Introduction

The College of Agricultural Sciences appreciates the in-depth analysis and response provided by the Strategic Alignment/Budget Reduction Review Committee (SABRRC) to the College’s restructuring proposal. Here we have attempted to provide an itemized response to the Committee’s bulleted queries, and have also included relevant appendices that provide additional context or details. The College is willing to provide any additional details the committee deems necessary.

In reflecting on the Committee’s inquiries about the character of the College of Agricultural Sciences proposal for transformation, we have identified several overarching points to make as we deliver our response.

- When we delivered our original document, we labeled it “Proposal” because what is described there is, indeed, a set of ideas that are products of experience, observations, conversations, and consultations among various stakeholders who care about the future of the College of Agricultural Sciences. These are ideas all of which will continue to evolve, and most of which will be fully articulated in the faculty governance process as Category 1 and Category 2 proposals.
- The College is serious about bridging its faculty and programs with other components of the University as well as with external stakeholders and, in fact, is experienced at doing so.
- Certain of the ideas expressed in our original proposal that was delivered in mid-March are not yet fully mature. Some may not yet meet every guideline the University has expressed. We believe those that do not still deserve a chance to be considered further and, if they continue to show merit, to be nurtured and to grow.
- There are references to policy-related programming in the original proposal and in this document as well. This College has a long history of research and outreach in public policy that relate especially to agriculture and natural resources, and that are oriented to the economic dimensions of policy decisions. It is our intent to sustain those activities and, where possible, to partner with other public policy activities at OSU.
- As Category 1 and Category 2 proposals are made for changes contemplated here, we expect them to articulate the changes that should be anticipated over time, the outcomes, and the measures that will be applied to test progress and guide further change.

Committee inquiry

Specific details were not provided concerning compliance with all academic and administrative system guidelines, including any academic programs that do not meet minimum graduation requirements, courses that fail to meet minimum class size standards, and college sub-units that do not meet the minimum for numbers of faculty. The Committee would appreciate receiving an accounting of any programs, courses or units that do not meet these guidelines as well as how the College plans to move toward alignment with the guidelines.

College response

The Advisory Committee on Budget and Strategic Priorities (ACBSP) identified four academic programs for elimination or consolidation within the College of Agricultural Sciences. These four programs were: Environmental Economics, Policy and Management (EEPM); Genetics; Poultry Science; and the Agriculture Program at Eastern Oregon University. In response to the ACBSP’s recommendations, the
following steps have been taken. The Genetics and Poultry Science programs have been eliminated. The plan for the Agriculture Program at Eastern Oregon University was described in some detail on pages 11-12 of the College’s Strategic Transformation Proposal submitted in mid-March 2010 to the Strategic Alignment and Budget Reduction Review Committee (SABRRC).

Briefly, the Agriculture Program at Eastern Oregon University (EOU) will be administratively combined with the Eastern Oregon Agricultural Research Center at Union. The FTE allocated to the program will be reduced from six to four. A new funding model is being sought, working collaboratively with senior administrators at EOU. A faculty member from the Agriculture Program at Eastern Oregon University is being reassigned to the Corvallis campus. Additionally, “smart” classrooms are being developed at OSU Corvallis and EOU to allow utilization of distance delivery technology; classes will originate from each location and will be delivered to the other location in an effort to accommodate degree delivery with reduced FTE. Finally, the Environmental Economics, Policy and Management degree will no longer be offered at EOU. Delivery models for the Agribusiness degree are currently being evaluated, and classes will be taught via distance delivery in the upcoming academic year. Other degrees will be aligned with decisions regarding curricular changes (e.g. plant sciences) on the Corvallis campus. For additional details, please refer to the College’s Strategic Transformation Proposal.

In place of the earlier Environmental Economics, Policy and Management (EEPM) degree, the Department of Agricultural and Resource Economics, with input from faculty in the College of Forestry and the College of Oceanic and Atmospheric Sciences, has developed a proposal for an alternative degree, Environmental Economics and Policy (EEP). The proposal is based on a successful model at UC Berkeley that has recently experienced a large increase in enrollment; and aligns well with the signature area, “Advancing the Science of Sustainable Ecosystems.” The program is also intended to increase collaboration among colleges within the Division of Earth Systems Science at OSU. The curriculum was designed using courses offered through the College of Forestry, and to provide courses of interest to students in the College of Forestry and College of Oceanic and Atmospheric Sciences. The proposal has been submitted to the Faculty Senate for review (please see Appendix A).

As previously indicated, all of the College’s courses have been reviewed relative to the course guidelines and in the context of degree review and modification and appropriate actions are being implemented including: course elimination, combination, and alternate year scheduling. An accounting of the courses offered this term that do not meet the enrollment guidelines is provided below. For this discussion, cross-listed and slash courses are counted as a single course. It is important to note that some courses, especially upper-division courses, are needed by students who are near graduation, and will be continued until those cohorts of students have graduated.

Overall, the College has nine courses that do not meet the guidelines.
• Two courses within the Poultry Science program for students completing their programs.
• An Agricultural and Resource Economics graduate course that has five graduate students and six undergraduates in the slash UG section.
• A stand-alone Agricultural and Resource Economics graduate course (in response to the Graduate School’s 50 percent guideline) that has five graduate students.
• Two upper division courses in Horticulture that are limited by capacity constraints and will become part of the new Plant Sciences curriculum being created.
• A Crop and Soil Science graduate course that has four graduate students and ten undergraduates in the slash UG section.
• A Rangeland Ecology and Management graduate course that has five graduate students and 12 undergraduates in the slash UG section.
• An upper division Toxicology course with 13 total students in slash and Honors sections.
In summary, as we move forward, efforts are being made to combine Horticulture and Crop and Soil Science courses in the new Plant Sciences curriculum. The poultry science program is being eliminated. The Rangeland Ecology and Management courses are part of a curriculum that is being revised and combined with Animal Sciences. Our strategy for the few remaining courses is to offer courses in alternate years and eliminate any that are not sustainable.

**Committee inquiry**

The academic guidelines approved by President Ray stipulate a maximum of 5 sub-units per college. While the Committee recognizes the efforts involved in creating three merged departments and acknowledges that the large number of the faculty in the College may justify more than 5 sub-units, the proposal still leaves the College with 4 more sub-units than the guideline maximum. The College is encouraged to consider further reorganization/merging of departments, particularly those that have fewer than 20 faculty.

**College response**

As noted in our proposal, we have considered—and continue to consider—these possibilities. The Department of Biological and Ecological Engineering has been tasked to seek connections during the next several months with compatible engineering faculty in the College of Forestry, and potentially also other units. Should these conversations not be productive, the College will make decisions on other potential mergers. Regarding the Department of Food Science and Technology, with the addition of two to three positions soon to be filled with support from the Oregon Wine Research Institute, that department will meet the threshold for faculty numbers.

**Committee inquiry**

Five signature areas have been identified in the College’s proposal: sustainable food and agricultural systems; bioproducts, biomaterials, and bioenergy; natural resource stewardship; environmental and human well-being; and fundamental science. Could these signature areas serve as a basis for a new departmental organization? If not, then how will these signature areas emerge or become identifiable within the proposed structure, and how will priority be given to these areas (e.g. potential new hires, research priorities, etc.)?

**College response**

We did consider that possibility. However, we believe that reorganization based on the signature areas is inappropriate, because as strategic foci, these signature areas are dynamic and may well evolve with time. Additionally we believe that such a thematic configuration would require wholesale restructuring of the units because faculty in nearly every current unit contribute to one or more of these cross-cutting, multidisciplinary signature areas. Driven merely by a need to meet a five-unit guideline, such a wholesale restructuring would not be strategic. In the engagement processes leading up to preparation of the College’s proposal, we were cautioned by the Blue Ribbon panel, by faculty, by students, and by our stakeholders to “do no harm” recognizing we already are one of the top-ranked colleges in the nation.

Given the complexities of the sciences and the problems we address, there is no one perfect organizational model. There is, however, a “perfect” attitude or working climate that values the various roles we play and the abilities in disciplines we have. Such an attitude or climate promotes working together effectively across organizational structures, engaging with various communities, and rewarding our faculty for doing so. We strive to nurture and maintain such a climate that exists in our College.
The College’s signature areas have already “emerged.” We are well-known nationally for our work in fundamental plant sciences (e.g. Botany and Plant Pathology ranked fifth), food and agricultural systems (e.g. the College of Agricultural Sciences recently ranked number one overall for the impact of our research in agricultural sciences), natural resources stewardship (e.g. fisheries ranked second nationally; wildlife ranked number one; Agricultural and Resource Economics, seventh), environmental and human well-being (e.g. Environmental and Molecular Toxicology), and bioproducts, biomaterials, and bioenergy (e.g. one of only 5 Sun Grant universities in the United States).

Our existing Priority Staffing procedures (please see Appendix B) require that every request make a case for how the position will advance one or more of these signature areas. Going forward we will focus on multi-unit proposals for cluster hires and enabling investments in the signature areas.

**Committee inquiry**

Could the departments of Food Science & Technology and Biological & Ecological Engineering find sufficient common ground to merge in support of a new identity focused on integrative research and education? Alternatively, do opportunities exist to consolidate agricultural engineering interests with compatible engineering sub-units in other colleges?

**College response**

We have explored both of these possibilities. There is little overlap between Food Science and Technology and Biological and Ecological Engineering (BEE). BEE focuses on biological and ecological engineering applied to ecosystems. Most of their collaborations are with environmental economists, environmental soil scientists, toxicologists, climatologists, fishery scientists, and conservation biologists. Food Science and Technology has a food systems focus and is primarily food chemistry (e.g. flavor, nutrition, health) and microbiology (e.g. fermentation, food safety) with some food system engineering (e.g. high pressure).

There is considerable opportunity to consolidate our Biological and Ecological Engineering unit (not “agricultural engineering”) with units in other colleges, particularly the College of Forestry, as noted above. In fact, we think this is the optimal direction. We have strongly encouraged these conversations, but have not received a similar response, thus far, from the College of Forestry. Nevertheless, we will continue to explore this possibility. As noted above, if BEE is unable to develop collaborations with counterparts in Forestry, the College will explore options and make decisions on other potential mergers for this unit.

**Committee inquiry**

The College is encouraged to engage in a broader discussion within the Division of Earth Systems Science (ESS) concerning natural resources programs. There is considerable overlap across the Division in this thematic area and it is possible that such a discussion will result in innovative proposals that involve reorganization/consolidation of related departments into fewer sub-units, possibly within a single college.

**College response**

In addition to the engineering conversation previously addressed, we have also encouraged faculty-initiated conversations in the other areas particularly applied economics and conservation biology. A committee of applied economists from both the College of Agricultural Sciences and the College of Forestry submitted a “Proposal to Create a School of Applied Economics in the Earth Systems Science Division at OSU” to the division deans in February (please see Appendix C). Similarly, faculty from both
the College of Forestry and College of Agricultural Sciences initiated conversations around forming a “School of Natural Resources.” In both cases, these promising conversations stalled due to lack of interest from within the College of Forestry; however, the deans of the two colleges are committed to such connections.

We are now encouraging a “two-college with bridges” model. In this model, we propose to use the concepts of “faculty of…” or “school of…” to create synergies in curricular, research, and Extension-outreach efforts in the areas of plant sciences, natural resources and conservation biology, applied economics, biomaterials and bioproducts engineering, etc. The areas of shared programmatic overlap are smaller with the College of Oceanic and Atmospheric Sciences than with the College of Forestry. Conversations continue, however, around greater synergies within the ESS division in applied economics and policy, soil science, and joint research initiatives.

**Committee inquiry**

What discussions have occurred with leadership of other colleges in the ESS division regarding the proposed name change (particularly in reference to the inclusion of natural resources) and departmental realignment? What is the broader impact of the proposed changes on other colleges/units within ESS and OSU?

**College response**

The deans of Agricultural Sciences and Forestry have initiated and will continue discussions on the proposed name change for the College of Agricultural Sciences. This is a proposal only for a name change, based on the fact that the College of Agricultural Sciences has the largest natural resources footprint on campus in terms of publications, grants, and research and Extension efforts. In proposing a new name that reflects the character of the College of Agricultural Sciences, we do not see the use of Natural Resources in the proposed name as suggesting an exclusive claim. For example, the College of Forestry is responsible for the Extension Forestry and Natural Resources Program, and our College is responsible for the Extension Agricultural Sciences and Natural Resources Program.

Note that as the college with the majority of the of the National Institutes of Health funding at OSU, we have not been impacted by nor have we complained or worried about there being another college that uses the word health in its name.

We intend that the proposed name change will proceed through the appropriate University process for approval.

**Committee inquiry**

The mission of the proposed Department of Applied Economics and Policy Studies appears to overlap with that of several other policy programs in other colleges, particularly the proposed School of Public Policy in the College of Liberal Arts which will become home to an existing graduate degree program in Public Policy. Do opportunities exist for focusing these efforts, possibly in a single college? Similarly, has the possibility of merging applied (agricultural) economics with other economics programs in other colleges been considered and, if so, what is the justification for not moving in this direction?

**College response**

The name change is a proposal, particularly in light of the comprehensive efforts in applied economics and policy, which offers an opportunity to seek synergies with colleagues in Forestry, Oceanic and Atmospheric Sciences, and other colleges. For nearly 30 years the College has championed a University-
wide applied economics graduate program. The Economics department has chosen not to formally participate in that program. However, there remains an open invitation and two Economics faculty members have recently joined the applied economics graduate faculty (consisting of faculty from four colleges: Agricultural Sciences, Forestry, Heath and Human Sciences, and Liberal Arts). As noted previously, we continue to encourage discussion of a Division-wide applied economics and policy program. In a recent conversation among the deans of Agricultural Sciences, Forestry, Liberal Arts, and Oceanic and Atmospheric Sciences, the conclusion was to have the College of Liberal Arts take the lead on creating a University-wide public policy graduate program and the College of Agricultural Sciences has the lead on the University-wide graduate program in applied economics policy.

It should also be noted that the Department of Agricultural and Resource Economics has a distinguished 50-year history of work in policy analysis dating to the early 1960s and is currently recognized as a national leader in land use, climate change, and rural economic policy. The department was also a major player in the development of the existing Master of Public Policy (MPP) program and has supported it throughout its existence (as has the Rural Studies Program). The idea of a graduate program in public policy that expands beyond the current MPP program is a welcome and important development at OSU and is fully supported by faculty in the Department of Agricultural and Resource Economics and the College of Agricultural Sciences. When one looks at the OSU Strategic Plan, one can see that public policy is an extremely important part of achieving these goals. The Signature Areas represent OSU’s “greatest opportunity to lead in solving complex societal problems, and to creating superior learning opportunities for students.” The first of three categories emphasizes “improving the understanding of the earth ecosystems upon which all life depends, and promoting their sustainability through high-impact public policy involvement with issues such as climate change, food security and safety, renewable energy production, and economically viable natural resource management.” Other signature areas include health and disease issues; the third signature area focuses on energy and technologies. What should be clear from these strategic goals is that public policy spans most, if not all, divisions, and especially the Division of Earth Systems Science where public policy has been a cornerstone of research and education for many years, including public policy related to climate change, food security, natural resource management, energy, environmental policy, fisheries and marine policy, forest policy, and so forth.

