS. These include 1) LIDAR (Light Detection And Ranging) and IFSAR (Interferometric Synthetic Aperture Radar), which can be used to study forest canopy characteristics, and to develop highly accurate digital elevation models, useful in such things as determining stream channel initiation points and topography under forest canopy; 2) GPS (Global Positioning System) and Inertial Navigation Systems, used for navigation under forest canopies for purposes like electronically mapping and marking riparian trees; and RFID (Radio Frequency Identification) for electronically tagging trees.

The research environment. The University and the Colelge have a long history of success in the research enterprise. Historically benefiting only graduate students, the University has recently committed to involving undergraduate students in research. Grants and contracts provide the opportunity for graduate and undergraduate students to work with nationally recognized faculty in research, as part of their educational experience. The value of the research effort is leveraged through the incorporation of graduate students into the program and the infusion of new knowledge into both graduate and undergraduate teaching. The faculty serve as Principal Investigators on research projects, often involving the same students they serve as graduate advisors. Many graduate students receive financial support through research assistant appointments. Research assistantships provide many advantages to students and to prospective employers. The recipient of a research assistantship receives training in the process of scientific research and, in the course of a project receives close direction and supervision from highly qualified faculty members. There have also been increasing opportunities for undergraduates to obtain hourly employment on various research projects.

Specialized laboratories. The laboratory facilities of the College are located in Bloedel and Winkenwerder Halls, and in the buildings at the Center for Urban Horticulture, part of the newly organized UW Botanic Gardens. They include specific laboratories designed to study soil chemistry and soil physics, hydrology, polymer chemistry, tree physiology, genetics, wood and extractives chemistry, physics of fibrous composites, and horticultural plant materials. Among the many available research tools are optical equipment, electronic instrumentation for a wide variety of uses, gas chromatographs, spectrophotometers, and physical test equipment. Funding has been requested for a special learning environment, converting the former library space in Bloedel Hall to accommodate the proposed Teaching Observatory, an active learning laboratory envisioned as a theatre-like environment. This facility would be a highly collaborative, technologically enhanced setting containing features inherent in active learning—breakout spaces and the latest AV and computer technology—allowing presentations (including live video), full class discussions as opposed to dialog with instructor, and highly focused small group discussions and data analyses, greatly enhancing the ability to engage in problem-based and novel learning modes.

Field instruction. Although the requirement of a quarter in residence at the College's C.L. Pack Experimental Forest is no longer part of the curriculum, the College continues to provide field experiences for its students. The College's 2007-09 operating budget request includes a request for an increase in the operations budget for TAs, some of whom are dedicated to assisting with field instruction. These have been funded in part from salary savings from vacant faculty positions, a source which will become dramatically reduced with the hiring of new faculty.

Financial Support for the College of Forest Resources

Faculty Salaries

Faculty salaries are adjusted based on a merit system. Faculty members are eligible for salary adjustments when resources are made available by the State Legislature. Consistent with the University's practice of collegial governance, the primary responsibility for decisions on salary matters is vested with the faculty. When funds are allocated for salary adjustments by the Legislature, or the University internally allocates funds for faculty salary adjustments, consultation on the formula for allocation among units is held between the Provost, the Deans, and the Faculty Senate. The President makes the final salary allocation decision, consistent with the rules of the Faculty Code. The Faculty Code procedures require faculty members to identify their own strengths through annual reports, and to submit those reports for evaluation by department colleagues senior in rank. Those materials must include student and collegial evaluations of teaching and annual Chair workload plan agreements. These records are reviewed at the departmental, college, and university levels, and translated into salary decisions.

It is in the area of faculty salaries that the University is particularly challenged. The table below displays recent merit funds available in percent terms.

Fiscal Year	Average Merit Available
1999-2000	4.2%
2000-2001	4.0%
2001-2002	4.5%
2002-2003	0.0%
2003-2004	2.0%
2004-2005	2.0%
2005-2006	3.2%

Faculty salary problems differ by department. Some departments approach their peers, but others lag substantially behind. Despite significant salary problems throughout the institution, the University continues to attract and retain excellent faculty although first choices are sometimes lost to higher bidders. Seattle's high cost of living, particularly housing, can also be a factor.

The University is investigating making differential unit adjustments in salary allocations as a method to ensure that faculty members within every discipline do not fall too far behind their peers. Finding a fair and adequate institutional approach to ensure all faculty members are paid at levels at least reasonably close to competitors, while simultaneously rewarding those units where the market is the most difficult for retention, and which are of the highest quality, requires difficult balancing.

Although not used by the College, a University strategy available to address salary problems is elective conversion to the A/B compensation model. Using this model, tenured faculty members can retain all of their state salary base while at the same time reducing, to an 80% limit the percentage of their tenured appointment. Outside salary sources can then be used to increase their total salary rate through the non-state portion of their salary. A long-standing strong research profile is a necessary ingredient for this model.

CFR 9-month faculty salaries by rank compared to other UW units, as of Autumn, 2005

		Assistant Professor			Associate Professor			Professor		
Unit	Group Average (includes other titles)	High	Average	Low	High	Average	Low	High	Average	Low
College of Arts and Sciences	$71,441	$84,303	$57,427	$46,926	$95,949	$62,716	$44,613	$183,600	$88,894	$54,963
College of Education	$81,096	$64,917	$59,621	$56,187	$91,791	$69,057	$59,571	$216,477	$97,900	$59,553
School of Pharmacy	$99,422	$90,564	$79,710	$68,856	$148,428	$95,830	$76,776	$166,284	$119,386	$87,972
College of Engineering	$96,269	$89,100	$74,311	$45,000	$114,807	$83,481	$63,126	$169,371	$109,622	$75,546
School of Law	$103,290	$105,264	$87,936	$71,406	$107,541	$97,294	$89,460	$153,324	$121,718	$79,857
College of Forest Resources	**$86,144**	**N/A**	**N/A**	**N/A**	**$81,324**	**$71,540**	**$65,061**	**$122,985**	**$89,515**	**$55,647**
School of Business Administration	$116,878	$150,003	$117,478	$92,844	$160,803	$124,793	$90,459	$206,510	$145,476	$69,408
Information School	$81,058	$87,714	$77,967	$67,572	$91,926	$82,207	$70,650	$120,996	$105,595	$88,074
School of Dentistry	$110,132	$96,108	$81,479	$65,000	$138,444	$103,268	$68,868	$228,148	$132,426	$85,764
School of Nursing	$81,916	$69,660	$66,320	$64,053	$83,700	$74,271	$66,825	$158,256	$96,582	$75,177
College of Architecture and Urban Planning	$66,359	$61,848	$52,502	$47,250	$134,208	$70,661	$52,110	$109,872	$85,940	$60,147
School of Social Work	$84,195	$68,967	$63,882	$60,300	$150,003	$80,490	$65,673	$191,016	$127,734	$90,009
Evans School of Public Affairs	$80,964	$73,863	$65,688	$61,848	$90,000	$80,571	$72,342	$113,994	$106,689	$102,861
School of Public Health & Community Medicine	$118,324	$105,060	$84,982	$74,232	$149,880	$107,054	$74,820	$197,976	$140,494	$93,012
College of Ocean and Fishery Sciences	$84,676	$61,353	$55,549	$52,218	$83,250	$67,210	$59,634	$153,621	$97,729	$69,615
OVERALL, Seattle campus	$80,586	$150,003	$67,285	$45,000	$160,803	$70,968	$44,613	$216,477	$98,266	$54,963

Entering the 2005-2006 academic year, the average professorial salary at the University's Seattle campus was $80,586, distributed by rank as follows:

- Assistant Professor $67,285
- Associate Professor $70,968
- Professor $98,266

For the College, Autumn 2005 data show that the average 9-month professor salary is $89,515 (9% behind the Seattle campus professor level average), while the average 9-month associate professor salary is $71,540 (about 1% ahead of the Seattle campus associate professor level average. (The College currently has no assistant professors.) The overall College 9-month salary is $86,144, ranking 7th among the 15 Seattle campus colleges reported above, behind Public Health, Business, Dentistry, Law, Pharmacy, and Engineering, and ahead of the overall Seattle campus average.

