April 30, 2010

Dear Becky:

On behalf of the College of Science, I have provided answers to the queries from the SABRR committee below. The College appreciates the time the Committee took to review what I know was a long document and to provide thoughtful feedback. The College’s answers and comments are in blue italics following the relevant comments from the committee. The leadership of the College has consulted at length about this and I have worked with other Deans to try to make our answers as consistent as possible, recognizing that there remain a couple areas of disagreement.

The College was mindful in our planning of the two core commitments in the Strategic Plan: “OSU will lead in developing a globally competitive workforce and an informed and capable citizenry” and “OSU will address multifaceted national and global challenges that resist simple technical or social solutions.”

Meeting these commitments requires a University with a strong, healthy core in the Arts and Sciences. This core must be founded on world-class research, educational and service components, and is vital to the success of other units of the University. The Strategic Plan unquestionably notes this: “Education and inquiry in the three Signature Areas will build upon a foundation in the arts and sciences to promote economic innovation, an educated citizenry, a globally competitive workforce, and strategies for addressing difficult regional, national, and global issues” and President Ray has frequently voiced his view that every great university is built on core strength in the Arts and Sciences.

Our proposal for organization, strategy, and focus addresses the expectations of the Strategic Plan by recognizing that among all OSU colleges the College of Science has the unique mission to provide leadership in basic research, core education, and dissemination of knowledge in the areas of natural sciences (earth science, chemistry, physics, and life sciences), mathematics, statistics, and the communication of science to future teachers and citizens. The changes we propose will strengthen our ability to carry out the core mission of our university; this enhancement of capability in the College of Science through the process of University reorganization will enhance the stature and success of OSU.

The Strategic Alignment and Budget Reduction Review Committee has completed its preliminary review of your plans and has prepared the following comments and questions for your consideration:

- The changes proposed would move the college from 13 units to 6 major units reporting through the college. Two additional units (Plant, Microbial and Insect Sciences; College of Education) and one proposed center (Center for Research in Lifelong STEM Learning), though perhaps not reporting through the college would still require administrative input from the college. The School of Earth and Environmental Sciences, one of the six major units reporting through the college, would also require coordination with COAS. The College is encouraged to consider mechanisms to further reduce the administrative complexity of the College. For example:

  In examining the structure that made most sense for the College, we were guided principally by strategic needs and outcomes. Administrative complexity, or simplicity, was not a strategic goal. We feel strongly that administrative structure needs to be designed in response to the strategic goals of the College and its programs. The College has a large and diverse mission and a large set of
stakeholders throughout the University. We are probably more connected to other units and programs than any other College and our organizational structure is going to have to reflect that diversity if we are to be effective. We will always have a structure more complex in some ways than that of the professional Colleges.

• If it makes sense to have positions in support of plant sciences managed by CAS, then why not simply move the resources to CAS permanently, thereby simplifying one administrative component?

Briefly, the core issue is accountability for the missions for which the FTE in those units were originally allocated. In plant sciences, Science FTE support undergraduate teaching, graduate teaching, and research. As has been noted by the Dean of CAS, Ag and AES are driven by research to a degree much greater than is true for Science, because of the mission and resources of the Agricultural Experiment Station. While it makes sense for plant sciences to be strategically integrated with other units in CAS, the FTE that were invested by Science must retain a responsibility for providing instruction, advising, and GTAs for undergraduate life science programs. We have already had issues with the plant sciences unit replacing tenure-rank faculty in required undergraduate courses with term instructors and planning to reduce their commitment to GTAs unless more resources are provided to them. While the plant science unit disagrees, the productivity per FTE in SCH and majors is significantly below that for other programs in the College (the per capita grant production of the plant sciences faculty is high however). In the absence of some budget control over the long-term investment of FTE, there is no real accountability for the mission that Science FTEs have historically discharged.

Note that we have not proposed managing the unit jointly. The department will be managed by CAS and the Dean of that unit will be accountable to the Dean of Science for the productivity of those positions. If they are productive in the right areas (as determined through conversations between the Deans), they will be refilled when they become vacant. If they are not productive or if they are redirected away from the core mission they currently support, the Dean of Science will have the opportunity reinvest those FTE in an area that does support the core mission. It is a powerful tool to insure accountability to the mission.

• Similarly, has the College considered moving the education faculty to the College of Education?

Yes, a possible move of SMED faculty lines from the College of Science to the College of Education was considered and discussed at length. After those discussions (which included significant faculty discussion and review) the leadership of both Colleges strongly believe that a partnership/joint venture between the Colleges of Science and Education as proposed has the best potential for building a national program of distinction in STEM education. OSU has an opportunity for taking real national leadership in models for research, learning, and teacher preparation in STEM disciplines. To realize that opportunity, we need a truly cooperative enterprise that integrates the strengths of the Science and Mathematics Education faculty and the faculty of the College of Education.