The best public policy schools in the country are university-wide schools with faculties drawn from political science, applied economics, sociology, management, and other fields. Political science and applied economics are generally the two largest faculty groups. For the graduate program at OSU, and given the important signature public policy issues that are emphasized, it makes sense for the graduate program in public policy to be designed similarly and to include the full participation of appropriate and interested faculty. Indeed, there are currently several masters programs at OSU that do public policy. These include the Masters in Public Policy, Water Resources Management and Policy, Masters of Marine Resource Management, and Natural Resource Policy and Law. Establishing a University-wide graduate program in public policy should facilitate reduced redundancy and duplication associated with these and other programs, while at the same time enabling them to maintain their topic-specific focus.

It is important that the proposed graduate program in public policy have a strong connection with the existing applied economics graduate program at OSU to avoid redundancy and promote the coordination between the disciplinary-focused applied economics graduate program and the highly interdisciplinary public policy program. We would strongly encourage all economists who wish to participate in applied economics graduate teaching to accept the open invitation to join the 30-plus economists across campus in the graduate faculty of applied economics. This would provide a powerful and effective way of offering a full range of applied economics graduate courses in support of both the applied economics and public policy degrees. We would really like to see the two graduate programs work in tandem with each other and, so too, the faculty.
Committee inquiry
The creation of the proposed Department of Applied Leadership, Education, and Communication is a result of merging Agricultural Education and General Agriculture, a small academic unit, with Extension and Experiment Station Communications, a unit that is primarily a support unit that is not involved in the education and research missions of the College. What are the plans for increasing student enrollments, research funding, and tenured/tenure track faculty over the next few years for it to be a sustainable unit meeting University guidelines? Furthermore, has consideration been given to merging Agricultural Education with the College of Education?

College response
About an assumption. First and foremost, the Department of Extension and Experiment Station Communications (EESC) is not “primarily a support unit”. It is an integral component of the College’s educational outreach and research missions. Science education and outreach are core requirements for all contemporary, large, multidisciplinary, integrated (e.g., research, teaching and Extension-outreach) projects emanating from the U.S. Department of Agriculture’s National Institute of Food and Agriculture, National Institutes of Health, National Science Foundation, and other federal agencies. Faculty in Extension and Experiment Station Communications are playing an increasingly integral role as investigators and collaborators in these projects and are critical to successfully achieving the required broader impacts. In addition, EESC faculty pursue all the responsibilities of other academic faculty, including obtaining grants, conducting peer-reviewed research, designing educational instruction, and applying new knowledge to outreach education.

About the present Department of Agricultural Education and General Agriculture. This department represents a unique component of the College of Agricultural Sciences. It is passionately committed to agriculture, yet flexible and adaptive enough to address leadership and communications skills for business and industry. If employers desire courses that enhance transferable skills, it provides these skills in courses that transcend a domain-specific agricultural discipline. The proposed merger is specifically intended to enhance the role of communication in our core education mission, enhance our undergraduate program in general agriculture and master of science in agricultural education, and initiate an academic program in leadership.

What the merger will do. The proposed merger of two departments in the College of Agricultural Sciences (Department of Agricultural Education and General Agriculture, and Department of Extension and Experiment Station Communications) is an intentional, creative response to several identified needs and emerging opportunities. In the resulting unit, faculty expertise and scholarship will be an amalgam of agricultural science and education, leadership, and communication. The merger will enhance and expand two existing and large enrollment degrees, one for undergraduates and another for graduates. The foci for curriculum growth are communication and leadership.

Given that educational communications for a broad base of stakeholders remains fundamental to OSU’s Land Grant mission, the merger also draws together into a more powerful faculty team those who understand—and who have mastered—the power of contemporary communications. These are faculty who translate the discoveries of research into accessible education that can be understood and used by Oregonians and others who fund that research and extension. This knowledge and expertise now becomes more available to our enrolled students than it has ever been.

Suitably carried out, we believe this merger will result in (1) programs for students leading-edge attractors of students, and sources of graduates distinguished by their mastery of communication and leadership skills; (2) powerful partnerships with other disciplinary faculty addressing new expectations (and requirements of granting agencies) for effective, measurable outreach and communication outcomes of major research projects for which OSU faculty will increasingly be
competing; (3) effective **outreach to and engagement with external stakeholders** through written and visual communications explaining Agricultural Experiment Station research and OSU Extension; (4) meaningful **public accountability** required of OSU’s statewide public service programs; and (5) leadership in **scholarly publishing** that extends the work of Extension and Agricultural Experiment Station faculty to improve the lives of Oregonians.

**Plans for increasing student enrollment: a long-standing vision.** Expanding communication and leadership education for students has been a long-standing vision for the College, pre-dating current discussions of strategic alignment and budget reduction. The master of science degree in Agricultural Education has been a hugely successful program in providing a qualified workforce of educators in Agricultural Science and Technology teaching programs statewide and nationally. The program has a reputation in Oregon and across the nation for the quality of graduates we consistently produce. Aligning with Agricultural Education and General Agriculture provides Extension and Experiment Station Communications faculty with partners who have experience with graduate education, while EESC provides knowledge and experience in science and public affairs communication across multiple media and for various audiences and stakeholders. The result will be college graduates much better prepared for high-level professional careers especially in food, agricultural, and natural resource sciences.

The merger to a Department of Applied Leadership, Education, and Communication will provide synergies in the area of leadership, education and communications. Faculty in the new unit will teach courses in leadership and communications, and expand their education and outreach mission within the department. At the same time, the marriage of two talent-rich faculty units will allow the new unit to fulfill a vision of a leadership and communications minor, option, and, perhaps, ultimately a degree. The additional faculty will help develop a program that will enhance other departments’ degree programs, as well.

**Reaching more learners with teaching about communication.** Communications skills are in demand by OSU faculty who find that their own scientific training has not prepared them for ever-more frequent situations that demand skilled communications and leadership. EESC communicators offer dozens of training programs to help Extension and research faculty explain the public value of their work. Recent faculty trainings and seminar topics for upper division and graduate student classes include: “Communicating science in contentious issues,” “Communicating your professional opinion,” “Preparing effective science presentations,” “Media training to explain research to a non-science audience,” “Effective written and visual communications for public education,” and “Using multimedia learning technologies.” One objective of the merger of Agricultural Education and General Agriculture with Extension and Experiment Station Communications is to expand many of the training workshops and seminars into regular undergraduate and graduate courses to enhance curricula that could better prepare the next generation of leaders in agricultural science, natural resource management, and extension education with focused and intentional education in communications and leadership.

Extension and Experiment Station Communications faculty are playing and will have a significant leadership role in the area of “risk communications, management, and mitigation,” a national initiative organized under the Association of Public and Land Grant Universities (APLU), and efforts such as Extension Disaster Education Network (EDEN), as a means to deal with natural, accidental, and intentional disasters such as Katrina, tsunamis, 9/11/2001, food safety recalls, and so forth. These are also areas ripe for educational and training opportunities for OSU students and Oregonians.

**Potential for expansion of distance learning.** The distance degree program in General Agriculture has seen significant growth over the past three years. The department provides services and advising to more than 60 distance education students in the program. The proposed merger will increase the scope of this program through an E-campus curriculum aimed at current professionals engaged in directing public affairs in institutions and industries, and who need additional training in leadership and communications.
In addition, the prominence of OSU’s agricultural and natural resource research and its nationally recognized science communicators within the Division of Earth Systems Science could combine into a top-tier science communications program to train the next generation of science journalists (not unlike Dennis Dimick, executive editor of *National Geographic*, and a General Agriculture graduate of the College of Agricultural Sciences), public information officers, Extension educators, and communication leaders at research institutions. Currently only MIT and University of California offer this graduate-level education, providing accomplished scientists with in-depth communications training. OSU could be prominent in this field, another good candidate for E-campus development. In the Outreach and Engagement Division, EESC is the fundamental part of the Educational Outreach unit in the newly integrated Extended Campus-Educational Outreach program (please see Appendix D).

**Why not move Agricultural Education and General Agriculture to the College of Education?**
Nationwide, agricultural education programs that had migrated towards colleges of education are now moving back to homes within colleges of agriculture (please see Appendix E). A recent national study indicated the three primary reasons for departments remaining within colleges of agriculture are: increased student enrollment, scholarships, and general program support.

**What are the plans for increasing research funding?** Successful grants require a clearly articulated plan for effective communication of impacts. The current large, multi-disciplinary federal grants have the explicit requirement of outreach communications. For example, the USDA Specialty Crop Research Initiative requires “specific mechanisms to communicate results.” The U.S. Agency for International Development encourages “public outreach through media coverage of development and humanitarian assistance programs.” Many of the new multi-institutional integration programs USDA intends to support place equal weight on research, Extension, and educational elements. The new unit can be a partner offering emphasis on the latter two elements. And proposals to the NSF are now evaluated through two separate merit reviews: one for “scientific merit” and the other for “broader impacts,” the latter includes elements that are key outcomes of the merged department. These new requirements demand greater partnership with communications and education faculty who understand educational outreach and the public value of research as well as the details of scientific methodology and strategic messaging.

Extension and Experiment Station Communications faculty already are involved as collaborators, investigators, and consultants on a variety of research grant proposals. They have a proven track record, beginning with a $900,000 grant from the Meyer Memorial Trust that helped establish the Oregon Explorer and the Institute for Natural Resources at OSU. Recent EESC grant awards include $335,000 from USDA to develop learning modules for a nationwide healthy aging program; and $225,000 from USAID to explain the impact of site-based aquaculture research on economic development in Southeast Asia, Africa, and Central America.

**Plans for faculty over the next few years.** Recent transformations in Extension and Experiment Station Communications have clearly defined the responsibilities for leadership and scholarship of tenured faculty within the department. The department has restructured its transdisciplinary teams, each now headed by a tenure-track faculty member who leads in developing new sources of funding, creating innovative learning opportunities, and scholarly inquiry into new technologies and educational content.

The College of Agricultural Sciences recently approved recruitment of a new tenure-track position in Agricultural Education and General Agriculture for fall 2010. This recruitment will allow Dr. Jonathan Velez to shift his teaching portfolio to emphasis on leadership, his area of scholarly expertise. This involves new courses and is a significant part of curricular enhancement described above.

This new department will continue to evolve toward a faculty count that meets guidelines but, because the planning is not yet fully developed, we are unable to offer detailed plans but the narrative above indicates
some of the potentials for growth. Additionally, over the next two to three years, we will monitor progress towards integration and effectiveness, using an outcomes-based approach, and if progress is not being made, we will apply appropriate corrective measures. Not all faculty members must be tenure-track. An instructor delivers a core area of the General Agriculture degree. Professional faculty bring essential skills to the educational communications mission. But those leaders who are expected to obtain grants, conduct research, and apply new discoveries to education and outreach communications must be of comparable rank as their tenured peers with the same academic expectations.

Please also see Appendix F, Dimensions of faculty contributions: Extension and Experiment Station Communications.

**Committee inquiry**

The College jointly administers three departments with the College of Science (Chemistry, Microbiology and Statistics). Is there a compelling justification for continuing this arrangement and what alternatives could be considered for simplifying administration of each of these units in a single college?

**College response**

Agricultural Experiment Stations in all 50 states make investments in non-agricultural colleges. The Oregon Agricultural Experiment Station invests significantly in several colleges at OSU, including funds provided as block grants to the College of Veterinary Medicine and College of Health and Human Sciences, several faculty positions in various departments in the College of Science, and individual faculty appointments in Economics in the College of Liberal Arts, and the director of the undergraduate Natural Resources program in the College of Forestry. These investments are made to enhance the mission of the Experiment Station by building partnerships and embracing unique capacities the investments bring to bear on societal challenges the Experiment Station is interested in addressing. Such investments will continue to be made so long as they bring value to the efforts of the Experiment Station for the state of Oregon. Faculty with Experiment Station funding will be expected to participate and submit reports in Hatch projects, multi-state projects, integrated research and Extension projects, and related activities and responsibilities.

The joint departments between the colleges of Agricultural Sciences and Science have historically served Oregon State University well and have helped avoid duplication of units within colleges. Unfortunately, the University has failed to develop a mechanism for ensuring that credit for research, teaching, and other contributions can be attributed to that college through which the budget comes in support of those activities. As a result, joint funding and administration has become disadvantageous to the colleges.

Is there a compelling justification for continuing this arrangement and what alternatives could be considered for simplifying administration of each of these units in a single college? The bottom line may be that this is another case where “one size doesn’t necessarily fit all”.

**Botany and Plant Pathology.** In the case of Botany and Plant Pathology, a process initiated by the faculty in 2007 to ensure that the future of plant sciences at OSU would best serve the University led to a unanimous vote of the faculty to request that the department be transferred entirely into the College of Agricultural Sciences. The provost in Fall 2009 formally approved the departmental move, effective January 1, 2010. This was the result of a process developed through multiple conversations with the deans of Agricultural Sciences and Science and the provost and including the recommendation of a Plant Sciences working group appointed by the provost (please see Appendix G). The communication from the provost to the department documenting that agreement is Appendix H. Because both colleges were undergoing conversations about internal change, it seemed best to wait until those pieces fell into place before individual faculty members were asked whether they would move with the department or find an
alternate academic unit. The department’s and College of Agricultural Sciences’ understanding is that for those faculty choosing to remain in what is now Botany and Plant Pathology all of the associated College of Science FTE, associated budget, and associated responsibilities for teaching in the biological sciences (in addition to plant sciences) will be transferred effective July 1, 2010. A memorandum of understanding implementing the move, including transferring the accountability and responsibility for teaching and advising within the biological sciences, has been drafted.

It is useful to note that there is a precedent at OSU for moving entire academic units between colleges or into a single college. The Department of Computer Science moved in 1990 in its entirety from the College of Science into the College of Engineering. In 1993, the Department of Atmospheric Science moved in its entirety from the College of Science into the then-College of Oceanography (that college was subsequently renamed Oceanic and Atmospheric Sciences). In 1991-92, the Department of Geography, a shared department between the College of Science and the College of Liberal Arts, moved in its entirety into the College of Science and subsequently was renamed Geosciences. In each of these cases, departmental faculty initiated the conversations and the units were moved in their entirety with the associated unit budgets.

The deans of the colleges of Agricultural Sciences and Science have had additional discussions on streamlining reporting lines for the unit leaders of Chemistry, Microbiology, and Statistics, so that they report only to the dean of the College of Science. Also under consideration is the prospect of funding work in these departments using a block grant approach, not unlike what is done currently with Veterinary Medicine and Health and Human Sciences. It is noted, however, that the unit leaders for these three departments value the opportunity they have had to be part of the leadership team in College of Agricultural Sciences. It has provided them with regular access to research and teaching initiatives within the College of Agricultural Sciences departments and encouraged new faculty collaborations and opportunities that might not otherwise have occurred. Further, there have been no conversations as yet with the faculty about what such a change in reporting structure might mean or whether individual faculty might ultimately request re-alignment with other units. The College of Agricultural Sciences has recently developed a formal process for faculty self-selection within our College (please see Appendix I); we would most certainly support a similar process being defined and agreed to for moves between colleges.