Aside from the issue of salary levels is the relationship of salaries among existing and new faculty. Salary compression, where new hire salaries are approaching or even outstripping those of long-time faculty members, is a University concern. According to Autumn 2005 University faculty salary data, this is most pronounced at the Associate Professor rank. The University is making available salary compression dollars, and the College is currently evaluating who is most deserving among its faculty. Although the College received very little funding for this purpose, the University intends to continue compression allocations and so over time progress can be made in correcting this disparity. A new hire last year at the professor level came in at $105,390, 18% above the average professor level salary. Several new hires in process now will provide a better benchmark for the compression issue within the College.

The University uses two peer comparison groups—the Higher Education Coordinating Board Peer Group (aka HEC Board Peer Group) and the Office of Financial Management Peer Group (aka OFM Peer Group). The College does not believe that the HEC Board 24 adequately represents forestry and natural resource college peers and has generated its own peer list of 9 institutions. These peer groups have the following memberships.

OFM (8)	HEC Board (24)	College of Forest Resources (9)
University of Arizona	University of Arizona	
University of California, Berkeley		University of California, Berkeley
	University of California, Davis	
	University of California, Irvine	
University of California, Los Angeles	University of California, Los Angeles	
	University of California, San Diego	
	University of Cincinnati	
		Colorado State
	Cornell University, Contract Colleges	
	University of Florida	
		University of Georgia
	University of Hawaii	

University of Illinois, Urbana/Champaign		
	University of Illinois, Chicago	
University of Iowa	University of Iowa	
	University of Kentucky	
		University of Maine
University of Michigan, Ann Arbor	University of Michigan, Ann Arbor	
	Michigan State University	
	University of Minnesota, Twin Cities	University of Minnesota, Twin Cities
	University of Missouri, Columbia	
	University of New Mexico	
		SUNY-Syracuse
University of North Carolina, Chapel Hill	University of North Carolina, Chapel Hill	
		North Carolina State
	Ohio State University	
University of Oregon with Oregon Health Sciences Center		
		Oregon State
	University of Pittsburgh	
	Texas A&M University, College Station	
	University of Utah	
	University of Virginia	
		VPI
	University of Wisconsin, Madison	

2004-5 data comparison to the OFM group shows overall University professor salaries lagging by 15.5%, associate professor salaries lagging by 5.5%, and assistant professors lagging by 0.7%. The same data comparison to the HEC Board group shows Univeristy professor salaries lagging the 75th percentile level by 11.5%; associate professors lag by 4.9%; assistant professors lead by 1.1%.

Comparison of salaries (2004-2005 data) to Natural/Forest Resource Schools within the College peer group show that professor salaries lag by 3%, associate professor salaries lag by 2% while assistant professor (sample of 1) salaries lead by 1%.

2004 – 2005 Faculty Salaries

College of Forest Resource's Peer Institutions				Natural/Forest Resource Schools						
	All Salaries*			Salaries**			Number of Faculty			
	Prof	Assoc	Assist	Prof	Assoc	Assist	Prof	Assoc	Assist	Total
University of Minnesota	$105.4	$70.7	$62.5	$84.40	$66.40	$57.60	26	6	11	43
Colorado State University	$90	$67	$57.9	$88.43	$65.40	$54.62	30	12	15	57
University of Georgia	$92.8	$64.7	$57.7	$83.30	$57.49	$51.67	19	15	10	44
University of California, Berkeley	$121.8	$77.7	$71.3	$104.88	$64.39	$65.98	39	7	9	55
North Carolina State University	$94.8	$70.3	$61.9							
SUNY - Syracuse	$78.2	$62.1	$51.9							
Virginia Poly Tech	$96.8	$68.8	$59.1	$86.69	$67.57	$56.27	28	13	15	56
University of Maine	$74.2	$63	$47.8	$78.09	$60.24	$49.59	73	41	29	143
Oregon State University	$79.2	$62.4	$54.8	$75.00	$60.23	$53.48	23	22	7	52
Average	$92.6	$67.4	$58.3	$85.83	$63.10	$55.60	34	17	14	64
University of Washington	$98.1	$70.2	$64.7	$82.96	$62.15	$56.14	33	9	1	43
Comparison to UW	+6%	+4%	+10%	-3%	-2%	+1%				

* Nine month salaries for full time instructional faculty from Chronicle of Higher Education website, AAUP faculty survey data

** Nine month salaries for academic and research faculty from respective deans and department heads as of September 1, 2005

Changes that Have Occurred or are Anticipated in the Educational Budget

Funding Prospects for the Future. The primary funding sources for the University's core educational enterprise are State General Fund dollars, tuition, and various local funding resources (e.g., investment income and overhead charges to self-sustaining activities). A combination of voter initiatives and the length and strength of the economic recession occurring in the State of Washington have put a great deal of pressure on State General Fund resources for the past several years, and this pressure appears to be continuing in spite of a current surplus in the State budget. While the University does not expect substantial future growth in its State General Fund resources, it does anticipate that its State General Fund appropriation will either stabilize or grow slowly. Over the past few years as the State has found it difficult to provide additional State General Fund resources for the University, the legislature has provided the University with greater tuition setting flexibility. As the quality of the University's programs is high and its tuition is low relative to peer institutions (for most tuition categories), the University believes that it still has a great deal of flexibility to increase tuition in the future. The local funding sources that support the core education enterprise are expected to remain stable. Thus with the funding for the core education enterprise under some pressure at the moment, this funding is stable in the near term and expected to resume moderate growth within a few years.

The Board of Regents and the administration have engaged in ongoing discussions about future financing of the University. The pace of these discussions has accelerated as the state economy has gone through periods of recession and as the competing pressures on the State General Fund have resulted in substantial reductions in that funds's resources for the University. The University's ability to continue to thrive and move forward with transformational change is a result of an institutional commitment to strategic planning. In addition, over the last few years, the University has moved to substantially increase the level of funding for development activities, and it is in the midst of its second ambitious long-term development campaign.

It is important to note that the majority of gift funds are not discretionary or unrestricted. The University maintains documentation of gift purpose and donor intent for every endowment in a separate permanent file. Ultimate responsibility for compliance with the proper use and donor intent, and for stewardship for each endowment, rests with the administering department. The University continues to be successful in fundraising, and private funding is expected to grow as investment in development activities start to pay off and as returns to the University's Consolidated Endowment Fund (CEF) grow with improving economic and presumably improving market conditions.

Programs supported by the CEF include undergraduate scholarships, graduate fellowships, professorships and chairs, and research activities.

The University's major priorities going into the 2005 Legislative Session centered around three themes: (1) Competitive Funding for Academic Excellence; (2) More Opportunities for a Growing Student Population; and (3) Buildings for Outstanding Learning. Technology has permeated our state's economy, with a full range of industries, including forest products, dependent on a highly educated workforce and continuing innovation. The basic raw materials of the future will be smart people and great ideas. The University intends to be a major producer of those smart people and great ideas.