Statistics. The joint nature of Statistics was established in the early 1960s to counter a trend in which disciplinary departments within College of Agricultural Sciences each individually sought to hire faculty to teach statistics (a problem that currently persists in other colleges at OSU). As noted by College of Science Dean Sherm Bloomer in his response to the SABRRC report, the College of Agricultural Sciences strongly supports maintaining a statistics unit that serves the entire University; we believe that such a unit must exist outside any professional college with accreditation requirements. The latter tend to restrict the nature of teaching and advising and the provision of courses that can be offered to the broader University community.

Chemistry. In the case of Chemistry, beyond a 0.1 FTE for the department chair, the joint nature of this department involves a single FTE which is paid for entirely by the Oregon Agricultural Experiment Station (AES). The joint association with Chemistry was a product of departmental realignments in about 1998 when Agricultural Chemistry underwent a reconfiguration and emerged as Environmental and Molecular Toxicology. At that time, two faculty associated with the mass spectrometry facility chose to transfer to Chemistry. Both have subsequently retired; the successor for one was intended to have been a joint hire with the College of Science. Unfortunately, that support never materialized. Given the similarity of research and teaching and physical co-location with the Department of Environmental and Molecular Toxicology (EMT), it would be timely to discuss a simplification in which that faculty member is transferred to EMT. (This conversation has not occurred, but will be undertaken between the departments, colleges, and faculty.) We believe that the faculty member involved can continue important intellectual connections with other departments through serving on the graduate faculty of those units.
Microbiology. This department has approximately 4 Agricultural Experiment Station FTE distributed over nine faculty, including the chair. These faculty undertake research of high relevance to the Experiment Station. No changes are proposed by the College of Agricultural Sciences.

Committee inquiry

For academic units, there are typically four layers of management between a faculty member and the Provost/President (Faculty Member—Department Chair/Head—Dean—Provost/President). The College has one additional layer consisting of two associate deans who supervise academic department heads. What is the justification for this additional management layer, particularly considering the proposed reduction in the number of departments?

College response

The College of Agricultural Sciences is the largest and most complex unit on campus. The College’s total expenditures per year exceed $100 million of which only approximately 6 percent is Education and General funds. We have nearly $50 million in external grants and contracts. We have research facilities and faculty at 15 separate locations across the state. We have Extension faculty in the 36 Oregon counties. We are also the unit that epitomizes the Land Grant mission, and the dean is expected to meet regularly with literally scores of commodity, environmental, food, and natural resource groups. We manage 26,000 acres of land scattered across the state with the associated issues of water rights, lease and rental arrangements, environmental compliance issues, and related matters. We maintain more than 500 buildings statewide. We have three separate budget lines and the associated unique state and federal accountability and reporting requirements. This also requires extensive legislative relations in both Washington, D.C., and Salem.

The bottom line is we are not a “typical academic unit”, and there is literally no way to effectively manage an organization this large and complex with a single dean. Our model is that the dean effectively operates as the “president or CEO” of the College focusing on external relations (e.g. Washington, D.C., Salem, interest groups, etc.), development, strategic directions, and senior University leadership (e.g. Provost’s Council). The executive associate dean effectively operates as the “provost or chief operating officer” of the College, focusing on day-to-day College operations including accountability reporting, budget, personnel, finance, operations, and program management. The two associate deans effectively operate as “deans” each supporting half of the units (on-campus departments and branch experiment stations and associated Extension personnel) on a daily basis and provide College-level line leadership for research, space, international programs, and other activities. The College follows a distributed and collaborative leadership model; however, all unit leaders ultimately report to the dean and final decisions are vested in the dean.

We have evaluated this structure relative to other colleges of food, agriculture and natural resources in the United States that commonly have more traditional structures:

- Vice president or vice chancellor of Food, Agriculture and Natural Resources, dean and director of the Experiment Station, dean of Resident Instruction, and dean and director of Extension; this model is seen at the University of Florida, University of Missouri, and others.
- Or alternatively, dean of Food, Agriculture and Natural Resources and director of the Experiment Station, with associate dean (and director) for Research, associate dean for teaching, and associate dean of Extension. This model is seen at the Iowa State University, Washington State University, and others.

We believe that our integrated structure is a superior model, particularly with its increased focus on program integration and outcomes accountability. On two separate occasions over the past five years, we
have proposed changing the structure and reducing the number of associate deans and both times the unit leaders have strongly supported the existing model—and even suggested adding an associate dean to manage the total workload.

**Committee inquiry**

Considering the economic challenges faced by local communities and projected state tax revenues, the goal of generating 25% of branch experiment station operating budgets from local sources would be challenging. In the event that this goal is not realized and alternative strategies are not identified, what criteria and process would be utilized to decide which facilities would be subject to closure? Alternatively, if a local community raises funds exceeding the current 25%, is the college still prepared to provide a 3 to 1 match?

**College response**

The state budget is becoming an ever-smaller proportion of overall support to the Oregon Agricultural Experiment Station. If the branch experiment stations (which are already stretched thin in their recurring base funding) are to remain preeminent in their mission, then supplemental financial support will be necessary. More than likely, it must come from local sources.

The rationale for the existing set of eleven branch stations (fifteen locations) of the Oregon Agricultural Experiment Station is that they are located in unique agro-climatic or economic zones and, thus, that they create value by serving unique local needs. If this premise is valid, then one would expect there will be local support to help maintain the stations or, conversely, if the premise is not valid, then it is difficult to justify the continued expenditure of a shrinking pool of state funds. If, indeed, there is local support, this partnership and support may be leveraged in Salem to maintain the state match.

If sufficient local support is not forthcoming, then this will be one factor in determining which stations may be closed. Other factors include: future overall state funding for the Statewide Public Services, the value and size of industries and local economy being supported, opportunities to partner with Extension, the potential to combine research with another station in Oregon, or to partner across state lines, and any unique strategic opportunities the location affords.

Guiding principles for the implementation of this partnership have been discussed with the superintendents of the branch experiment stations and reflect their counsel (please see Appendix J).

**Committee inquiry**

The College proposes to integrate management of branch experiment stations and the Extension Agricultural Sciences and Natural Resources Program, with stations serving as hubs for administrative support reaching out to county extension programs. Please provide more information concerning this proposal, especially whether the intention is to co-locate any of these and whether this would involve reassignment of personnel or reallocation of budgets.

**College response**

These conversations are continuing in partnership with Extension. It is unlikely that there will be a “one size fits all” model. We anticipate that some of our branch experiment station locations could serve as administrative and programmatic hubs for regional research and extension faculty. The goals would be to gain administrative efficiencies and maintain teams with “deeper” subject-matter expertise than would otherwise be possible, serving bigger (e.g. multi-county) geographic areas. The alternative is to have
“generalists” with smaller (e.g. county) geographic assignments. Given our budget constraints, the goal is to provide the best programming possible, not simply to co-locate. However, we do anticipate that co-location might make sense in some cases, and that it could potentially result in the reassignment of personnel and consolidation of operating budgets. We are currently exploring just such a possibility with our Mid-Columbia Agricultural Research Center, Hood River County OSU Extension, and Wasco County OSU Extension.

The Agricultural Sciences and Natural Resources Extension Program is currently developing a staffing plan reflecting a 25 percent reduction in state funding from our 2007-2009 biennial budget. Note that our current 2009-2011 biennial budget is 10 percent less than the 2007-2009 budget. The intent of the plan is to determine the optimal combination of subject matter expertise and location to maximize stakeholder impacts. The plan will consider the role of county Extension offices, branch experiment stations, and campus-based faculty. For off-campus positions we are seeking optimal arrangements to cover three important functions:

- OSU representation and community leadership;
- First stop for general agriculture and natural resource concerns in a community;
- Expertise in a relevant discipline of agriculture and or natural resources that best serves a specified geographic area.

Not all positions are expected to cover all three functions, but the combination of positions—especially in close partnership with the branch experiment stations and other Extension program areas—will do so.

Because cropping systems and climate vary across the state, and there are often long distances between locations, staffing in each area will vary to best meet specific local needs. This staffing plan will not ensure or sustain levels of program that once were possible. Instead, we intend to be clear and realistic with stakeholders about what can be offered; and offer opportunities for stakeholders to make joint investments in order to offset faculty reductions. It is our intent to use attrition to achieve the necessary budget alignment; at the same time we will use the staffing plan to guide relocation (a few cases) of faculty and to decide which positions should be refilled as resources permit.

Committee inquiry

To what extent have faculty been involved in development of the College’s proposals? For example, have department mergers been discussed with the faculty involved and other related faculty, and if so, what was their assessment? Also have faculty in departments that have proposed changes in title and possibly mission focus, been consulted?

College response

In the development of the restructuring proposal and to seek input, the dean and other members of the College’s administration engaged in 11 Town Hall meetings on campus and, in person and by videoconference, with branch experiment stations. The dean met in at least nine face-to-face meetings with agricultural, environmental, and food security organizations, and held numerous other formal and informal conversation on- and off-campus with students and other stakeholders. The dean and others in senior administration also participated in individual unit faculty meetings. The transformation proposal has been shared with faculty, staff, and students, and they have been encouraged to provide their ideas, suggestions, and questions. A listserv has been set up for on-line discussion. Internal and external stakeholders have been reminded multiple times that these are only proposals, and that faculty and others have an opportunity to provide their counsel through June 2010. Additionally, unit leaders have been encouraged to convene discussions and seek perspectives from colleagues regarding name changes. The dean and associate deans have attended faculty meetings for units proposed to be merged or for whom name changes have been proposed. Such meetings and efforts to seek responsive insights are continuing. We stress that in some cases the proposed names were offered only as place-holders and units have been
encouraged to further explore alternatives. In all cases, the formal OSU process for changing names will be followed.

**Listings of dates and locations of Town Hall meetings and sessions with stakeholders groups** are available at: [http://agsci.oregonstate.edu/about/planning-for-change](http://agsci.oregonstate.edu/about/planning-for-change)

A link to the transformation listserv is available at the same location, as are links to:

- **Video recording** of one of the College-wide conversations about transformation;
- The product of **unit-leader initiated conversations** about transformation;
- The product of transformation-related conversations initiated by **branch experiment station superintendents**;
- The working documents of the **Blue Ribbon faculty panel** (Strategic Discussions Panel); and
- **A background document on transformation** that was distributed at each of the 11 Town Hall meetings and elsewhere.

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**Committee inquiry**

Budget projections for the next biennium indicate that additional cuts will probably be necessary, possibly in excess of 10%. To what extent will the proposed changes address further decreases in state-appropriated funding?

**College response**

Without severe impacts on faculty productivity, we do not expect to save money by reorganizing. This is particularly true because, for the past 20 years, the University has chronically underinvested in support functions. In this regard, the College’s Blue Ribbon faculty panel had two overriding recommendations:

1. Do no harm (don’t fix what’s not broken; don’t impair a top-ranked college containing five top-ten ranked departments nationally); and
2. The biggest faculty need is more “enabling support” not less. Pulling staff out of the departments and assigning them to business centers may save money in central administration, but doing so has the unfortunate consequence of reducing enabling support available to faculty where they need it most. We anticipate having to invest additional resources in order to maintain faculty support.

In academic organizations where personnel consume 90 percent of the budgets, the only way to downsize is to reduce the number of people on payroll. If we have 10 percent fewer state dollars during the next biennium, we simply will have 10 percent fewer people supported on state dollars. The challenge is to do that strategically. For the past 15 years all vacated faculty positions have returned to the dean’s office and we have used a Priority Staffing process (please see Appendix B) to determine what positions to fill. We will continue to use that process in the future to fill the highest priority positions to advance the signature areas, regardless of the underlying organizational chart. We will also continue to aggressively seek out other funds and partnerships to offset the loss of state funds, including grants and contracts, development, university-industry partnerships, fees for services, and local base support for our branch experiment stations. We have successfully used this strategy to double our grants and contracts over the past decade; and to raise more than $45 million in the current Campaign for OSU. Moving forward, we intend to be even more intentional in grant-seeking (e.g., providing cradle-to-grave support for grants) and, through a continuing excellent partnership with the OSU Foundation, in development activities. Simultaneously, we will be focusing greater attention on relatively less-developed areas of fees, partnerships, and local support.
Appendices

Appendix A:  *Category 1 proposal: Environmental Economics and Policy*

Appendix B:  *Factors influencing Priority Staffing decisions* (July, 2004)

Appendix C:  *Proposal: School of Applied Economics in the Earth Systems Science Division at OSU*

Appendix D:  *Extension and Experiment Station Communications in relation to Educational Outreach*

Appendix E:  *Where are Agricultural Education Programs Located?* (2008)

Appendix F:  *Dimensions of faculty contributions: Extension and Experiment Station Communications* (2010)

Appendix G:  *Recommendations of Plant Sciences Working Group*

Appendix H:  *Provost communication to Department of Botany and Plant Pathology*

Appendix I:  *Faculty Choice of Association: Procedures*, April 2010

Appendix J:  *Guiding Principles: 25 percent local partnership with branch experiment stations*, April 2010

Appendix L:  *List of changes that require approval beyond the College of Agricultural Sciences*

Source:
Office of the Dean
College of Agricultural Sciences
Oregon State University
Saved as CAS SABRRC V15
Proposal to Change the Name and Requirements for Bachelor of Science Degree in Environmental Economics, Policy and Management

Oregon State University

Sponsoring Department:
Agricultural and Resource Economics
Description of Proposed Program

1. Program Description

a. Proposed CIP number

b. Provide a brief overview (approximately 1-2 paragraphs) of the proposed program, including its disciplinary foundations and connections; program objectives; programmatic focus; degree, certificate, minor and concentrations offered.

Background
The Environmental Economics, Policy and Management (EEPM) program came into being in 1997 as an option under the Agricultural and Resource Economics (AREC) degree. The degree was created in part to complement the department’s international reputation for graduate training in resource and environmental economics. At that time the AREC degree had only 11 students. Fred Obermiller became the advisor for the AREC degree program and actively promoted the EEPM option. In 2002 the options were dropped and the AREC degree was renamed as EEPM. In Fall 2003 Fred was diagnosed with cancer and passed away a year later. EEPM advising responsibilities were assumed by our ABM advisor, but there was no longer a faculty member to promote and advocate for the EEPM degree. Enrollment numbers reached a plateau and then declined from 2005 to 2009, but did turn around significantly in Fall 2009.

Because of the low graduation numbers, the Provost’s Office identified the degree as a candidate for termination after 2009. The department made a case that the degree be allowed to continue because it fit within the strategic plan of the university, particularly with the new divisional arrangement. The Provost’s Office agreed but directed that the degree be reorganized and a recruitment plan be put in place to build graduation numbers to at least 20 graduates per year.