Competitive Funding for Academic Excellence. Great universities are known for the quality of their undergraduate experience: they are the places the best students attend to get an outstanding

education, and the places the best faculty want to teach. The University is falling short of its potential as a center of undergraduate excellence. State appropriations to the University have fallen by 23% (in constant dollars) since 1991, while most states have increased their commitment to higher education. Only one state in the nation (South Carolina) has a worse record of higher education support during this period. The gap behind competitor schools for funding (general fund and tuition) has grown to more than $4,000 per student. Inadequate compensation for top faculty will eventually result in migration to other universities that provide an environment where they can thrive. An increasing number of courses must be taught in large settings, reducing interaction between students and faculty. Many required courses are offered infrequently or fill up fast, making it difficult to finish degrees on time. Students have insufficient access to counseling to help them make good educational choices, reducing the chances they will find the right major and finish on time. Many University buildings do not have the wiring and networking systems to support today's technology-savvy students.

More Opportunities for a Growing Student Population. The State of Washington is a major importer of higher education. At the same time that our population ranks as one of the best educated in the country, our higher education system has among the lowest capacities to offer four-year degrees at public universities. While some students who are denied entry to our state's universities can afford an expensive private or out-of-state education, many others will be frozen out of higher education and the opportunities it offers. Washington ranks 48th out of fifty states in the number of student spaces per capita at four-year universities. Washington ranks 32nd out of fifty states in the production of bachelor's degrees per capita (including transfers from community and technical colleges). When students leave the state for their college education, they frequently do not return. The State of Washington continues to be a significant importer of talent; we are not giving our own students the tools to compete with the tens of thousands of degree-holding people who move to Washington State each year.

The "UW Paradox": booming research, under-funded education. Why, when the University continues to grow as an institution, is there so much concern about funding? The answer is that current growth in University employment and budget is attributable to increases in (1) research funding and (2) services provided through the University's Medical Center. While these two functions contribute importantly to education, revenue from them cannot be used to support the University's basic education mission. The combination of tuition and state per-student support will continue to fund the education of students, and while the University as a whole may be expanding, those two revenue sources are not. Over time, it will not be possible to sustain excellent research and medical services in an institution with an eroding teaching mission: key research faculty want to be part of a university with great students and great teaching.

The University has a diversified revenue base, with no single source generating more than 31% of the total revenues. Forty-five percent of total expenditures support instruction and research. The University's level of State General Fund support, a critical source for instructional activities, is determined as part of the State budget process. The University usually receives a lump sum appropriation from the State Legislature, although some appropriations may be for specified purposes such as salary increases. With few exceptions, the President and Provost have broad discretion and autonomy on how the State General Fund support allocated to the University is expended within the University.

As part of the budget development process, the President and Provost seek input from a wide range of campus constituents, including the Board of Deans. Each year, the Dean of the College has a

strategic planning/budget meeting with the Provost and Office of Planning and Budgeting staff. The information obtained during these meetings is one part of the input into the University's annual budget process in which decisions about allocation of any incremental resources are made. Any financial support issues that are raised during program-specific accreditation processes are discussed by the Dean and the Provost. At least every ten years, the University conducts thorough program reviews of all of its academic programs; any financial support issues that are raised during these internal academic program reviews are discussed by the Dean and the Provost.

There are two constraints that significantly challenge the University's financial planning efforts.

- *Authorized student enrollment.* The University's overall authorized student enrollment at each campus for programs that receive state support is established by the State Legislature as part of the biennial budget process. With a few exceptions, the University has discretion in allocating student full-time equivalents to programs within these authorized enrollment levels. The state does not regulate enrollment in academic programs offered on a self-sustaining basis by the University.

- *Tuition setting authority.* For the state-funded part of its program, the University has only recently been granted authority by the State Legislature to establish tuition rates for graduate and professional students; this authority is subject to reauthorization in 2009. Tuition levels for undergraduates continue to be established by the State Legislature as part of the biennial budget process. Recent budgets have provided the Regents with greater latitude in setting tuition rates than has been customary in the past, and the hope is that this will evolve into full tuition-setting authority.

Internal sources of financial aid are gifts, including distributions from endowed gifts, and tuition waived or restricted for financial aid. Financial aid funded from tuition waivers or revenues is authorized by various State laws, which establish selection criteria and set limits on total revenues available for financial aid. The University's model for tuition increases includes projected increases in financial aid in order to address accessibility for needy students. Additional University resources are being directed to fundraising activities to increase private gifts to support student financial aid. The College has benefited greatly from private support.

Funding for the research enterprise at the University is strong. For a long period of time, the University has been the leading grant-getter among public universities and 2nd overall. The College's total research expenditures have shown an upward trend since FY2000. It is hoped that this will continue. However, various federal agencies are experiencing budget cuts, which could lead to an overall reduction.

Through Educational Outreach, the University has substantially expanded the educational offerings that are available in addition to the core State-supported educational program. Demand for these fee-based courses and certificate and degree programs is very strong. The University's auxiliary enterprises are financially stable and expected to continue to be so. These auxiliary enterprises neither depend on financial support from central resources nor support the University's education and general operations. The College has not yet pursued activities in this area.

The University's budgeted revenues come from two major funding categories: State appropriations and University local funds. The table below displays the College's recent allotments of these funds, along with research cost recovery funds. After an extended period of budget reductions, the College's state and local fund allocations, the primary sources of instructional funds, have been

essentially flat, with increases due solely to minimal salary increases. Although total research grant funding from agencies and foundations has been increasing, the indirect costs associated with those projects have been falling, which reflects itself in the reduced funding from the Research Cost Recovery source.

College of Forest Resources State and Local Sources of Funds

	2003-04	Percent Change	2004-05	Percent Change	2005-06
Regular State	$5,228,363	+1.5%	$5,304,155	+2.9%	$5,457,357
Local Fund Allotment	$72,139	+2.1%	$73,685	+2.8%	$75,774
Research Cost Recovery	$469,601	+0.0%	$469,800	-15.4%	$397,567
Total	$5,770,103	+1.3%	$5,847,640	+1.4%	$5,930,698

How this money is spent by category is dependent upon need. However, as displayed in the tables below, salaries consistently take the majority of funds. A lot of faculty travel occurs on research grants, which are not reflected in these tables; the same is true of equipment. Instructional equipment, however, is limited to state and local fund sources. Research cost recovery funds have more flexibility, as shown in the wider percentage swings in the table.

College of Forest Resources State and Local Uses of Funds

	2003-04	2004-05	2005-06
Salaries	90%	88%	data not yet complete
Services	5%	6%	
Travel	1%	1%	
Supplies	3%	3%	
Equipment	1%	2%	
Total	100%	100%	

College of Forest Resources Research Cost Recovery Uses of Funds

	2003-04	2004-05	2005-06 (current)
Salaries (01 & 07 & 08)	66%	44%	data not yet complete
Services (02 & 03)	20%	25%	
Travel	3%	5%	
Supplies	9%	12%	
Equipment	2%	14%	
Total	100%	100%	

Two common measures of the adequacy of financial resources are 1) overall funding per FTE student and 2) faculty salaries, both compared to peer institutions. At the university level, both of these metrics raise issues of eroding state support.

Faculty Provided with Professional Development and Continuing Education Opportunities

The University offers a formal program for professional leave with pay. Under the University's Professional Leave Policy, faculty members may request and receive a paid development leave, as frequently as every seven years. (By state law, the University is limited to no more than 4% of its faculty being on sabbatical leave at one time.) This generous sabbatical leave policy allows for faculty members to take one quarter leave at full salary, two quarters leave at three-fourths quarter salary, or three quarters leave at two-thirds salary. College faculty have made moderate use of the professional leave privilege over the last several years. Due to the state limit, the College is awarded a small number of quarters of sabbatical each academic year. The allotment is usually sufficient, but there is the capability of requesting more quarters if needed.