Proposed Changes
There are a number of programs similar to the EEPM offered at other universities around the U.S. Perhaps the most successful in terms of enrollment is the degree in Environmental Economics and Policy (EEP) jointly offered by the College of Natural Resources and the College of Letters and Science at the University of California – Berkeley. EEP is one of two degrees jointly offered by these two colleges, the other being Environmental Science. Their EEP degree was created in 2004 and by the 2008-09 academic year had grown to 126 students and 50 graduates. This growth occurred apparently without any impact on enrollments for related degrees like Environmental Science. The defining characteristics of Berkeley’s EEP program are (1) a focus on rigorous training in calculus, statistics and economics, (2) field courses in the resource and environmental economics area that are topical and of interest to students, and (3) a large number of unrestricted electives that permit students to explore their own interests in the environmental sciences.

Although the Berkeley model has much to offer, exit interview feedback from students suggests our current EEPM degree has also been well received. A number of our graduates
have gone on to graduate programs in law, economics, public policy and other fields. They have credited their undergraduate education with being fundamental to their later success. Consequently, it seemed to be more prudent to expand the opportunities provided in this degree program by creating options for students, rather than by simply restructuring the EEPM degree. Consequently, we propose the following changes to the EEPM degree.

(1) Rename the degree to Environmental Economics and Policy (EEP);
(2) Create three options under this degree, to be titled the General Option, the Environmental Economics Option and the Environmental Policy Option. These will be simultaneously submitted as Category II proposals.

   a. The Environmental Economics option would be closely patterned after the EEP program at UC-Berkeley, with
      i. a core set of required classes in economics, statistics and math;
      ii. a larger set of resource and environmental economics courses selected from a set of upper division offerings; and
      iii. approximately 70 hours of free electives that students can use to pursue their own interests in the biological, physical or social sciences. In short, this option would be very quantitative, but would offer students greater flexibility to design their own program.

   b. The Environmental Policy option would look much like the current EEPM degree, with less focused training in economics and more breadth of coursework in environmental sciences, political sciences and related subject areas. In general, this option would provide more breadth and less depth in economics, with a greater focus on the socio-economic dimensions of environmental sciences.

   c. The General option would represent a blend of the other two options, using only classes available through distance education.

(3) The department would offer seven new courses in the environmental and resource economics area. Several faculty would be involved in offering these classes, thereby broadening participation in the degree program. The new degree also strengthens ties between our program and coursework in Forestry and COAS. All these classes would initially be offered live, some would also be offered through distance education.

(4) The General Option would be proposed as a new distance degree program. As far as we are aware, this would be the first undergraduate degree of its kind offered through distance education in the United States. The department would continue to retain the minor in resource economics through distance education.

(5) The department would consolidate the EEP program at Corvallis by discontinuing the EEPM degree at the OSU Program in LaGrande. Penny Diebel, who is transferring to Corvallis as part of the consolidation process, would assume responsibility for the leadership of the EEP degree and oversee advising and recruiting students for this new program. The addition of her teaching resources to our mix of teaching resources will allow us to consolidate course duplications and free up resources to offer most of these new courses.
c. Course of Study – proposed curriculum, including course numbers, titles and credit hours.

The check sheets for the two proposed EEP options are provided in Appendix A. Changes made in the EEP Policy option from the old EEPM degree are highlighted in bold italics. The EEP Economics option and General option are entirely new so are all in bold italics. There will be seven new courses created in conjunction with the restructuring of this degree program. The classes (with Category II proposal numbers) are:

1. Welfare Economics and Policy Analysis (Proposal ID #79854) - AREC 313. This three credit class would contain a selection of special topics in intermediate microeconomic theory as they pertain to resource and environmental economics. Topics include welfare theory, public economics, uncertainty, cost-benefit analysis, and public choice theory in economics. AREC 311 or ECON 311 would be prerequisites for the course. The target audience would be EEP majors.

2. Marine Economics (Proposal ID #79856) - AREC 452/552. This three credit class represents a reinstatement of a similar class that was discontinued when the instructor left the department. The class will be offered in alternate years. Topics include economic aspects of marine resource utilization and management; the open access aspect of marine resources; conflict and allocation of marine resources; marine resource markets; marine recreation, pollution, and aquaculture, with special emphasis on commercial fisheries. This class was popular with MRM students, we expect most enrollment to be from that program. Prerequisites would be AREC 351 or AREC 352.

3. Economics of Water Conservation in Agriculture (Proposal ID #79857) - AREC 456/556. This one credit class would be offered in alternate years, probably in modular format. Topics include institutions that manage irrigation water, particularly in the Western United States; the role of economics in motivating how irrigated water is used; technological change in irrigation; and management tools that can be used to improve water efficiency. The target audiences would be EEP majors, undergraduate and graduate students in environmental sciences, natural resources and water resource management. Prerequisites would be AREC 351 or AREC 352.

4. Economic Dimensions of Global Climate Change and Renewable Energy (Proposal ID #79858) - AREC 457. This one credit class would be offered in alternate years, probably in modular format. Topics include the analysis of current policies to address climate change and renewable energy opportunities, interdependence of energy and climate policies, design of specific carbon policies such as taxes and cap and trade, and carbon accounting. Focus would be on issues in developed and developing countries. The target audiences would be EEP majors, undergraduate and graduate students in environmental sciences, natural resources and water resource management, students in the Colleges of Forestry and Oceanic and Atmospheric Sciences. Prerequisites would be AREC 351 or AREC 352.
5. Economic Dimensions of Biodiversity (Proposal ID #79859) - AREC 448. This one credit class would be offered in alternate years. In recent years, biological diversity has become an important natural resource. This class would address specific issues on measuring biodiversity, the economic implications of policies to address biodiversity, the role of uncertainty and option value, and case studies on valuing changes in biodiversity. The target audiences would be EEP and Fish and Wildlife majors, undergraduate and graduate students in environmental sciences, natural resources and water resource management, and students in the College of Forestry. Prerequisites would be AREC 351 or AREC 352.

6. Valuing Ecosystem Services (Proposal ID #79860) - AREC 450. This one credit class would be offered each year. Ecosystem services and how they change in response to exogenous factors (climate change, human use and development) are critically important to the productive capacity and economic welfare. Valuing ecosystem services is a timely research area given the connections to state and federal climate and energy policies and other resource policies. This course would explore the economic dimensions of policies that are impacted by and target ecosystem services, including markets for ecosystem services, and the connections to institutions, regulations, and societal preferences. The target audiences would be EEP majors, undergraduate and graduate students in forestry, environmental sciences, natural resources and water resource management. Prerequisites would be AREC 250 and either AREC 351 or AREC 352.

7. Sustainability, Development and the Environment (Proposal ID #79861) - AREC 458. This one credit course would be offered in alternate years. It explores the economic dimensions and drivers of sustainable development, with an emphasis on applications to agriculture and rural development policy and agricultural technology impact assessment. Topics also include a review of sustainability concepts, micro-economic foundations of economic-environment interactions, and development patterns in both developing and developed countries. The target audiences would be EEP majors, undergraduate and graduate students in environmental sciences, natural resources and water resource management. Prerequisites would be AREC 311 and AREC 351.

d. Manner in which program will be delivered, including program location (if offered outside of the main campus), course scheduling, and the use of technology (for both on-campus and off-campus delivery).

The program will be delivered both on-campus in Corvallis and through distance education. Most current courses will continue to be offered on the same schedule as before, although we will discontinue offering AREC 250, 311, 351 and 434 live in LaGrande. Classes will be offered more often if demand justifies a change. The department offers a number of EEPM classes through distance education, so is well situated to offer the EEP degree on-line. Three courses (AREC 311, 313 and 434) will be added to the suite of distance classes already offered in order to facilitate distance students completing the core set of classes in the EEP program.
e. Ways in which the program will seek to ensure quality, access and diversity. The EEPM program has always attracted strong students. Requiring rigorous coursework in economics, statistics and mathematics will keep the quality high in the EEP degree. The requirements in place for the new Economics option match those that we require of students entering our nationally ranked graduate programs in Applied Economics. The EEPM degree has shown more diversity than our ABM degree, we don’t expect that things will change with these new revisions.

f. Anticipated fall term headcount and FTE enrollment over each of the next five years.
Historical enrollment for the last three for the EEPM degree and that projected for the new EEP degree are projected as follows. Note that enrollment increased sharply during the 2009-10 year, from both freshman and transfer students. We hope to build on this increase and expect growth in both on-campus freshman and transfers, as well as distance students.

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Table 2. Projected Enrollment and Degrees Awarded for EEP Degree

The graduation numbers provided in Table 2 are projections based on historical enrollment and graduation numbers (2007-2010) and future projections based on increased recruitment of freshmen, increases in transfers and double degree students, and new students in the distance program.

h. Characteristics of students to be served (resident/nonresident/international; traditional/nontraditional; full-time/part-time, etc)
The EEPM degree typically served traditional, full-time students. Most are from Oregon, although we have attracted some outstanding nonresident students. The distance option will open this degree program up to a new group of prospective students. We expect that part of our growth will come from nonresident students attracted by our international reputation in resource and environmental economics. We plan to tap into the pool of INTO students as a particular source of international students.

i. Adequacy and quality of faculty delivering the program. The AREc and Forest Economics programs have enjoyed a longstanding international reputation for excellence in resource and environmental economics. This program utilizes the talents and course offerings across both the Colleges of Agricultural Sciences and Forestry, as well as offering coursework that may be attractive to some students in Oceanography and Atmospheric Sciences. We
expect that most of our resource and environmental faculty will participate by teaching at least one class in the EEP program. In addition, having an award winning teacher and advisor (Penny Diebel) leading the program will be extremely important in recruiting and retaining students in the program.

j. Faculty resources – full-time, part-time, adjunct
At present, we have 16 faculty members on tenure and tenure-track appointments in the department in Corvallis. John Antle will be joining the department in Fall 2010 and Penny Diebel will transfer from our EOU program by Fall 2010. Diebel will take on leadership and advising responsibilities for the EEP program and will teach several of the new classes. Antle will teach one of the new classes. Some of the one credit, alternate year classes will be picked up by existing faculty. We also have graduate students who need teaching experience and who could either teach or co-teach some of these classes, or take over existing lower division classes and free up faculty to teach some of these new upper division classes.

k. Other professional faculty and staff
Tjodie Richardson has served for more than a decade as the department’s undergraduate advisor for the ABM program. Since 2005 she has also advised the EEPM students. We anticipate her continuing to handle many of the day to day responsibilities associated with advising, freeing Penny Diebel up to provide career advising and focus on recruiting.

l. Facilities, library and other resources
We anticipate no additional needs in faculties, library support or other resources.

m. Anticipated start date
We anticipate being able to offer the EEP degree beginning in Fall 2010.

2. Relationship to Mission and Goals

a. Manner in which the proposed program supports the institution’s mission and goals for access; student learning; research and/or scholarly work; and service.
The degree program continues to support OSU’s mission and goals, as was the case under the EEPM degree. Nothing new is added in this area as a result of renaming the degree and offered a second option to the program. A degree like EEP would serve as a bridge with all three colleges making up the new Division of Earth Systems Science. This point is explained in greater detail in section 2b.

b. Connection of the proposed program to the institution’s strategic priorities and signature areas of focus.
The revised degree program is exceptionally well positioned to address the signature area *Advancing the Science of Sustainable Earth Ecosystems*. Economics represents the key human dimension of sustainable ecosystems. Understanding physical and biological systems that underlie Earth ecosystems cannot, by itself, change human behavior toward those systems. The economic dimension allows students to understand the motivations that humans have to consume or preserve ecosystems, as well as providing tools to modify behavior in socially beneficial ways.
The AREc Department offers four undergraduate courses that serve the wider OSU community in the resource and environmental economics area: AREC 250, 253, 351 and 352. The proposed program will add seven new courses to this list, most of which will have AREC 351 and (or) AREC 352 as prerequisites. Because enrollment in these two classes is dominated by students outside AREc (such as Fish & Wildlife, Environmental Science and Natural Resources), we expect to see significant numbers of nonmajors in these proposed classes. In addition, we have included a number of economics classes from the College of Forestry in the EEP economics electives as a way of broadening our student’s exposure to other programs in the university. In short, we believe this program will lead to greater integration of our undergraduate program within the new Division of Earth Systems Science.

c. Manner in which the proposed program contributes to the Oregon University System goals for access; quality learning; knowledge creation and innovation; and economic cultural support of Oregon and it’s communities.
We anticipate changing the degree name and adding three options will not change goals for access, quality learning, knowledge creation and innovation, and economic cultural support.

d. Manner in which the program meets broad statewide needs and enhances the state’s capacity to respond effectively to social, economic and environmental challenges and opportunities.
We anticipate the proposed changes will provide students with a flexible option under this degree (within the Economics option), such that students can put together a set of classes that complete their rigorous economic training. For example, a student interested in graduate school in forestry economics could couple the EEP – Environmental Economics option with minors in forest management and fisheries and wildlife. This would also be the first economics-type degree offered statewide through distance education, so provides Oregonians who cannot attend OSU the opportunity to pursue this kind of degree.

3. Accreditation

a. Accrediting body or professional society that has established standards in the area in which the program lies, if applicable.
No accreditation body or professional society exists for this degree program.

b. Ability of the program to meet professional accreditation standards.
Not applicable.

c. If the proposed program is a graduate program in which the institution offers an undergraduate program, proposal should identify whether or not the undergraduate program is accredited and, if not, what would be required to qualify it for accreditation. Proposal is for an undergraduate degree only.

d. If accreditation is a goal, the proposal should identify the steps being taken to achieve accreditation.
Accreditation is not a goal of this proposal.
4. Need

a. Evidence of market demand.
Enrollment growth in the current EEPM program suggests demand is increasing. The existing EEPM degree already has a base of support, graduating 5-10 students per year. We believe the name change and additional options will allow us to build on the existing student interest. Coupled with an active recruiting program and an advisor dedicated to this program, we believe we can double or triple the number of students graduating from this program each year. Certainly the success enjoyed by the UC-Berkeley program is evidence that our goal is realistic. The national and international reputation of our program, in particular, should aid us in attracting more out-of-state and international students.

The proposed Environmental Economics and Policy (EEP) curriculum is focused on developing economic skills that can be applied to a variety of resource and environmental fields. Along with the baccalaureate core of required courses in the sciences and humanities, students may select a broad range of electives with the help of a faculty advisor. This program provides flexibility to meet a wide variety of educational and career goals. EEP graduates may go on to graduate in environmental, natural resource, and agricultural economics departments, business schools, and law schools. Other careers include non-profit organizations and interest groups, local governments, county and regional planning offices, environmental consulting firms, legislative or policy assistants, and state and federal agencies.

b. If the program’s location is shared with another similar OUS program, proposal should provide externally validated evidence of need.
The EEPM degree exists at OSU campuses in Corvallis and LaGrande. This proposal would consolidate the EEP program at one campus and result in increased efficiencies in program offerings.

c. Manner in which the program would serve the need for improved educational attainment in the region and state.
Graduates should be well prepared to undertake a career in public or private agencies engaged in the planning or management of natural resources, or to enter a graduate school for further study in such fields as agricultural and resource economics, economics, law, public policy, or resources administration. The continued conflict between ever increasing resource use by society and the fixed nature of the natural resource base suggests resource economists will be in increasing demand for the foreseeable future.

d. Manner in which the program would address the civic and cultural demands of citizenship.
No changes from the EEPM degree planned in this area.