Each department, under the general guidance of the deans of the campuses, schools, and colleges, decides its own faculty workload and individual faculty classroom and other work assignments. The mission of the University focuses on teaching, research, and service, which all faculty members are expected to contribute in some way toward all aspects of this mission. Thus, the distribution of an individual faculty member's workload inevitably reflects the strengths each individual faculty member brings to the department.

There are substantial University resources that support faculty professional growth and renewal. All new faculty members are expected to participate in the Faculty Fellows Program. The Fellows Program provides new faculty members an intensive instructional development program led by the University's Teaching Academy (faculty members who are previous winners of the University of Washington Distinguished Teaching Award). In addition, the Center for Instructional Development and Research (CIDR) offers an array of instructional improvement and assessment training programs for faculty and teaching assistants.

There are a number of substantial programs that provide support for new research initiatives by faculty members. The most prominent is the Royalty Research Fund (RRF). This fund, which is supported by a distribution of revenues from the University's program in Technology Transfer, is administered by the Office of Research. Twice a year, faculty members are invited to submit internal grant proposals to start new research programs.

Student Support Programs

The faculty, staff, and students of the College can draw upon a wide range of University support and educational services. The large size of the institution and the diversity of programs provide an ample menu of opportunities for personal development and academic enrichment.

The University's Division of Student Affairs provides a broad range of services and programs designed to further the educational and personal development of students. The division consists of ten units: Admissions and Records, Center for Career Services, Student Counseling Center, Disabled Student Services, Housing and Food Services, International Services Office, Recreational Sports Programs, Student Financial Aid, Student Publications and Student Activities and Union Facilities.

The University's Center for Career Services offers career information and services to assist undergraduates, graduate students, and degree- or certificate-holding alumni (1) to make a viable connection between their academic backgrounds and their career or long-range employment

objectives, (2) to develop effective job-seeking strategies, and (3) to find suitable employment upon leaving the University or to change employment thereafter. Programs include individual and group career counseling, job search seminars, career-related internships, campus interviews, and summer employment listings.

All students at the University may make use of the services of the Student Counseling Center and its staff of psychologists and counselors to discuss educational progress, personal concerns, or career goals. Also available is an interactive computer-assisted career guidance and information system. Workshops on special topics such as test anxiety, time management, and stress management are also available. Other support services provided by the University include financial aid, student health insurance, a childcare program, student legal services, and recreational sports.

A wide variety of computers, facilities, and support services are available to the University community. The central organization for computing and networking, called Computing & Communications (C&C), offers an array of computing options and services that include microcomputers, workstations, and a number of large multi-user computers. C&C computer labs, open to all students, faculty, and staff members, provide opportunities for use of Macintoshes, PCs, and workstations. In addition, electronic mail services and convenient access to resources throughout the world, such as supercomputing, library catalogs, and other information resources are available on the campus network. All members of the University community are entitled to basic computer services at no charge under the C&C Uniform Access system.

The University's Office of Classroom Support Services provides comprehensive media support and services to faculty, staff, and students, including educational media services, classroom maintenance and planning, equipment consultation, repair, and maintenance, and photography. Over 5,000 films and videotapes for classroom instruction, preview facilities, and classroom operators and equipment to utilize these materials are available for use by the campus community. A complete photographic lab with studio services is also available.

Major Strengths and Weaknesses of Partner Institution

Major Strengths

In 2003 the University underwent its decennial accreditation by the Northwest Association of Schools and Colleges, this region's accrediting agency of higher education institutions. Among the conclusions of the evaluation team:

"The University of Washington is an institution of distinction by national standards, well recognized among America's leading research universities (typically ranking at or near the top in grants and contracts from federal, foundation, and industry sources, which totaled over $800 million in FY 2002). With over 40,000 students in its regular program and an additional 120,000 students throughout the world in its Educational Outreach programs, UW ranks high among America's institutions of higher education. Like virtually all public universities in America, the University of Washington has been challenged by the changing patterns of state taxpayer support for higher education, exacerbated at the time of this site visit by a persistent, national recession. The story that is playing out at the UW today is quite substantially about the university's response to that challenge."

One of the College's major strengths is the widely recognized depth and diversity of the larger University. Many outstanding faculty in other units interact and influence our students during the

course of their academic careers, offering a dimension of the total educational experience not possible within the walls of the College itself.

Faculty. There is much truth to the old adage that the quality of a university is determined primarily by the strength of its faculty. For decades, the University has been able to attract and retain a high quality faculty, teachers who are at the forefront of their individual fields of study. Institutional quality seems to be holding even in the face of difficult economic times in the state. Viewing the University as a whole, efforts at faculty recruiting generally are successful. Typically, the reason for not succeeding in attracting the candidate of choice is financial. Several deans have reported losing top candidates to other institutions who offered substantially higher salaries. This challenge is compounded by the high cost of living in the Seattle area. Housing is a particularly difficult problem, especially for junior faculty. While the exceptional quality of the University and the overall quality of life in the Seattle area are positive factors in faculty recruitment, the high cost of living and the fact that salaries overall lag those of peer institutions are factors that inhibit successful recruitment. The University takes some pride in the fact that it does not rely very strongly on the use of part-time faculty. Despite the difficult fiscal climate, the University has not developed a reliance upon such faculty or used them to replace full-time faculty. While there has been a 15.6% increase in part-time appointments since 1998, total faculty have increased by about 8% in the same period. Much of the growth in part-timers can be linked to programmatic growth in areas not served by regular tenure-track faculty. In any case, data on the hiring of part-time faculty are made available annually to the Faculty Council on Faculty Affairs. Once appointed, part-time faculty are subject to the same regular evaluation procedures as full-time faculty.

The research enterprise. Another indication of the strength of the University is its national ranking in research funding from external sources. Each year since 1975 the University has ranked first in the country among public institutions in the generation of grants and contracts from all sources (federal and private). The bulk of this funding comes from the federal government; the rest derived from private foundations and corporations and state and local governments. This success is a very tangible measure of the intellectual quality of the University faculty and best characterizes the entrepreneurial spirit of the University. These research activities are increasingly interdisciplinary and multi-disciplinary in nature.

Interdisciplinarity. An important strength of the University is a growing commitment to interdisciplinary activities. The College, through its joint management of research centers such as The Water Center and the Olympic Natural Resources Center, is actively involved in teaching and research that take place across disciplinary boundaries. College faculty regularly teach courses in other University academic units such as the Center for Quantitative Sciences, the Business School, the College of Engineering, and the Department of Biology.

New leadership. At present, the University is facing the challenges and opportunities of a major transition in administration. A new permanent president and provost are both in place after a long period of interim leadership in one or both positions. Although the interim leadership served the campus well, the permanent appointments will allow a firmer future direction.

Institutional transformation. For some time the State of Washington, like many other regions across the country, has been facing significant economic difficulties. The University has recognized the strong likelihood that decreased State support is a permanent circumstance rather than a temporary aberration, requiring it to reassess its fundamental economic relationship to the State, which now contributes less to the support of the University on a per-student basis today than ever before. This

economic revelation has created an entrepreneurial environment never before experienced in the institution, one that is creating energy and excitement leading to a core transformational effort occurring on many fronts: (1) transformation from a state-supported university to a state-assisted university; (2) transformation from a highly discipline-oriented teaching and learning setting to an interdisciplinary and multi-disciplinary environment of discovery; (3) transformation from a university with three campuses to a coordinated multi-campus university; (4) transformation from a classroom-based instructional academy to a service learning and technologically oriented societal partner; and (5) transformation from the classroom that merely disseminates knowledge to a vigorous learning environment that engages students in the creation and discovery of knowledge. Through these transformations, the University is re-envisioning itself and creating a new educational paradigm.

Planning throughout the institution. The change in the University's resource base has forced whole new levels of planning upon the institution. Every department has a strategic plan, every college has a strategic plan, and the University has goals and objectives. The Regents assess performance against goals and objectives, and the University Administration assesses departments against their performance indicators. Since 1999, the Board of Regents has established and focused upon six goals, reaffirming these goals each year and establishing annually a list of one-year performance measures related to these goals: (1) Establish a solid resource base to support excellence in education and research, now and in the future; (2) Provide equitable access for all citizens of the State of Washington and promote diversity at the University; (3) Work with our state's other educational institutions to meet the educational aspirations of students at all levels; (4) Position the University to contribute in the 21st Century; (5) Stay on the cutting edge of innovation in education, research, and technology; 6) Promote the integration of research, education, and service. Planning and assessment are ongoing characteristics of the University, providing a strong mechanism for meeting future challenges.

New approaches to undergrad education. The University's transformation from a large monolithic university into a smaller learning environment for its students through Freshmen Interest Group programs, its focus on personalized education, the use of technology to allow students to individualize their engagement in education, and its commitment to ensure that students can complete their programs in a timely manner, are important reconstructions of the University's approach to undergraduate education. Its expanded opportunities for international education with a goal of making an international experience available to every undergraduate student who wants one is recognition that a university education must be conducted in a global setting. The fundamental incorporation of research opportunities into the undergraduate experience sets the University apart in making the undergraduate experience rich and unique.

Re-envisioning graduate education. The University's investment in "Re-envisioning the Ph.D." has dramatically advanced approaches to graduate education. Re-envisioning the Ph.D. was a project funded by The Pew Charitable Trusts which posed the challenging question: "How can we re-envision the Ph.D. to meet the needs of the society of the 21st Century?" Even though U.S. doctoral education is considered the world's best, with international students vying for admission, concerns about its future were being expressed by many groups. The project was funded to identify and produce examples of the scattered and diffuse attempts currently underway to redesign doctoral education; explore the connections among the efforts, the issues, and the many stakeholders involved; convene national leaders to develop a set of strategies and incentives and an overall concept or design for addressing the issues to effect change based on a new vision of the Ph.D.; and continue to encourage and support national conversations and serve as a clearinghouse of innovative

practices in doctoral education. The research team interviewed more than 375 individuals, conducted numerous focus groups, compiled an impressive bibliography related to doctoral preparation, and inventoried more than 300 ways (which came to be known as "Promising Practices") that each of the groups was using to respond to criticisms and concerns in very creative and innovative ways. The project methodology and results appear on the web at http://www.grad.washington.edu/envision/about/index.html, an on-line, "living" resource for everyone interested in sharing ideas and shaping the future of doctoral education.

Private fundraising. The University is aggressively pursuing private funds for among other things assisting students with financial need and for enhancing the diversity of the student population, a commitment that extends all the way up to the Board of Regents. The University has been extremely successful in its private fundraising and is currently in the midst of its second major campaign. As of September 30, 2005, 31 units hold a total of 2,077 named endowments, with a market value of $1.49 billion. The College ranks 7th on campus in number of endowments and 11th in market value. Recent data show the University ranks 19th among all universities nationally in the amount of private gifts and grants it receives and 8th among public research and doctoral universities. Alumni are a strong source of private funds, with a participation rate of 18.5%.

Computing support and innovation. The University's Computing and Communications (C&C) division coordinates the overall quality, ubiquity, and use of computing and information technology on all three campuses. Although some campus units may partially disagree, the University's accreditation review characterized the division as well-organized and effectively administered, responsive to academic needs and interests, and forward-thinking in the approach to system-wide technology applications. It is obviously a critical support area. In recent years it has developed user-friendly web-based front ends for legacy systems such as financial services, student records, and other administrative services. Progress is also being made towards becoming a wireless campus. C&C has initiated a high-level Computing Directors Group to exchange information and discuss strategic information technology issues. C&C has deployed each of its directors to two or three schools or colleges as personal ambassadors. The intention of this effort is to create and maintain a direct and regular communication link between a C&C director and a dean. A new three-tiered structure of University-wide advisory committees is also in place to improve information technology planning, services, and functions through enhanced communication, participation, and exchange. The membership of these committees is designed to reflect the reality that traditional barriers among academic, administrative, research, instruction, library, and clinical functions have been largely dissolved in the technology domain.

Continuing education. The UW Educational Outreach enterprise is strong and well regarded. Faculty appointments in its programs are made in consultation with academic departments and faculty are given extraordinary support in course development. In the case of online courses, graphic designers and other technical experts work closely with faculty in ways that facilitate innovative course development and a robust and growing division of the institution.

Faculty workload. While faculty workloads vary by discipline, they are entirely consistent with the mission and goals of a major research university, allowing an appropriate balance between teaching, research, and service commitments. Recent changes in the Faculty Code have permitted development of differential teaching loads within the framework of individualized workload plans, allowing units to work with their strengths.

Faculty development. Faculty development (sabbatical) leaves and a number of other support programs run by the Center for Instructional Development and Research (CIDR) make University fully competitive with peer institutions. Faculty with limited access to research funds can take advantage of the grants available through the internally funded Royalty Research Fund. The University offers encouragement to pursue external funding from such sources as Fulbright, Guggenheim, NEH, and NSF by making up the difference between the grant awarded and regular salary. The University's faculty development program includes a program for new faculty included in the Center for Instructional Development and Research and junior faculty development awards, as well as senior faculty renewal programs.

Faculty evaluation. The University has well-defined policies and procedures regarding the selection of faculty, their evaluation, roles, welfare, and development. All faculty, including non-tenure track faculty, are required to administer student evaluations at least once a year. Elected faculty bodies play a critical role at all stages of the process. Comprehensive third year reviews are conducted for all new faculty and when problems are identified, efforts are made to implement appropriate course corrections. Post tenure reviews are triggered whenever a faculty member experiences two years without a merit pay increase. Corrective actions are identified and if specified requirements are not met, termination can occur, although no terminations through this process have occurred at the University.

Aesthetic appeal of the campuses. The University's Seattle campus is exceptionally beautiful. It is inviting and safe, conveys a strong sense of respect and tradition, and is intellectually stimulating.

Major Weaknesses

Fiscal challenges. The principal weakness of the University continues to be the lack of adequate financial resources to offset inflation of operating costs and to initiate essential improvements in salaries, programs, and facilities. Although the Legislature has not imposed recent budget cuts, neither has it provided substantial increases, and past reductions have taken a heavy toll. The present financial climate resulted in large part from the passage of Initiative 601, a publicly approved ballot measure, which mandated a state spending limit, together with mandatory spending increases for public schools, correctional institutions, and other programs. According to recent data the University ranks 17th out of 25 institutions (the HECB group) in total funding per FTE student, at $16,365. The University is adopting new strategies, but inadequate state support of the core mission will continue to have impacts. To achieve the goal of managing scarce resources without perceptible loss of quality, it may be necessary to include the elimination of academic programs of diminishing priority. The growing practice of charging "user fees" for various student services and the decline in general use funds to support these vital services may prohibit the students who need them the most from being able to use them. The rapid change in the sources and purposes of its revenues, purposes which are increasingly restricted by such funding sources as the federal government and private benefactors, will require leadership to pay close attention to keep from being diverted from the University's core mission.