5. Outcomes and Quality Assessment

a. Expected learning outcomes of the program.
Students graduating with an EEP degree will be able to:
1. Explain microeconomic theory at the intermediate level, including producer theory, consumer theory, how markets work and prices are formulated, market failure and its causes, and welfare theory.

2. Explain macroeconomic theory at the principles level, including national income accounting, savings versus consumption, how interest rates are formed, government spending and its impact on the economy, and how government is financed.

3. Apply economic theory and tools to natural resource and environmental management issues the management of specific resources (such as fishery, forests, land and water), such as:
   - efficiency concepts and other criteria for evaluating environmental and resource management and policy,
   - externalities and imperfect market structures, and
   - basic policy instruments to control externalities (including taxes, standards, subsidies, liability rules, and voluntary approaches).

4. Perform basic algebra and introductory calculus operations.

5. Apply statistics and regression techniques to economic problems and evaluate results.

6. Demonstrate computer skills needed to analyze economic issues.

7. Communicate through a variety of oral and written methods.

8. Explain the legal system, particularly as it applies to environmental issues and natural resource use.

b. Methods by which the learning outcomes will be assessed and used to improve curriculum and instruction.

1. Courses will be separated into three groups and each group reviewed every three years. Instructors of courses will meet with undergraduate committee to assist in the review and a report given to the AREc department each year. Materials to be included in the review are:
   a. random set of student work (anonymous) from EEP courses will be collected and reviewed by the undergraduate committee,
   b. course syllabus and assignment samples,
   c. distribution of grades over the previous 3 years, and
   d. other materials as developed.

The review process will compare course and program learning outcomes, performance of students for each outcome, based on work samples, and instructor feedback using a rubric.

2. Exit interviews with students will be conducted to obtain feedback about each class and how well it was taught. Students will provide feedback about the overall program structure.

3. Alumni and employer surveys to obtain feedback on the program and job placement will be periodically conducted.

4. The assessment process will be changed to fit the needs of the program as it develops.

c. Program performance indicators, including prospects for success of program graduates (employment or graduate school) and consideration of licensure, if appropriate.

The EEPM degree was temporarily suspended in Fall 2009 because the Provost’s Office did not feel that there were enough students graduating from the program to justify its
continuation. When the appeal was granted and the program allowed to continue, it was with the stipulation that the program be redesigned and a recruitment program instituted to boost graduation levels past the 20 graduates per year mark. Therefore, the success of this restructuring effort will be evaluated strictly on this measure, i.e., boosting enrollment such that there are 20 students graduating from the program each year.

d. Nature and level of research and/or scholarly work expected of program faculty; indicators of success in those areas.
No changes are planned in this area.

6. Program Integration and Collaboration
a. Closely related programs in other OUS universities and Oregon private institutions.
The economics programs at the University of Oregon and Portland State University offer no undergraduate degrees in the environmental economics area. Changing the degree name to EEP and creating three options moves the degree away from any similar science-based environmental programs like natural resources and environmental sciences and production-based programs like forest management.

b. Ways in which the program complements other similar programs in other Oregon institutions and other related programs at this institution. Proposal should identify the potential for collaboration.
There are no other programs like this in the State of Oregon. Portland State and the University of Oregon offer undergraduate degrees in Economics (as does OSU). The University of Oregon and Portland State also offer undergraduate degrees in Environmental Science, but both programs require little training in economics and the social sciences.

One focus of this revised proposal is to increase collaboration between the three colleges comprising the Division of Earth Sciences at OSU. This is being done in two ways. First, we are now including a number of courses in the EEP degree that are taught in the College of Forestry. Second, we are offering a new set of courses that will appeal to students in the College of Forestry and the College of Oceanography and Atmospheric Sciences. A number of these courses should also be attractive to environmentally oriented students in the College of Science.

c. If applicable, proposal should state why this program may not be collaborating with existing similar programs.
Not applicable.

d. Potential impacts on other programs in the areas of budget, enrollment, faculty workload, and facilities use.
The budget implications for this proposal are complicated, although it is largely a matter of reshuffling existing budgetary resources.

As noted, Penny Diebel is moving to the Corvallis campus in Fall 2010. This move is motivated by several factors, one of which is this proposed program. Even if this program
were to be rejected, however, Penny will still be moving to the Corvallis campus this fall. This move is part of a larger restructuring taking place at the OSU Program at EOU, with the eventual aim of bringing that program (which is currently losing +$300,000 per year for the College of Agricultural Science) into budgetary balance. A number of instructor changes in Corvallis are also being made to accommodate the new teaching responsibilities for the Applied Economics graduate program.

Penny currently carries a 9-month, 90% teaching appointment at the LaGrande program and teaches six classes per year: AREC 250, AREC 311, AREC 351, AREC 434 and AREC 461. Enrollments for all of these classes are smaller than their corresponding classes on the Corvallis campus, so the move will result in greater program efficiency. Changes at EOU are currently being finalized, but transition plans are being made to cope with the loss of these six classes being taught live at EOU.

AREC 250 – The class will be dropped at EOU, students will use ECON 201 from EOU faculty instead. The class filled mostly a service role for students in the EOU program.

AREC 311 – This class served ABM and EEPM students at LaGrande. The class will be dropped at LaGrande and Penny will begin offering both live and distance versions of this class in Corvallis. In Corvallis, we will drop the AREC 300 class and have all our ABM and EEP students take AREC 311. The distance version of 311 will serve the needs of ABM students in LaGrande and EEP students on-campus and worldwide.

AREC 351 – This class is being taught by JunJie Wu, who will now take over a graduate class in the Applied Economics program. Penny will take responsibility for this class in Corvallis and will continue offering her distance version of the class. EOU students will take this class via distance education, the class will also serve EEP, Environmental Science and Natural Resources students in distance education.

AREC 434 – This class is the capstone/writing intensive class for EEPM students in Corvallis and LaGrande, although it has not been taught for three years because of a faculty retirement. It was taught alternate years in LaGrande. With the closure of EEP in LaGrande, this class will no longer be needed there. Penny will take over teaching this class in Corvallis and will add a new distance education component to serve the distance students seeking the EEP degree. It will be offered every year.

AREC 447 – This class was used primarily by ABM students at EOU. The offering will be discontinued in LaGrande and Jeff Reimer, who teaches 447 in Corvallis, has agreed to add a remote link setup to serve students in LaGrande.

AREC 461 – This class was also used primarily by ABM students at EOU. As with the 447 class, the LaGrande class will be discontinued and Larry Lev (the Corvallis 461 instructor) will add the LaGrande students to his class via remote link. With these changes, Penny’s teaching appointment will be reduced to four classes (12-13 credit hours) per year and more of her FTE will be covered by extension or experiment station monies. Also note that Penny’s budgetary line is within the Department of Agricultural and Resource Economics, so her move to Corvallis means no net change in finances for the department.

Most of the proposed new courses represent modest resource needs from within the department. They will be covered as follows:
AREC 313 – This new class will be taught by Steve Buccola. He was teaching AREC 300, so the elimination of that class frees up his time to teach this class.

AREC 452/552 – The reinstatement of this class will require hiring a new instructor. Susan Hanna, a marine economist, is slated to offer this three credit class on an alternate year basis. She does not currently carry a teaching appointment, so will need to be compensated through the department’s teaching resources. We estimate this will cost $3,000 per year.

AREC 456/556 – This new one credit class will be taught in alternate years by Bill Jaeger, who has extensive research and extension experience in irrigated agriculture. He will likely receive some of the teaching FTE being transferred from Penny as compensation for this course and two other courses he is currently teaching.

AREC 457 – This new one credit class will be taught in alternate years by Susan Capalbo, who has extensive research experience in this topic area. The class will be in addition to her current research and administrative responsibilities in the department.

AREC 448 – This new one credit class will be taught in alternate years by Bill Jaeger. The class will alternate years with 456/556.

AREC 450 – This new one credit class will be taught in alternate years by Penny Diebel.

AREC 458 – This new one credit class will be taught in alternate years by John Antle. John is a new hire and will be arriving on campus in Fall 2010. Most of his teaching responsibility will be at the graduate level, but this class will also be part of his new responsibilities.

In addition to these classes, there are some other class adjustments that will impact on the EEP program.

AREC 253 – This core class is taught by Christian Langpap. It was taught twice a year, but will be reduced to one time per year to free up Christian to teach in the Applied Economics program.

AREC 352 – This class was taught in Spring 2009 by Susan Capalbo, with another section taught by graduate students in the Economics Department. Susan’s expertise was needed in the Applied Economics program, so the class is being taught this year by a PhD student in Applied Economics. We anticipate it will be taught in Spring 2011 by a visiting faculty member here on sabbatical, thereafter probably by a ABD graduate student.

It should also be noted that AREC 250 is being taught three times per year (plus two distance sections) by Andrew Plantinga. This class is taught in a mentored teaching arrangement, whereby Andrew does most of the teaching in the fall, while mentoring a graduate through several lectures. In the winter, he turns more of the class over to the graduate student and then gives the student full responsibility for the spring class.

Graduate students in our department are typically funded using a combination of salary savings from faculty, grants, returned overhead from grants, and monies from distance education. Historically, most of this money was used to support students on research projects. Feedback from students suggests their marketability in the job market (particularly for teaching positions) is enhanced by gaining some teaching experience. Hence we have made a conscious decision to bring more graduate students into the teaching side of the department. This is a financial benefit for the department, better prepares graduate students for employment, and (if done judiciously) does not harm undergraduate education.
7. Financial Sustainability

a. Business plan for the program that anticipates and provides for its long-term financial viability, addressing anticipated sources of funds, the ability to recruit and retain faculty, and plans for assuring adequate library support for the long term.

Again, the key to long term viability (according to the Provost’s Office) is student numbers and number of degrees awarded. The EEP degree fits well within the first of the university’s three areas of distinction: **Advancing the Science of Sustainable Earth Ecosystems.** The strategic plan provides further details about this area of distinction:

> Improving the understanding of the earth ecosystems upon which all life depends, and promoting their sustainability through high-impact public policy involvement with issues such as climate change, food security and safety, renewable energy production, and economically viable natural resource management.

The proposed program directly addresses the area of economically viable natural resource management. As concern grows for protecting and restoring increasingly scarce natural resources, there will be increased demand for the skills that economists bring to these discussions. Consequently, as OSU moves forward and grows in enrollment, we expect to see growth in all the university’s signature areas. The EEP degree will be a key part of that growth.

The department will also need a more focused effort to market the program to prospective students as a way to build enrollment. Marketing efforts will include

- (i) Developing a new website for the EEP degree, along with accompanying materials;
- (ii) Visiting with UESP students about the program and what it has to offer;
- (iii) Targeted mailings to OSU applicants interested in this general area;
- (iv) Working with our extension and outreach efforts within the college;
- (v) Quality advising and coursework, to create positive word of mouth among students.

b. Plans for development and maintenance of unique resources (buildings, laboratories, technology) necessary to offer a quality program in this field.

There is no need for new or additional resources because of the change from the EEPM to EEP degree.

c. Targeted student/faculty ratio (student FTE divided by faculty FTE).

The current average enrollment, projected enrollment, and estimated student credit hours for the proposed classes in AREc on-campus are provided in Table 3. Assuming each 3 credit class represents 0.10 FTE of faculty teaching time, the current courses used in the EEPM program (and as service courses in other majors) represents 42 credit hours of coursework or 1.4 FTE of teaching time. The current ratio of student credit hours per FTE is 916. Under the proposed EEP degree with projected enrollments, each year the department will commit 39.5 credit hours or 1.3 FTE of teaching time. Details regarding the readjustment of faculty resources are provided in (6d). Projected ratio of student credit hours per FTE will be 1232, so the department will markedly improve the productive use of its teaching resources.
There will also be some changes in the distance course offerings (see Table 4). Enrollments are projected to increase moderately and the department will offer three new distance classes.
<table>
<thead>
<tr>
<th>Course Number</th>
<th>Location</th>
<th>Term</th>
<th>Credit Hours</th>
<th>Offered Annually/Alternate Years</th>
<th>2007-09 Instructor</th>
<th>Per Class Average Enrollment</th>
<th>Per Class Projected Enrollment</th>
<th>Projected Instructor</th>
<th>Estimated Student Credit Hours</th>
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<td>Buccola</td>
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</table>

Number of Classes Offered: 14
Number of Credit Hours Offered: 42
Enrollment Per Credit Hour: 30.5

16
### Table 4. Historical and Projected Enrollments for EEP Courses Taught Distance

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Location</th>
<th>Term</th>
<th>Credit Hours</th>
<th>Offered Annually/Alternate Years</th>
<th>2008-10 Instructor</th>
<th>Per Class Average Enrollment</th>
<th>Per Class Projected Enrollment</th>
<th>Projected Instructor</th>
<th>Estimated Student Credit Hours</th>
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<tr>
<td></td>
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<td>2007-09</td>
<td>2014-15</td>
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<td><strong>Total</strong></td>
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</tbody>
</table>

**Required EEP Classes:**

- **AREC 250 Corvallis Fall**: 3 credit hours, Annually, Grad Student, 2008-10: 32, Projected: 40, Instructor: Grad Student, 2007-09: 96, 2014-15: 120
- **AREC 250 Corvallis Winter**: 3 credit hours, Annually, Grad Student, 2008-10: 25, Projected: 40, Instructor: Grad Student, 2007-09: 75, 2014-15: 120
- **AREC 250 Corvallis Spring**: 3 credit hours, Annually, Grad Student, 2008-10: 18, Projected: 40, Instructor: Grad Student, 2007-09: 55, 2014-15: 120
- **AREC 311 Corvallis Winter**: 4 credit hours, Annually, Not Offered, 2008-10: 0, Projected: 15, Instructor: Diebel, 2007-09: 0, 2014-15: 60
- **AREC 313 Corvallis Spring**: 3 credit hours, Annually, Not Offered, 2008-10: 0, Projected: 5, Instructor: Buccola, 2007-09: 0, 2014-15: 15
- **AREC 352 Corvallis Spring**: 3 credit hours, Annually, Grad Student, 2008-10: 30, Projected: 40, Instructor: Grad Student, 2007-09: 89, 2014-15: 120
- **AREC 432 Corvallis Winter**: 3 credit hours, Annually, Brekken, 2008-10: 10, Projected: 15, Instructor: Brekken, 2007-09: 80, 2014-15: 100
- **AREC 434 Corvallis Spring**: 3 credit hours, Annually, Not Offered, 2008-10: 0, Projected: 5, Instructor: Diebel, 2007-09: 0, 2014-15: 15

**Total**

- 677 credit hours, 935 total students

**Number of Classes Offered**

- 8 classes, 10 total

**Number of Credit Hours Offered**

- 26 hours, 32 total

**Enrollment Per Credit Hour**

- 26.0 per hour, 29.2 total

### d. Resources to be devoted to student recruitment

We project that the department will devote 0.10 FTE toward recruiting of students to this new degree program. We project that the department will devote 0.10 FTE toward recruiting of students to this new degree program. Recruitment activities will include:

- i. provide program materials describing curriculum and job opportunities to the University Admissions Office and College of Agricultural Sciences recruiting staff, CAS Extension (4-H) and Experiment Stations, and high school contacts,
- ii. work with the CAS/FOR Ambassador program resources,
- iii. work with other OSU student recruitment and retention organizations, such as INTO
- iv. develop faculty guest lecturers in their area of expertise for high school and elementary school events,
- v. work with Ecampus staff to develop recruiting efforts for the EEP distance program,
- vi. develop and extend the EEP website,
- vii. utilize Ambassadors from the AREc department for club visits,
- viii. develop a variety of written materials.