Relationship among the three campuses. There are some inconsistencies in perceptions of future relationships among the University's three campuses. There is no apparent reconciliation of the clear diversity of the three campus missions and the concept of "one university." The consequences of the resulting confusion may become serious if not addressed carefully and thoughtfully. There is a tremendous scale difference between the Seattle campus and the campuses at Tacoma and Bothell, greater clarity is needed in defining future relationships among these quite different enterprises.

Establishing learning objectives. The University has multiple strategies for academic assessment but remains far from the goal of establishing learning objectives for all students and measuring progress toward those objectives to facilitate continuous improvement.

Competitive compensation. Faculty salaries are a major source of concern. The salary problem is clearly one that has developed over a long period of time. In 2003, University salaries lagged behind their peers by an average of 12.1%. In some cases, notably in the Arts and Sciences (the largest college), the situation is much worse, with differentials ranging above 20% even in large departments. Moreover, there seems to be no obvious correlation between the quality of ranking of a unit and the status of its salaries. A class action lawsuit by University faculty is seeking to force the University to honor a policy that was supposed to guarantee a salary increase each year, although there is some difference of opinion as to the precise interpretation of that policy. Since the University has generally succeeded in hiring competitively, salary compression has affected morale of existing faculty, sometimes leading to loss of senior faculty and promising junior faculty, which must be viewed as deleterious to the overall health of the institution. The good news is that the administration has devised some creative strategies, including reallocation of resources from programs that can become fee-based, to address such salary problems. However, elective conversion to a compensation model relying upon outside sources for academic year salary increases would seem to be a tool of limited use, unless benefits are somehow shared. The University's accreditation committee views faculty salaries as a problem that needs to be solved even at the expense of actions with locally adverse consequences, which would include reallocation of resources.

Faculty salary vulnerability. There is potential of increased loss of faculty because of the current budget problems being experienced by the University. The loss of the faculty retention fund from the institution's budget from the State is troubling, and those State resources will need to be replaced with other funds if the University is to be successful in its efforts to match offers from other universities, or to make pre-emptive salary increases. Some units within the University have well-articulated counter-offer policies, while others rely more heavily on pre-emptive activities designed to reduce the gap between University of Washington faculty salaries and those of competing institutions. In either case, however, new funds will have to be identified to avoid increasing problems with faculty retention.

Maintaining computing facilities. Maintaining the facilities infrastructure that supports the technical operations of the network and meeting the space needs to accommodate C&C personnel and equipment is an ongoing institutional challenge. Information technologies require a continuous cycle of installing, maintaining, and upgrading the network infrastructure, and concomitantly a continuous stream of resources. The University has creatively and resourcefully used existing resources and periodic infusions of funding to build the existing infrastructure. These incremental investments are no longer sufficient to remain on the cutting edge and the University now faces the urgent need to replace most of the cable and physical cable distribution infrastructure in order to support the next generation of networked-based tools, approaches, and programs.

Advancing the diversity agenda. The University recognizes as one of its highest educational priorities the need to increase the number of qualified minorities enrolled in academic fields and professions to which they have been historically denied access, or have been traditionally underrepresented. Accordingly, the University provides educational support services to achieve this goal. Although the efforts have been sincere, the results are not sufficient. Both faculty and student populations need to increase their numbers from underrepresented groups. Currently, efforts are underway to increase the number of privately supported scholarships for underrepresented ethnic students. Despite these

efforts, the proportion of underrepresented ethnic students attending the University has been somewhat disappointing. In Autumn Quarter 2005, underrepresented minorities constituted 9.2% of undergraduate enrollment, 6.4% of graduate enrollment, and 8.6% of professional enrollment. This is due to a number of factors, including a reported image of University being an unwelcoming climate for students of color. Differences in graduation rates by ethnicity are as apparent at the University as they are elsewhere, and this disparity needs continuing attention. Of special concern is the limited number of underrepresented ethnic faculty members (4%) on the non-research regular ladder track. This representation is insufficient to support the University's desire to prepare students who "must be able to communicate across cultural, geographic, and linguistic barriers and to appreciate perspectives different from their own." Further, it does not represent the talented pool of ethnically and culturally diverse faculty who are available nationally.

Timely effective communication. The size and complexity of the institution make necessary for shared governance a major commitment to timely communication, which will never be quite good enough. This requirement needs continuing attention at the University, as it does in every major research university.

Insufficient capital funding. Funding capital construction for the University has presented numerous challenges as State funding has decreased significantly. As a result, numerous alternative funding arrangements are utilized. These include debt financed, private support, institutional allocations, private developer financed arrangements, indirect cost recovery contributions, as well as campus supported and State-managed bond financing. The University has worked aggressively to gain flexibility in managing these alternative funding processes at the campus level through one time agreements with the State and through changes in State law.

Insufficient facility maintenance and renewal. The University faces significant difficulties in meeting the deferred maintenance needs of the campus and in renewing outdated facilities to meet current research and educational needs. The University represents about 33% of all public higher education facilities in the state, including the community and technical college system. From 1995 to 2000, the Univesrity received an average of 28% of all higher education capital project funding—an amount about in proportion to the size of the institution relative to all other four and two-year schools. However, from 2000 to 2005, the University has seen its share of the state higher education capital budget shrink dramatically, dropping to a new low of 10% in the final 2005-007 capital budget. University buildings and facilities represent a $6 billion asset for the State of Washington. Declining support in the State capital budget is seriously jeopardizing this asset. Other difficulties include unfunded mandates for health and safety improvements, accessibility requirements, and compliance with funding agency requirements. These are problems shared by peer research institutions across the country. The University does have the flexibility to allocate State general funds to these purposes, but only at the expense of other high priority programs. The campus has conducted assessments of campus facilities to identify physical problems, to establish priorities, and to bring a more structured approach to the process. Various reserve funds have been established to assist with solving these problems on a one time basis. All renovation, renewal, and deferred maintenance projects are closely coordinated through an on-line matching process to ensure the limited funding is maximally utilized for all types of projects. The University needs to vigorously pursue innovative approaches to enhance non-state funding opportunities to address the inevitably widening non-state funded gap relating to facility maintenance and renewal, issues that are usually viewed as relatively unappealing in comparison to raising funds for new construction projects.

Library Facilities and Holdings

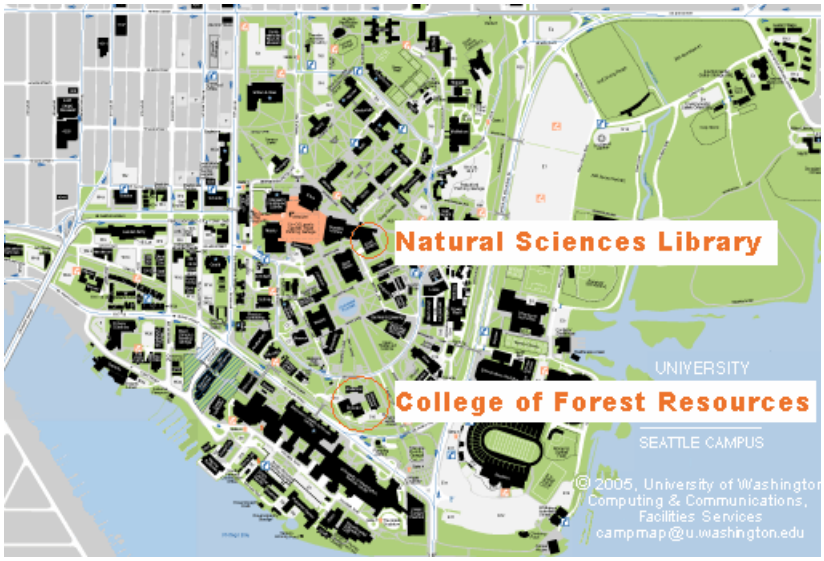
University of Washington Libraries (the Libraries) ranks among the top ten research libraries in North America, a ranking that it has held for many years. Collections are very rich in most subject areas and disciplines, and some are of international significance. A well qualified staff is available to assist users. Research collections are properly housed and maintained, with the prerequisite equipment for accessing digital and multimedia learning resources. One of the hallmarks of the Libraries has been its commitment to integrating collections and services with the intellectual life of the campus.