### 8. External Review

Not applicable for this proposal.
**AGRICULTURAL & RESOURCE ECONOMICS**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Code</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Discovering Agri &amp; Res Economics</td>
<td>AREC 121</td>
<td>(2)</td>
</tr>
<tr>
<td>Intro. to Environ. Econ. &amp; Policy</td>
<td>AREC 250</td>
<td>(3)</td>
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<tr>
<td>or Introduction to Microeconomics</td>
<td>ECON 201</td>
<td>(4)</td>
</tr>
<tr>
<td>Environ Law, Policy and Econ</td>
<td>AREC 253</td>
<td>(4)</td>
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<tr>
<td><strong>Intermediate Microeconomic Theory I</strong></td>
<td>AREC/ECON 311</td>
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<tr>
<td>Welfare Economics and Resource Policy</td>
<td>AREC 313</td>
<td>(3)</td>
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<tr>
<td>Natural Resource Econ. &amp; Policy</td>
<td>AREC 353</td>
<td>(3)</td>
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<tr>
<td>Environmental Economics &amp; Policy</td>
<td>AREC/ECON 352</td>
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<tr>
<td><strong>Environmental and Resource Economics</strong></td>
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<tr>
<td><strong>Project/Internship</strong></td>
<td>AREC 406/470</td>
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AREC, ECON or FOR – & 10 credits upper division courses from the following list:

**Economics of Recreation Resources**

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<tbody>
<tr>
<td>FOR 432</td>
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**Forest Policy**

<table>
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<tbody>
<tr>
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**Energy Economics**

<table>
<thead>
<tr>
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<tbody>
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**Law, Economics & Regulation**

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**Environment, Sustainability & Quality of Life**

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<tbody>
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**Rural Development Economics and Policy**

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**Negotiation in Bus and Res Management**

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<tr>
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**Valuing Ecosystem Services**

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<tr>
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<tr>
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**Marine Economics**

<table>
<thead>
<tr>
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**Economics of Water Conservation in Agriculture**

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**Economics of Global Climate Change**

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**Biodiversity Economics**

<table>
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**Development, Sustainability, and the Environment**

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**Three classes from the following:**

**Environmental Law**

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**Natural Resource Policy and Law**

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<tbody>
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**Fisheries and Wildlife Law and Policy**

<table>
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**Human Impacts on Ecosystems**

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**Two classes from the following:**

**Nat. Res. Policy and Bureaucratic Politics**

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**Environmental Politics & Policy**

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**Science and Politics**

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**International Env. Politics & Policy**

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**Two classes from the following:**

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**Principles of Soil Science**

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**Problem Solving: Soil Sci. Appl.**

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**Introduction to Water Science & Policy**

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**Introduction to Forestry**

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**Principles of Fish & Wildlife Conservation**

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**Endangered Species, Soc. & Sustainability**

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**Introduction to Oceanography**

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**Rangeland Ecology & Management**

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**AREC, ECON or FOR – & 10 credits upper division courses from the following list:**

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**Forest Policy**

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**Energy Economics**

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**Valuing Ecosystem Services**

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**Marine Economics**

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**Economics of Global Climate Change**

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**Biodiversity Economics**

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**Development, Sustainability, and the Environment**

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**Three classes from the following:**

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**Natural Resource Policy and Law**

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**Introduction to Water Science & Policy**

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### SOCIAL SCIENCES
- Introduction to Macroeconomics: ECON 202 (4) C- or above
- Intro. to U.S. Government and Politics: PS 201 (4)
- Introduction to Sociology: SOC 204 (3)

### COMPUTERS AND TECHNOLOGY
- Computer Applications in Agriculture: AG 111 (3)
- or Computer Apps. and Implications: CS 101 (4)
- Introduction to GIS: GEO 365 (4)

### COMMUNICATIONS
- Writing I: WR 121 (3) C- or above
- Writing II: WR 214/222 (3)
- Writing III: COMM 111/114 (3)
- Additional course: WR 323/327 (3) C- or above

### MATHEMATICS
- College Algebra: MTH 111 (4) C- or above
- Calculus for Mgmt. & Science: MTH 241 (4)

### STATISTICS
- Intro. to Statistical Methods: ST 351 (4) C- or above

### QUANTITATIVE COURSES - choose two courses
- Agricultural Price and Market Analysis: AREC 447 (4)
- Introduction to Econometrics: ECON 424 (4)
- Introduction to Statistical Methods: ST 352 (4)

### HEALTH & HUMAN PERFORMANCE
- Lifetime Fitness for Health: HHS 231 (2)
- Lifetime Fitness or Activity Course: HHS 241 - 248 (1)

### SYNTHESIS (must be in different departments)
- Contemporary Global Issues
- Science, Tech. & Society

### PERSPECTIVES (2 classes allowed in same dept.)
- One Bacc Core Chemistry class
- Biological Science
  - 1 add’l Phys/Bio Science

Western Culture
Cultural Diversity
Literature & the Arts
Social Processes
Diff., Power & Discrimination
# ENVIRONMENTAL ECONOMICS AND POLICY MAJOR (Code # 099)

## Environmental Economics Option (New)

### Name:

**AGRICULTURAL & RESOURCE ECONOMICS**

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<tr>
<td>or Introduction to Microeconomics</td>
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<td>Environ Law, Policy and Econ</td>
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<td>Intermediate Microeconomic Analysis</td>
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**AREC, ECON, FOR or MRM – 20 credits upper division courses from the following list (or approved by advisor):**

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<td>Economics of Recreation Resources</td>
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<td>Techniques for Forest Resource Analysis</td>
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<td>Forest Policy</td>
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<td>Natural Resource Policy and Law</td>
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<td>Public Policy Analysis</td>
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<td>Law, Economics &amp; Regulation</td>
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<td>Transportation Economics</td>
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<td>Environmental Law</td>
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<td>Negotiation in Bus and Res Management</td>
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<tr>
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<th>Course</th>
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<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Macroeconomics</td>
<td>4</td>
<td>C- or above</td>
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**COMPUTERS AND TECHNOLOGY**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Computer Applications in Agriculture</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>or Computer Appls. and Implications</td>
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</table>
## COMMUNICATIONS

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Credits</th>
<th>Grade Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing I</td>
<td>WR 121</td>
<td>3</td>
<td>C- or above</td>
</tr>
<tr>
<td>Writing II</td>
<td>WR 214/222</td>
<td>3</td>
<td>C- or above</td>
</tr>
<tr>
<td>Writing III</td>
<td>COMM 111/114</td>
<td>3</td>
<td>C- or above</td>
</tr>
<tr>
<td>Additional course</td>
<td>WR 323/327</td>
<td>3</td>
<td>C- or above</td>
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## MATHEMATICS

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<th>Course</th>
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<tr>
<td>College Algebra</td>
<td>MTH 111</td>
<td>4</td>
<td>C- or above</td>
</tr>
<tr>
<td>Elementary Functions</td>
<td>MTH 112</td>
<td>4</td>
<td>C- or above</td>
</tr>
<tr>
<td>Differential Calculus</td>
<td>MTH 251</td>
<td>4</td>
<td>C- or above</td>
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## STATISTICS

<table>
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<tr>
<th>Course</th>
<th>Code</th>
<th>Credits</th>
<th>Grade Requirement</th>
</tr>
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<tbody>
<tr>
<td>Intro. to Statistical Methods</td>
<td>ST 351</td>
<td>4</td>
<td>C- or above</td>
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## HEALTH & HUMAN PERFORMANCE

<table>
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<tr>
<th>Course</th>
<th>Code</th>
<th>Credits</th>
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<tr>
<td>Lifetime Fitness for Health</td>
<td>HHS 231</td>
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</tr>
<tr>
<td>Lifetime Fitness or Activity Course</td>
<td>HHS 241 - 248</td>
<td>1</td>
</tr>
</tbody>
</table>

## SYNTHESIS (must be in different departments)

- Contemporary Global Issues
- Science, Tech. & Society

## PERSPECTIVES (2 classes allowed in same dept.)

- Physical Science
- Biological Science
- 1 add’t Phys/Bio Science
- Western Culture
- Cultural Diversity
- Literature & the Arts
- Social Processes
- Diff., Power & Discrimination

| Elective Credits | 5-6        |
### ENVIRONMENTAL ECONOMICS AND POLICY MAJOR (Code # 099)
General Option (Distance and On-Campus)

**Name:** __________________________

**AGRICULTURAL & RESOURCE ECONOMICS**

<table>
<thead>
<tr>
<th>Course Description</th>
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<tr>
<td>Intro. to Environ. Econ. &amp; Policy</td>
<td>AREC 250</td>
<td>(3)</td>
</tr>
<tr>
<td>or Introduction to Microeconomics</td>
<td>ECON 201</td>
<td>(3)</td>
</tr>
<tr>
<td>Environ Law, Policy and Econ</td>
<td>AREC 253</td>
<td>(4)</td>
</tr>
<tr>
<td>Intermediate Microeconomic Theory I</td>
<td>AREC/ECON 311</td>
<td>(4)</td>
</tr>
<tr>
<td>Welfare Economics and Resource Policy</td>
<td>AREC 313</td>
<td>(4)</td>
</tr>
<tr>
<td>Natural Resource Econ. &amp; Policy</td>
<td>AREC 351</td>
<td>(3)</td>
</tr>
<tr>
<td>Environmental Economics &amp; Policy</td>
<td>AREC/ECON 352</td>
<td>(3)</td>
</tr>
<tr>
<td>Environmental Law</td>
<td>AREC 432</td>
<td>(4)</td>
</tr>
<tr>
<td>Environmental &amp; Resource Economics</td>
<td>AREC 434</td>
<td>(3)</td>
</tr>
<tr>
<td>Project</td>
<td>AREC 406</td>
<td>(6)</td>
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</table>

16 credits upper division courses from AREC, ECON, FOR or PS

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Code</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Ecology</td>
<td>BI 370</td>
<td>(3)</td>
</tr>
<tr>
<td>Principles of Soil Science</td>
<td>CSS 305</td>
<td>(4)</td>
</tr>
<tr>
<td>Introduction to Water Science &amp; Policy</td>
<td>CSS 335</td>
<td>(3)</td>
</tr>
<tr>
<td>Introduction to Forestry</td>
<td>FOR 111</td>
<td>(3)</td>
</tr>
<tr>
<td>Principles of Fish &amp; Wildlife Conservation</td>
<td>FW 251</td>
<td>(3)</td>
</tr>
<tr>
<td>Endangered Species, Soc. &amp; Sustainability</td>
<td>FW 350</td>
<td>(3)</td>
</tr>
<tr>
<td>Introduction to Oceanography</td>
<td>OC 331</td>
<td>(3)</td>
</tr>
<tr>
<td>Rangeland Ecology &amp; Management</td>
<td>RNG 341</td>
<td>(3)</td>
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</table>
### SOCIAL SCIENCES

- **Introduction to Macroeconomics**  ECON 202  (4)  C- or above
- **Intro. to U.S. Government and Politics**  PS 201  (4)
- **Introduction to Sociology**  SOC 204  (3)

### COMPUTERS AND TECHNOLOGY

- **Computer Applications in Agriculture**  AG 111  (3)
- **Introduction to GIS**  GEO 365  (4)

### COMMUNICATIONS

- **Writing I**  WR 121  (3)  C- or above
- **Writing II**  WR 214/222  (3)
- **Writing III**  COMM 111/114  (3)
- **Additional course**  WR 323/327  (3)  C- or above

### MATHEMATICS

- **College Algebra**  MTH 111  (4)  C- or above
- **Elementary Functions**  MTH 112  (4)  C- or above
- **Differential Calculus**  MTH 251  (4)  C- or above

### STATISTICS

- **Intro. to Statistical Methods**  ST 351  (4)  C- or above
- **Introduction to Statistical Methods**  ST 352  (4)

### HEALTH & HUMAN PERFORMANCE

- **Lifetime Fitness for Health**  HHS 231  (2)
- **Lifetime Fitness or Activity Course**  HHS 241 - 248  (1)

### SYNTHESIS (must be in different departments)

- Contemporary Global Issues
- Science, Tech. & Society

### PERSPECTIVES (2 classes allowed in same dept.)

- One Bacc Core Chemistry class
- Biological Science
- 1 add'l Phys/Bio Science

- Western Culture
- Cultural Diversity
- Literature & the Arts
- Social Processes

- **Diff., Power & Discrimination**

- **General Electives 33-37 hours**
Factors influencing priority staffing decisions

College of Agricultural Sciences (CAS)
Oregon State University (OSU)
July 23, 2004

Addresses planning goals
Supports teaching, research, or Extension (or a combination thereof) in the basic or applied sciences essential for the education of new generations of students and clients to advance the goals emphasized in the following planning documents:

- Unit Strategic Plan,
- CAS Strategic Plan,
- OSU Strategic Plan,
- OSU Extension Strategic Plan,
- National priorities (USDA, NSF, NIH, etc.)

Relevance
- Provides present value to the people of Oregon: economic, environmental and social.
- Capitalizes on an opportunity to increase the future value of education or research for the people of Oregon.
- Promotes and enhances diversity.
- Reflects or anticipates the direction of contemporary science.
- Contributes to integration across the College’s mission areas, disciplines, and geographic locations.
- Has political or economic support from outside the University.

Quality and performance
- Maintains the integrity of a core program (e.g., a curriculum, a research program, or an Extension program).
- Has potential to generate high productivity, as measured by the metrics used within the College of Agricultural Sciences to assess academic programs and units.
- Leverages other funds through partnering, collaboration, and shared funding arrangements.
- Considers the position and potential of the unit in relation to national comparators.