The Libraries nationally recognized program of information literacy has helped the it reach large numbers of students (over 50%) by means of classes taught in partnership with faculty and by means of library sponsored workshops and tutorials. While all components of the Libraries (including those in Bothell and Tacoma) are engaged in offering instruction on how to access learning resources in a wide range of formats, the Odegaard Undergraduate library and the Health Sciences Library have truly outstanding programs. With respect to the acquisition of new collections, the Libraries allocates an ever increasing percentage of its budget to the purchase and licensing of electronic resources (approximately 25%). But at the same time, print collections continue to grow at a rate of approximately 100,000 volumes per year. This growth has required that less heavily used materials be placed in several storage areas due to lack of shelf space. Planning, assessment and continuous improvement are ongoing processes with broad staff participation.

The Libraries' program for the measurement of library use and user satisfaction has resulted in ten years of longitudinal data on satisfaction rates and user behavior. This information is frequently referred to and used to modify existing services and plan new ones. The Libraries' outreach to and engagement with the community extends far beyond the campus. It holds the most significant research collection west of Minnesota and north of Berkeley. Cooperative relationships have been established with other leading research libraries in the U.S. (e.g. Cornell), as well as with several Pacific Rim university libraries. In 2000, the Libraries was cited by the Association of Research Libraries for its best practices for staff training and development.

In 2004, the Forest Resources Library merged with the Natural Sciences Library, due to a previously articulated strategy of reducing the number of library service points and collection locations, a substantial decline in the use of the Forest Resources Library, an increase in the growth of multidisciplinary research and teaching, especially in the environmental area, and a deteriorating budgetary environment that reduced the Libraries budget in 2001-03 and resulted in position cuts. This merger was decided upon after a series of committee and all-College meetings, and with the assurance that forest resources information would continue to be updated and maintained for use by College students, staff, and faculty.

The Natural Sciences Library is located close to the main College buildings, as shown in the following image. The collections and services of the Natural Sciences Library support study, reference and research in: Atmospheric Sciences, Biology/Ecology, Botany, Earth and Space Sciences, Environment, Forest Resources, General Science, History of Science, Psychology, Speech and Hearing, and Zoology. Additionally, there is a dedicated Forest Resources Librarian who is available at the Natural Resources Library as well as for weekly consultations in Anderson Hall.



The Natural Sciences Library makes available more than 336 electronic and paper-only journals and other materials. The following table lists the wide breadth of information available to the University community.

Acta oecologica
Afrotherian conservation newsletter of the IUCN/SSC Afrotheria Specialist Group
Agricultural and forest entomology
Agricultural and forest meteorology
Agriculture, ecosystems & environment
Agroforestry systems
Agronomy journal
Alaska wildlife news an online newsletter from the Alaska Department of Fish & Game
Alpiner
Ambio
American forests
American woodworker
Amicus journal
Animal conservation
Annals of forest science
Annual review of ecology and systematics
Annual review of ecology, evolution, and systematics
Annual review of phytopathology
Annual review of plant biology
Annual review of plant physiology and plant molecular biology
Anzeiger fur Schadlingskunde = Journal of pest science
Applied soil ecology
Applied vegetation science
Aquatic botany
Aquatic conservation : marine and freshwater ecosystems
Aquatic toxicology
Archives of environmental contamination and toxicology
Asian wild pig news
Atlantic coastwatch
Australian journal of plant physiology
Australian journal of soil research
Backpacker
BC journal of ecosystems and management
Bear tracks
BioControl
BioCycle
Biodiversity and conservation
Biodiversity letters
Biodiversity series
Biological conservation
Biological control
Biology and fertility of soils
Bird conservation international
BMC ecology
BMC plant biology
Boxboard containers international
Bulletin of the Ecological Society of America
Bulletin of the Ecological Society of America
Buzzworm's earth journal
Camping magazine
Canadian journal of forest research = Journal canadien de la recherche forestilere
Canopy international
Casual living the magazine of leisure & lifestyle products
Cellulose
CFRU research bulletin
CFRU research note
Chemoecology
Chemosphere

Chesapeake science
Chiroptera Neotropical
CIFOR news
CITES world official newsletter of the Parties, Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
Climbing
Coastal services
Coastlines information about estuaries and near coastal waters
Communications in soil science and plant analysis
Conservation and society
Conservation biology
Conservation genetics
Conservation in practice : a publication of the Society for Conservation Biology
Conservation Northwest quarterly
Conservation science newsletter
Conservationist
Contract
Corn and soybean digest
Crop protection
Crop science
Crossing paths with wildlife in Washington towns and cities
Current opinion in plant biology
Deer Specialist Group news
Discussion paper
Diversity & distributions
Ecological applications
Ecological management & restoration
Ecological modeling
Ecological monographs
Ecological research
Ecological restoration, North America
Ecological Studies of Kenai Peninsula Brown Bears
Ecology
Ecology and society a journal of integrative science for resilience and sustainability
Ecology letters
Ecosystems
Ecotoxicology and environmental safety
Ekologia Bratislava = Ecology Bratislava
Electronic Journals
Endangered species update
Engineered wood journal
Environmental and experimental botany
Environmental and social values report
Environmental entomology
Environmental modeling & software with environment data news
EPPO bulletin
ESA today
Estuaries
ETFRN news
European journal of forest research
European journal of plant pathology
European journal of soil science
European journal of wildlife research
European wolf newsletter
Evolutionary ecology
Evolutionary ecology research
Extremophiles : life under extreme conditions
Farm industry news
FDM
Field crops research
Fire management notes
Fire management today
Fitopatologia brasileira
Forest biometry, modeling and information sciences
FBMIS
Forest ecology and management
Forest health & biodiversity news
Forest industries
Forest log
Journal de pathologie forestiere
Forest policy and economics
Forest products journal
Forest science
Forest stewardship notes
Forestry & British timber
Forestry : the journal of the Society of Foresters of Great Britain
Forestry chronicle
forestry source
Forests, trees, and people newsletter
FRDA report
Frontiers in ecology and the environment
Functional ecology
Functional plant biology
Garden and forest a journal of horticulture, landscape art, and forestry
Garden history
Garden History Society newsletter
Geoderma
Gesunde Pflanzen Pflanzenschutz, Verbraucherschutz, Umweltschutz
Global ecology and biogeography
Grass and forage science
Greenwire the environmental news daily
Grounds maintenance
Habitat
Habitat hotline
Holzforschung
Illinois forest management
Information forestry
Insect science and its application
International forestry review
International journal of biometeorology
International journal of wildland fire
International newsletter on plant pathology
International rice research notes
International wildlife
Irrigation journal