Note: Positions vacated when tenure is denied based on a unit-level recommendation will remain in the unit, with the understanding that the unit must submit a new position description for review and approval through the College’s priority staffing process; the new position description will be evaluated in relation to the criteria outlined in this document.
Proposal to Create a

School of Applied Economics

in the Division of Earth Systems Science at OSU

Submitted to

Hal Salvasser
Executive Dean, ESS
Dean, COF

Sonny Ramaswamy
Dean, CAS

Mark Abbott
Dean, COAS

Background

OSU economists presently are spread across three divisions, four colleges, five departments, and at least five off-campus locations. Such a diaspora can be useful for addressing certain policy domains, and indeed has evolved with that object in mind. But it has negative long-run implications for faculty development, productivity, and professional community. To achieve excellence, scholarly life requires continual intellectual stimulation and replenishment. In economics and many other fields, these can best be fostered through continual association with one’s discipline and through sustained, working relationships with those who profess it. Indeed, ensuring high standards of quality in one’s discipline at OSU is a primary faculty responsibility. The Earth Systems Science Division provides an opportunity to significantly improving the quality and efficiency of our teaching, research, and outreach.

Objective

To limit the fragmentation in, and improve the efficiency and vigor of, Oregon State University economics, we propose establishing a School of Applied Economics in the Division of Earth Systems Science. The School would be responsible for teaching, research, and outreach efforts in economics and policy analysis appropriate to the mission and focus of the Division's three colleges, and with links to relevant programs in the other OSU divisions.
**Mission and Name**

Applied economics is the application of economic principles and methods to real-world situations, issues, and problems. It has long been a conventional concept in economics, and served as the basis for an increasing number of academic unit names, journals, and professional associations. Ten PhD and 13 MS programs in Applied Economics are now offered, in approximately equal numbers by economics and formerly agricultural economics departments, in the U.S. and Canada. Departments wholly or partly named Applied Economics now are found many universities, including the University of Minnesota, Cornell, Wisconsin, Clemson, Texas Tech, and Nevada-Reno.

The School of Applied Economics would engage in cross-college, division-wide focus on economics-based research, extension, and education. It therefore would broaden the state-level discussion of sustainable management of our resource-based systems, complement the cross-disciplinary teaching, research, extension, and outreach efforts of ESS's science-based disciplines, and create needed visibility within OSU and the broader research community.

Establishing a School of Applied Economics would signal to the research community, stakeholders, and students that the ESS Division's human and economic dimensions are important to, and on par with, its biophysical and marine dimensions. Understanding how land, water, atmospheric, agricultural, and forest resources affect and are affected by economic incentives and institutions, and how public policies can correct or mitigate undesirable effects, is central to state, national, and international decision-making and will become even more so with continued economic and population growth.

**Administrative Structure**

The SAE would be headed by a Director, functioning similarly to a department head and reporting to one or all of the ESS deans. The School would be responsible for, and have authority over, all its faculty's research, outreach, and undergraduate teaching activities. It would not supplant the newly formed Applied Economics Graduate Program (AEGP), which would continue to report to the Graduate Dean under a separate director. Proposed relationships with the AEGP are discussed below.

Upon the School's creation, the Agricultural and Resource Economics (AREC) Department would be eliminated. Relevant faculty from Forest Engineering, Resources, and Management (FERM), Forest Ecosystems and Society (FES), or other appropriate departments would be invited to join the SAE upon their deans' approval and negotiations with their present department heads and the SAE Director. Joint appointments are possible. Economists outside ESS, such as in Liberal Arts or Health and Human Sciences, might also join the SAE when circumstances are suitable. Like the AEGP, the SAE would seek to be inclusive of all interested economists. The originating College might in such cases retain the member’s faculty line, as CAS and the College of Science presently do in the Statistics
Department. Alternatively, part of a non-ESS faculty's appointment -- such as in research -- might be housed in the SAE, and the remainder retained in the originating division.

With perhaps some exceptions, faculty would be housed in one location, conducive of building collegiality and a sense of mutual enterprise. The SAE's internal committee structure initially would resemble that in AREC but also would likely reflect the inputs and preferences of other joining faculty. Committee structure would be decided internally at the School's founding.

**Research and Extension Programs**

The SAE's research specializations will draw on those presently pursued in AREC and the College of Forestry. In AREC, principal fields are in natural resource and environmental economics (under a proposed arrangement, marine and fisheries would receive increased attention); trade, market, and productivity economics; and rural economics. In COF, principal fields are in natural resource economics, although important commonalities are present in trade, productivity, and rural development as well.

From the economics profession's standpoint, a School of Applied Economics is a substantially broader unit name than Agricultural and Resource Economics; Forest Engineering, Resources, and Management; or Forest Ecosystems and Society. As such, it carries generally broader appeal to federal, state, and even private funding sources who are particularly concerned with the economic disciplinary rigor of the research they finance. Yet the broadened name would not discourage connections with funders concerned with specifically agricultural, natural resource, forest, or other sector-level issues. For these reasons, we think the broadened title will enhance our economics faculty's research funding opportunities.

The AREC Department has Extension programs in public policy, sustainable rural communities, and enterprise budget and farm & ranch management. The College of Forestry has similar Extension programs for forest industries and communities. Outreach and extension program stakeholders tend to be interested in the economic dimensions of a given applied issues within their own industry or affecting their sector. Thus, a wider academic unit title may not appeal to some of these stakeholders, although the experience with the name change at other institutions is not indicative of such a concern. A broadened orientation would leave room for broadening and connecting our current outreach and policy programs to non-traditional but emerging issues such as those of interest to urban areas. Examples could include transportation, energy, taxation, and public finance issues. It would fit well with other ongoing ideas for applied policy forums and workshops within the ESS Division. Furthermore, the retention of Extension program branding through the titles, logos, and website design can reassure clientele that our stakeholder-oriented outreach programs will remain unimpaired.

**Graduate Teaching Programs**
The University's MS and PhD programs in Applied Economics are under the aegis of the newly formed Applied Economics Graduate Program (AEGP), so would not be part of the SAE's direct responsibility. The AEGP reports to the Graduate Dean and would continue to do so under the present proposal. The AEGP's organizational relationship with the SAE would be the same as it presently is with OSU departments. That is, any economist faculty member may join the AEGP upon the AEGP's and the applying member's department head approval. Because the SAE's and AEGP's missions are so closely aligned, we might look to a future point at which the SAE and AEGC would merge in some fashion. But there is no current need for doing so.

While some prospective economics graduate students favor such industry signifiers as "agricultural" or "forest" in a department name, most appear to be attracted to more generic specifiers such as "applied." The more generic title promises broader course relevance, greater disciplinary rigor, and wider job opportunities when the student graduates. Faculty in the newly named Department of Applied Economics (formerly Agricultural and Applied Economics) at the University of Minnesota reported a jump in graduate student applications as soon as their name was broadened and simplified. The quality and quantity of graduate applicants to our own newly established Applied Economics graduate degrees are already higher than to our former Agricultural and Resource Economics degrees.

**Undergraduate Teaching Programs**

The School of Applied Economics would provide an opportunity to offer an undergraduate degree that fits with ESS's economic education needs and is also linked with the University's Applied Economics Graduate Program. A companion proposal for an undergraduate degree that would either replace or reposition AREC's current undergraduate Environmental Economics Policy and Management degree is under development and will be submitted separately from the present proposal.

Although the SAE's undergraduate programs initially would be strongly influenced by AREC's existing structure, bringing AREC and COF economists’ teaching programs together could create significant opportunities for avoiding redundancies in campus-wide undergraduate economics education. In 2008-2009, for example, COF offered five undergraduate economics courses covering such topics as forest resources, timber, recreation, and risk, modified versions of which could be offered through the SAE to enhance the breadth of undergraduate majors outside of COF. Similarly, because considerable overlap is present between current COF and AREC courses, consolidating the two to address redundancies would streamline our course offerings and improve efficiency.

Creating an undergraduate teaching program through the SAE also would provide an opportunity for students in a wide variety of majors to complete a minor in applied economics. Because undergraduate economics courses are currently spread over at least 4 departments, students are unable to create such a minor because minors require that the courses be from one department. For example, Forest Management majors take economics courses in the Departments of Economics, AREC, FES, and FERM but cannot package them as a minor despite significant interest in doing so. A minor in Applied Economics would be
a tremendous calling card on the job market in many natural resource and environmental fields and, for example, to engineering majors.

Some interdisciplinary majors/programs, such as Natural Resource and Environmental Science, struggle to identify appropriate economics courses for their majors. SAE could coordinate with these and other emerging programs, such as Sustainability, to insure that appropriate courses are offered to support non-majors as well.

Next Steps

Upon the ESS Dean’s interest and approval, we suggest establishing a steering committee to discuss more specific issues in the design of and transition to a School of Applied Economics. Topics could be divided into their teaching, research, and outreach components and include the structure of Division-level oversight, coordination with concurrent teaching proposals, arrangements for faculty inter-department transfer or joint appointments, adjustments to internal committee structures, course title changes, and website design and content.

The steering committee should include representatives from the three ESS colleges; the teaching, research, and outreach missions; off-campus research and teaching stations; the Applied Economics Graduate Program; and perhaps from interested colleges such as Liberal Arts or Health and Human Sciences. The committee's report to the ESS Deans should be completed in time to coincide with other ongoing campus reorganizations.

Initial drafting committee:
Steve Buccola (Chair), AREC
Jo Albers, FES
Bill Jaeger, AREC
## Where are Agricultural Education Programs Located?

### Colleges of Agriculture
- Alabama A&M
- Arizona
- Arkansas State
- Southern Arkansas
- Arkansas
- Cal State, Chico
- Cal Poly
- Cal State, Fresno
- Cal State, Pomona
- UC – Davis
- Colorado State
- Connecticut
- Delaware
- Florida
- Georgia
- Idaho
- Illinois State
- Southern Illinois
- Illinois
- Western Illinois
- Purdue
- Dordt College
- Iowa State
- Kansas State
- Morehead State
- Murray State
- Kentucky
- Western Kentucky
- Louisiana State
- Louisiana Tech
- Louisiana - Lafayette
- Maryland - Eastern Shores
- Michigan State
- Minnesota - Crookston
- Alcorn State
- Mississippi State
- College of the Ozarks
- Northwest Missouri
- Southwest Missouri

### Colleges of Agriculture Cont.
- Missouri
- Montana State
- Nebraska
- New Mexico State
- Cornell
- North Carolina A&T
- North Carolina State
- Ohio State
- Oklahoma Panhandle State
- Oklahoma State
- Oregon State
- Penn State
- Clemson
- Middle Tennessee State
- Tennessee State
- Tennessee Tech
- Tennessee
- Tennessee - Martin
- Prairie View A&M
- Sam Houston State
- Stephen F. Austin
- Tarleton State
- Texas A&M
- Texas A&M - Commerce
- Texas A&M - Kingsville
- Texas State
- Texas Tech
- West Texas A&M
- Utah State
- Virginia Tech
- Washington State
- West Virginia
- Wisconsin
- Wisconsin - Platteville
- Wisconsin - River Falls

*Source: Moore, Gary; Presidential communication, American Association for Agricultural Educators, 2008.*
Dimensions of faculty contributions

Examples of academic contributions of Extension and Experiment Station Communications tenured faculty

Innovations in educational publishing: Among the most visible educational outreach from OSU is the catalogue of learning materials developed by Extension specialists and communications faculty. More than 1,200 titles are available to the public, each providing peer-reviewed information based on OSU research.

Since joining our faculty in 2009, Professor Mark Anderson-Wilk has increased the scholarly standard for Extension Publishing to align with the standards for peer-reviewed journals; has placed the entire catalogue in the Scholars’ Archive of the OSU Library; has led the university in developing a sophisticated e-commerce methodology to generate revenue from Extension’s online learning materials; and shared these innovations with peers across the nation.

Professor Jeff Hino has developed similar innovations in expanding educational opportunity by adapting technologies developed for Web 2.0 and social media for the purpose of public education and lifelong learning. Hino and Anderson-Wilk share their discoveries with the world through their learning technology blog, Electronic Papyrus, the most widely subscribed blog produced at OSU. Extension and Experiment Station Communications has put OSU on the forefront of implementing the highest standards for research-based education delivered to people beyond the OSU campus.

Maintaining outreach activities

Both Agricultural Education and General Agriculture and Extension and Experiment Station Communications provide valuable outreach activities that serve diverse stakeholders. Agricultural Education and General Agriculture is a key partner in the Summer Ag Institute and Agriculture in the Classroom. These are important agricultural literacy programs that are successful because of the connections with the agriculture industry and our departments in the College of Agricultural Sciences. Through Agricultural Education and General Agriculture, we can continue to offer support to students, teachers and alumni associations thoroughly entrenched within agriculture (Oregon Team Ag Ed, Oregon FFA Alumni Association). Continued residence within the College of Agricultural Sciences will allow this support to continue.

Extension and Experiment Station Communications faculty not only communicate cutting-edge science, they also investigate the science of communications. Our academic faculty actively participate in professional organizations, including the National Association of Science Writers, the Network of Educational Technology and Communications, the Association of Communications Excellence, the Society of Scholarly Publishing, and AAAS.

Recent Extension and Experiment Station Communications peer-reviewed investigations include one of the nation’s first assessments of online participants in Extension education; measuring the capacity for technology-assisted learning in Oregon communities; profiles of Land Grant universities in transition; and a quantitative review of the impact of print and online educational communications.

In addition, Extension and Experiment Station Communications faculty are active in their creative fields of science communication, publishing numerous peer-reviewed books, chapters, and journal articles. Extension and Experiment Station Communications faculty members consistently win top awards in national competitions for the quality of their written and visual educational communications. Despite being smaller than most other communications departments at peer Land Grant universities, Extension and Experiment Station Communications leads the nation in setting the standard for excellence in science communications and public affairs education.

Source: Office of the Dean, College of Agricultural Sciences, Oregon State University, April 2010
Positioning for Greater Success in the Plant Sciences at Oregon State University

In a “hot, flat and crowded” world (Friedman 2008) we are faced with the converging dilemma of climate change due to global warming and an increasing rate of global consumption of natural resources due to the combination of a growing middle class and an ever increasing global population. Our ability to manage climate change, feed the world’s people, and protect the Earth’s remaining biodiversity is this generation’s greatest challenge and one that future generations are completely dependent upon. At the core of this challenge is a paradigm shift in how we manage plants and plant-based resources, and the central players in developing new technologies and management strategies are plant scientists of our university system. The United States university system has been the engine of innovation in the developed world. Today is no exception and the challenges we face require a concerted research effort in plant sciences as it relates to climate change, feeding the world’s population, and preserving the Earth’s biodiversity. Furthermore, this effort must be articulated from genomes to whole plants to farming systems and ecosystems and scaled from DNA to space.