Irrigation science
Issues in ecology
IUCN/SSC Canid Specialist Group's canid news
IUFRO news
Journal of agricultural engineering research
Journal of applied entomology = Zeitschrift fur angewandte Entomologie
Journal of aquatic ecosystem stress and recovery
Journal of arboriculture
Journal of arid environments
Journal of climate
Journal of economic entomology
Journal of environmental education
Journal of environmental radioactivity
Journal of forest economics
Journal of forest research
Journal of forestry
Journal of general plant pathology
Journal of invertebrate pathology
Journal of pest science
Journal of plant growth regulation
Journal of plant nutrition
Journal of range management
Journal of soil and water conservation
Journal of sustainable forestry
Journal of tropical ecology
Journal of vegetation science : official organ of the International Association for Vegetation Science
Journal of wildlife management
Journal of wood chemistry and technology
Journal of zoo and wildlife medicine
Kitchen & bath business
Laboratory animals
Land degradation & development
Land for Wildlife note
Land for Wildlife Queensland newsletter for the Land for Wildlife Program, Queensland
Land management handbook
Landscape & irrigation
Landscape and urban planning
Landscape ecology
Landscape management
Marine ecology
Marine ecology progress series
Marine environmental research
Microbes and environments
Minnesota conservation volunteer
Molecular ecology
Molecular ecology notes
Molecular plant pathology
National parks
National wildlife
National wildlife
Natural resource modeling
Natural resource news the Colorado Department of Natural Resources monthly newsletter
Neotropical entomology
Network news forest health & biodiversity
Network paper
New forests
New Zealand forest industries magazine
Nihon Sakumotsu Gakkai kiji
Nordic pulp & paper research journal
Northern journal of applied forestry
Northwest conservation
Northwest ecosystem news
Nutcrackernotes a research and management newsletter about whitebark pine ecosystems
Nutrient cycling in agroecosystems
Occasional paper
ODFW news release
Oecologia
OG
Oikos
Onearth
Organic gardening
Oryx
Pachyderm newsletter of the African Elephant and Rhino Specialist Group
Pacific park science
Parks & recreation
Perspectives in plant ecology, evolution and systematics
Pest management science
Pesticide biochemistry and physiology
Pesticide outlook
Pesticide science
Photosynthesis research
Photosynthetica
Physiological and molecular plant pathology
Phytochemical analysis
Phytochemistry
Phytochemistry reviews
Phytopathologische Zeitschrift = Journal of phytopathology
PIMA's Asia Pacific papermaker
Plant & cell physiology
Plant cell
Plant cell reports
Plant ecology
Plant pathology
Plant physiology and biochemistry : PPB
Plant, cell and environment
Pulp & paper
Pulp & paper Asia
Pulp & paper Europe
Pulp & paper international
Quarterly newsletter
Rangeland ecology & management
Rangelands
Rare bits
Raves a newsletter about threatened species conservation in Tasmania
Recent publications of the Pacific Northwest Research Station

Resource engineering & technology for a sustainable world
Restoration
Restoration ecology
Revista arvore
Revista forestal venezolana
RTI news : newsletter of the Rural Technology Initiative
Scandinavian journal of forest research
Science
Seeing : social, environmental and economic report
Sexual plant reproduction
Silva Fennica
Silva fennica
Silviculture note
Soil & tillage research
Soil biology & biochemistry
Soil science
Soil Science Society of America journal
Soil technology
Soil use and management
Solutions!
South African journal of wildlife research. Suid
Southern journal of applied forestry
Southwest Washington wildlife reports
Southwest Washington wildlife weekly
Special places news and views on the NWT protected areas strategy
Species newsletter of the Species Survival Commission, IUCN
Starker lectures
Streamline
Streamside runoff
Systematics and biodiversity
Tapir conservation the newsletter of the IUCN/SSC Tapir Specialist Group
Tappi journal
Tappi journal
Threatened Species Scientific Committee annual report
Timber trades journal & wood processing
Tragopan newsletter of the WPA/Species Survival Commission/BirdLife, Pheasant Specialist Group
Tree physiology
Tree planters' notes
Trees
Trends in ecology & evolution
Tropical biodiversity
Tropical forest update
Turtle and tortoise newsletter the newsletter of the chelonian conservationists and biologists
Unasylva
Urban ecosystems
Urban habitats
Vegetation history and archaeobotany
Washington water resource the quarterly report of the Center for Urban Water Resources Management
Washington wildfire
Washington's forest products industry current conditions and forecast
Watershed review
Weed biology and management
Weed research
Weed science
Weed technology
Western journal of applied forestry
Wetlands
Wetlands ecology and management
Wetlands Research Program bulletin
Wild Oregon
Wildlife Society bulletin
Wolf notes
Women in natural resources
Wood based panels international
Wood digest
Wood technology
World conservation
World Wide Web journal of biology
Zeitschrift fur Pflanzenernahrung und Bodenkunde
Zoo biology

A Physical Environment that is Safe, Healthful, and Conducive to Learning

The University has a long standing executive level policy that assures that it will create, maintain, and enhance a safe and healthful environment for all individuals associated with the institution, including students, faculty, staff, hospital patients, and visitors. The University's facilities are also sufficiently equipped to properly support the educational programs and services provided by the institution. The University's physical resources are planned, managed, and maintained by a well defined, professionally administered, and suitably configured series of facilities related operations. These include the Capital and Space Planning Office, the Capital Projects Office, the Real Estate Office, and the Office of Facilities Services. In addition, faculty, staff, and students contribute to physical resource planning processes by participating on a well-orchestrated series of governance committees. The University is applauded for its open, inclusive, and collaborative capital projects and space planning processes and its capital projects delivery processes.

In 2002-03, the University completely updated its Campus Master Plan for the Seattle campus and, in collaboration with the University Office of Regional Affairs, had the Plan approved by the Seattle City Council and the Board of Regents. The Plan provides a flexible, opportunity-sensitive framework to guide campus development, and forecasts the need for approximately 3 million additional square feet of facilities over the next decade in response to anticipated increasing student enrollment and research demands. The CMP selected the following goals:

Respect Its Stature	Enhance the Campus	Respect the Environment
Provide Facilities	Provide Accessibility	Encourage Efficiency
Maximize Flexibility	Promote Safety	Value the Community

The University is encouraged to continue the work of focus groups, such as the Learning Spaces Consortium, to explore innovative ways of using traditional and non-traditional learning spaces to greatest efficiency. Maintaining quality of institutional physical resources in the face of declining State-funded financial support will require careful consideration.

The University is appropriately exploring and prioritizing potential statutory and regulatory modifications that could assist its transition to a state-assisted university, facilitate greater operational flexibility, and increase the ability to respond to changing market conditions more readily. Securing legislative approval for alternative contracting methods, such as Design-Build and GC/CM project delivery, has already proven its value to the University. Continuing to work with the City of Seattle to eliminate the restrictive "Lease-Lid" mandates should also prove beneficial. The greatest percentage of the University's visible deferred maintenance appears to remain in some of its oldest facilities such as Johnson Hall and some of the most heavily used 30-40 year old facilities such as the Health Sciences Center, which is burdened by both heavy use and outdated, insufficient student informal spaces, including its library space. Institutional planning processes have begun to draw attention to these issues and the University is encouraged to continue to increase the priority of modernizing these types of facilities. The University's Hazardous Materials Management program has received awards from the State for its pollution prevention efforts. In addition, the Hazardous Materials Management group participated with a national consortium of universities, headed by the Howard Hughes Medical Institute, to establish best practice guidelines for laboratory management of hazardous wastes.

The University's physical resources, its mortar and bricks, are valuable assets of the State of Washington. The University has more than 300 buildings across three campuses, including over eighteen million gross square feet of space (including approximately one million gross square feet of leased space) and making up over one-fifth of all space owned by the State of Washington. Current estimates show a total replacement value of $5 billion.

Numerous organizational units within the University commit resources to carrying out this policy including Facilities Services, the Capital Projects Office, Organizational Health and Safety Committees, Health and Safety Advisory Committees, the Risk Management Office, the University Police Department, and Environmental Health and Safety (EH&S). These units work cooperatively to assure that the facilities, environment, operations, systems, and processes that make up the University function to the highest health and safety standards.