Oregon State University has the responsibility and capacity to be leaders in creating new directions in the development, use, and conservation of plants and plant-based resources. OSU has a nationally and internationally recognized research presence in the plant sciences and we are well positioned to make a more substantive and positive impact. However, better coordination and integration, greater visibility, and a more responsive and flexible educational experience will be essential for this to occur. For this reason we propose a more connected and articulated plant science and systems presence at OSU. The exact nature of this new presence will require additional discussion and input from the Provost, Deans of the relevant colleges and the Graduate School, and faculty. However, we offer several desirable outcomes, goals, and recommendations for better coordination of research and teaching in plant-based units, and better positioning for continuing success into the future.

Process

Provost Randhawa charged us to examine the current programs (undergraduate, graduate, research, and outreach) in the plant sciences and the institutional structure for delivering those programs. We were to work with the broader faculty in the plant sciences and the administrators of relevant departments and colleges to develop a vision for Plant Sciences that would meet the University’s aspirations in developing distinction in Exploring and Sustaining Earth Ecosystems and Improving Human Health and Wellness. The group was also expected to define key strategies for delivering high impact programs in the area and for attracting new resources to advance the discipline.

The plant sciences working group met on 1 and 19 December 2008; and 27 January, and 9 and 26 February 2009. After an initial analysis, we concluded that Extension and Outreach programs were very well coordinated statewide by the program leaders and in collaboration with the unit leaders (department heads, staff chairs, and branch station superintendents). Adding additional institutional structure would overburden faculty and slow implementation of programs and staffing requests within Extension. We focused most of our conversations on the need for enhanced communication, collaboration, and coordination across the plant science departments for teaching and research activities and programs.
Strengths

Collectively, plant sciences constitute a major strength at OSU. Six departments (Botany and Plant Pathology; Crop and Soil Science; Forest Ecosystem and Society; Forest Engineering, Resources and Management; Horticulture; and Rangeland Ecology and Management) located in three colleges (Colleges of Agricultural Sciences, Forestry, and Science) at OSU are focused predominantly on plant sciences. Several other departments and centers have interests in the plant sciences as well. More than 80 tenured or tenure-track faculty members direct research programs, over 70 faculty members are engaged in Extension and Outreach, and over 50 faculty members are involved in undergraduate education. Faculty in the plant-based departments often have split appointments between E&G, AES AgES, and FRL. Courtesy and fixed-term research professors also contribute to plant systems research at OSU. In FY 2007, the six departments identified above garnered over $24,000,000 (excluding branch experiment stations) in new grants and contracts or 14.5% of the statewide University total.

Research areas of emphasis clearly span from genomes to whole plants to ecosystems to space. OSU plant science faculty members across the three colleges are considered national and international experts in agronomic, horticultural, pest, and rangeland ecology and management; breeding and genetics; evolution and ecology; genomics, metabolomics, transcriptomics, and bioinformatics; pathology; plant-microbe interactions; structure and function; and systems biology. Over the past five years, plant-based researchers and specialists have sought even greater cooperation and coordination of efforts. The department heads within the CAS routinely discuss priority-staffing requests to avoid overlap and enhance synergism. A joint seminar series across plant-based departments was launched in 2008 and has been offered the past two winter terms.

Desired Outcomes

Plant-based academic units at OSU currently exist as a loose consortium of traditional departments that exist across three colleges. As we think about the future of plant-based systems at OSU, we must have and develop programs that 1) function in a more coordinated and integrated manner; 2) heighten the visibility of plant systems and sciences within the University, throughout the state, and in the national and international arenas; and 3) are flexible in and responsive to training undergraduate and graduate students in the latest disciplines associated with plant systems.

These are the anticipated outcomes if the aforementioned programmatic criteria are met:

1) The people of Oregon, the region, nation, and the world will recognize OSU as a leading provider of information that drives sustainable plant-based business development and aids in natural and managed resource decision making and funds the program accordingly.

2) Students from around the state, nation, and world will recognize OSU as a premier educational institution for plant-based systems and science with unique training opportunities.

3) Outside funding agencies of all types will recognize the plant sciences as an important place to invest their dollars for maximum impact and economic return.
Goals

1) Increased Coordination and Integration of the OSU Undergraduate and Graduate Plant-based Curricula. The existing plant-based curricula are primarily distributed across six departments in three colleges. Coordination and integration of these curricula is currently difficult because of independent processes within the Colleges to design and implement course offerings and curricula, and to hire faculty with teaching responsibilities. Increased coordination and integration of these curricula would greatly benefit the quality of course offerings, insure that critical and core courses are available, allow for creation of a more efficient and dynamic curriculum that is responsive to emerging educational and training needs, and promote alternative course delivery strategies (e.g. module-based or on-line courses) that reach a broader student base.

2) Re-brand Graduate Education in Plant Sciences at OSU. OSU has internationally recognized research programs in traditional and emerging fields of the plant sciences, making it one of the strongest universities in the nation to offer contemporary, diverse yet integrated learning experiences encompassing the breadth of the plant sciences. We must do a better job of promoting ourselves as an institution with dynamic cutting edge research in the plant sciences. To accomplish this goal we need to develop a unified effort to promote the plant sciences, recruit the best graduate students in plant sciences, facilitate graduate training initiatives across plant science departments, and promote the development of relevant transcript visible degree options within the plant sciences.

3) Coordinate Faculty Hires to Leverage Maximum Impact on Plant Sciences at OSU. The hiring of multiple new faculty members associated with recent initiatives (e.g. CBGI) has proven the efficacy of cluster hires at OSU. It is an approach that has had an immediate and positive impact on the OSU community. We should expand this concept by creating a more collaborative culture in priority staffing for plant systems and sciences at OSU. To accomplish this goal we propose to enhance communication and alignment of staffing needs across the plant-based departments which will result in more intentional individual and cluster hires for the plant sciences at OSU.

4) Realignment of Plant Science Departments. Currently the majority of plant sciences reside in the Colleges of Agricultural Sciences (CAS) and Forestry (COF). The teaching FTE in the Department of Botany and Plant Pathology (BPP), which delivers a significant component of the basic plant biology courses within the plant sciences curricula, resides in the College of Science (COS) of which plant sciences constitutes a very small portion of its overall academic mission. The goals of BPP are more closely aligned with the goals of CAS and COF where a substantive emphasis is placed on the plant sciences. The reassignment of BPP to CAS will result in more effective administration, distribution, and management of the collective teaching FTE associated with plant-based systems and enhanced realization of the three previously stated goals.
**Recommendations**

In order to achieve the four main goals, we make the following initial recommendations.

1. Consolidate existing plant-based graduate degree programs and create an integrated graduate degree program with transcript visible options or emphases that would function at least across the Colleges of Agricultural Sciences and Forestry.

2. Reassign BPP to CAS to simplify the coordination of plant science research and teaching programs, achieve greater alignment between the department and the College in which it is located, and create improved coordination of staffing needs.

3. Establish and empower a CAS curriculum committee with the task to receive input from plant-based departments to determine core teaching needs; evaluate course and curricula proposals for relevancy, redundancy, and sustainability; and review and provide input on priority staffing requests especially where teaching is a component of the position description. We strongly support that the COF and CAS curriculum committees include representative(s) from each other’s committees to also coordinate critical teaching needs across the two colleges.

4. Continue discussion with plant-based unit leaders regarding the future undergraduate degrees, curricula, and courses within the Colleges of Agricultural Sciences and Forestry.

**Respectfully submitted,**

Anita Nina Azarenko, HORT (Facilitator and convener)  
Tom Adams, FES  
Dan Arp, BPP and Honor’s College  
Mike Borman, REM  
Jim Carrington, BPP and CGRB  
Lynda Ciufetti, BPP  
Glenn Howe, FES  
Russ Karow, CSS
1. The Provost and the Deans of the Colleges of Agricultural Sciences and Science are proud of and value the significant contributions made by faculty in the Department of Botany and Plant Pathology (BPP).

2. The Colleges of Agricultural Sciences and Science have long standing commitment to plant sciences and have fostered joint faculty appointments over time.

3. The Provost and the Deans of Agricultural Sciences and Science support the following recommendations from the Plant Science Work Group, and expect that the faculty-driven initiatives under the division alignment efforts currently under way will enable the university to make progress towards those goals:
   a. Increase coordination and integration of the OSU undergraduate and graduate plant science curricula
   b. Re-brand graduate education in plant sciences at OSU
   c. Coordinate faculty hires to leverage maximum impact on plant sciences at OSU

4. The Deans of the two colleges agree that the reporting for the Department of Botany and Plant Pathology will be through the College of Agricultural Sciences as of January 1, 2010. This move includes the OSU Herbarium. Individual faculty positions in the units will remain as currently funded by the Colleges, with responsibilities remaining the same, through the end of 2009-10 academic year.

5. The Colleges of Agricultural Sciences and Science have initiated a process to transform the colleges, including departmental structures in both colleges. This process will be completed in spring 2010, with implementation to commence in July 2010. Individual faculty members in BPP will be provided an opportunity to consider appointments in either college that is consistent with the mission of the transformed colleges and new divisions.

6. The Deans of the two colleges agree that in implementing the administrative change for BPP that:
   a. The colleges will credit SCH, ROH, grant productivity, and similar metrics generated by individuals in proportion to the source of funding for the position.
   b. The colleges are committed to positions in plant sciences and, while recognizing that vacant positions revert to the individual College’s priority staffing process, agree that neither college will make changes to current faculty FTE in BPP through the end of the 2009-10 academic year.
   c. The College of Agricultural Sciences will assume responsibility for the management costs of the BPP program (e.g. chair stipend).

7. Effective January 2010, the Botany undergraduate and graduate degrees will be transferred to the College of Agricultural Sciences; student majors in those programs will be counted in CAS student totals. The BPP Department will continue to participate in the Biology Program currently housed in the College of Science with similar responsibilities for course staffing as at present. It is possible, however, that degree programs and/or their focus may change during the division-based transformation process over the next few months. Development of the curricular programs or their successors will include appropriate consultation with colleagues and programs across campus. Going forward, specific plans for assignments and delivery will be finalized by the two colleges in a manner that best serves the University and its students.
Faculty Choice of Association: Procedures

College of Agricultural Sciences
Oregon State University
April 2010

Introduction

Choice of association applies to individual faculty moves from one academic home department to another. It does not apply to changes occurring as the result of merger of units or movement of entire programs. Potential moves are entirely voluntary and may not be initiated or induced by anyone other than the individual faculty member. Proposals to move are expected to be relatively few in number and will be approved only if the move is consistent with the mission of the receiving unit and enhances potential productivity of both the individual faculty member and the receiving unit without irreparably impairing or destabilizing the former unit.

Procedures

1. Faculty member initiates exploratory conversations with leaders of his or her current unit and the proposed receiving unit.
2. Faculty member provides to the leaders of both units a written proposal for change of academic home. The proposal consists of:
   • a new position description;
   • a description of anticipated program outcomes;
   • a timeframe for the transition; and
   • a description of budget implications (addressing, as appropriate, matters of salary, grants, service and supplies budgets, and related matters).
3. Unit leader for the proposed academic home engages faculty within the unit to ensure there is an appropriate match of academic expectations.
4. To the faculty member’s proposal, the leaders of the current unit and the proposed new academic home unit add their perspectives on the proposal including:
   • the unit leader’s level of support for the move; and
   • the unit leader’s assessment of programmatic and budgetary dimensions of the move.
5. The unit leaders then forward the faculty member’s proposal and their perspectives on it to the associate deans of the College of Agricultural Sciences (with a copy to the faculty member).
6. The associate deans review and evaluate the proposal and the unit leaders’ perspectives, then forward their recommendation to the dean
7. The dean communicates a decision to the faculty member and the leaders of the affected units.

Source:
Office of the Dean
College of Agricultural Sciences
Oregon State University
Saved as Choice of association policy V3
Guiding Principles

25 percent local partnership with branch experiment stations

College of Agricultural Sciences
Oregon State University
April 2010

Why? The premise and the partnership

The state budget is becoming an ever-smaller proportion of overall support to the Oregon Agricultural Experiment Station. If the branch experiment stations (which are already stretched in their recurring base funding) are to remain preeminent in their mission, then supplemental financial support will be necessary. More than likely, it must come from local sources.

The rationale for the existing set of eleven branch stations (fifteen locations) of the Oregon Agricultural Experiment Station is that they are located in unique agro-climatic or economic zones and, thus, that they create value by serving unique local needs. If this premise is valid, then one would expect there will be local support to help maintain the stations or, conversely, if the premise is not valid, then it is difficult to justify the continued expenditure of a shrinking pool of state funds. If, indeed, there is local support, this partnership and support may be leveraged in Salem to maintain the state match.

If sufficient local support is not forthcoming, then this will be one factor in determining which stations may be closed. Other factors include: future overall state funding for the Statewide Public Services, the value and size of industries and local economy being supported, opportunities to partner with Extension, the potential to combine research with another station in Oregon, or to partner across state lines, and any unique strategic opportunities the location affords.

25 percent of what?

- Core support: What is needed for the Station to thrive, rather than merely survive?
- Not specific research project or program support, e.g. commodity commission project-specific funds.
- Based on the July 1, 2011 rebased AES base budget; this is permanent.
- Match will be guaranteed only for the base budget amount. Local support above that may be targeted to programs.
What counts toward the 25 percent?

- External stakeholder financial support for recurring base funds—not internal tactics that offset base expenses. (See the premise and the partnership.)
  External stakeholder support may vary among branch stations, and might include endowments, direct support for salaries, local tax districts, etc. (NOTE: Local tax districts may not be a legal possibility at this time.)
- Existing core support from outside stakeholders does count.
- Specific project or program support does not count.

When?

- Phase-in has already started.
- Next biennium may precipitate difficult budget decisions. Progress in obtaining local support will be a key factor.
- Expectation is that this support will be permanent and on-going.

Other considerations

- The 3 to 1 match is up to only a maximum of the FY 2011-2012 base budget.
- Anticipate maintaining approximately the existing proportion of Agricultural Experiment Station funding allocated to branch experiment stations in relation to that allocated to on-campus units.
- On-campus units and their base budgets are being combined and reduced in response and in proportion to the reduction in state funding.

Source:
Office of the Dean
College of Agricultural Sciences
Oregon State University
Saved as 25 percent state support V4
APPENDIX L

Changes requiring University approval

*College of Agricultural Sciences*

*Oregon State University*

*April 2010*

Name change for the College.

Name change for Botany and Plant Pathology.

Name change for Agricultural and Resource Economics.

Merger and name change for Crop and Soil Science, and Horticulture.

Merger and name change for Rangeland Ecology and Management, and Animal Sciences.

Merger and name change for Agricultural Education and General Agriculture, and Extension and Experiment Station Communications.

Pending merger of Biological and Ecological Engineering.

Creation of Environmental Economics and Policy degree (submitted); Elimination of existing Environmental Economics, Policy and Management degree.

Creation of academic program in leadership and communication.

Creation of new Plant Sciences undergraduate and graduate degrees with associated elimination of some existing degrees in Horticulture, Crop and Soil Science, Botany and Plant Pathology, and Rangeland Ecology and Management.

Creation of potential “Faculties of…” in natural resources, plant sciences, applied economics, etc.

Appropriate Category II’s to eliminate classes that don’t meet guidelines.