The proposed nature of the partnership is that the SMED faculty will be administered through the College of Education, but will maintain substantive ties in the College of Science. The partnership will enable strategic joint investments, better connections for all College of Science majors with the
Education Double Degree, and growth of research activity related to education. The partnership approach will encourage and support the strong research collaborations and success that the SMED faculty has built with science and mathematics “content” area departments in STEM education. The unit would be managed by Education with accountability for productivity of the Science-funded FTE from the Dean of Education to the Dean of Science.

The College would also note that we believe that an independent College of Education is an important strategic commitment for OSU. As the state’s land grant university, a strong unit of education, identified as a college, is important to the university and the state and region. In particular, OSU is the most suited OUS institution to provide leadership for STEM education, a state and national priority. Because of the importance of preparing high quality educators and conducting education related research, every OUS institution (with the exception of OIT) has a College of Education—we should be taking a leadership role in the State among these Colleges for STEM education. In addition, there is a growing pool of Federal and private funds to promote research into effective K-20 education, including the preparation of educators. Many of those funding opportunities require the participation of a College of Education as one of the formal partners. Organizational structures that lower the visibility of our programs in Education would not be in our best interest.

- The Statistics group (12 faculty) is well below the guideline of 20 faculty per group. The potential inclusion of 7 adjunct faculty does not alleviate the problem, unless these faculty are moved out of their current units and into the statistics group. Otherwise they are simply double counted. While arguments were presented for not merging Mathematics and Statistics, some members of the committee urged a reconsideration of this decision. If a merger of the two units is not appropriate, has the College considered distributing the Statistics positions to other units, and then using something like a graduate program in statistics to unite the group of statisticians on campus?

In the case of Statistics, we looked carefully at and discussed at great length other options for Statistics, including those the committee notes. OSU, through the Colleges of Science and Agricultural Sciences, has built a Statistics unit with an expertise in applied statistics, particularly in the areas of environmental statistics and biostatistics. This focus is a catalyst and enabler for work across the University—evidence for that would be the number of student committees the typical Statistics faculty has sat on by the time he or she is up for tenure or promotion—typically 45 to 70. A look at publications and grant support in the unit provides the same picture. Faculty and leadership in Statistics, Mathematics, and the two Colleges looked at what happens in merged Mathematics and Statistics programs. In virtually every case, the Statistics programs move towards a more theoretical and probabilistic bent—take a look at Statistics at the UO for an example. This is not the kind of program that makes strategic sense for OSU.

Currently, the principal cost in having the Department is a modest Chair’s stipend (I would be happy to provide the details of chair compensation in the College). If there were a merged Department, there would still need to be some kind of compensated manager for the Statistics program (in time or stipend) to manage curriculum, advising, and the other functions that we would retain. If we disbursed the faculty and then formed a Graduate Program, it would be MORE expensive than the current model. The Graduate School allocates 0.25 FTE to Director positions, which is more than the increment provided to the current Statistics Chair. In addition Statistics has a major undergraduate service course responsibility, which is not typically something Graduate School programs support.
There is one staff position in the Department and that position will be part of a joint office support group for Kidder Hall. The functions that person performs will exist regardless of the form of Statistics unless we close the courses and degrees.

Given that there are no significant cost advantages to other models and no strategic arguments for other models, the only reason to either merge Statistics with Mathematics or disperse the faculty in a distributed Graduate Program is to meet the somewhat arbitrary guideline of 20 people per unit. We do not see that as a compelling argument.

- Physics remains slightly under the guidelines with 18 faculty. Is physics a sufficiently high priority for the college that it is likely to increase in FTE, even as other units are likely to decrease in the next biennium?

Yes, Physics is a very high priority for the College. We are in fact currently engaged in a search for another tenure-track position. A look at the academic structure of our peer institutions shows they all have an independent Physics Department. In fact, you would be hard pressed to find a major research university in the United States without a Physics Department. Physics is one of the fundamental branches of natural sciences and is a different way of looking than the natural world than are disciplines like chemistry and mathematics. OSU would lose a tremendous amount of strategic advantage were we to drop our program in Physics. Our long-term goal is in fact a Department of 20, and we will always have a substantial investment in physics regardless of budget circumstances, because of its strategic importance for both research and education.

In our discussions, the only reason to merge or change Physics was to meet the guideline of 20 people per unit. Given that that number is a guideline, and is somewhat arbitrary, we felt strongly that the strategic arguments for a Physics program outweighed other considerations.

- The life sciences departments are clearly undergoing the most change. While recognizing that discussions are on-going, what mechanisms are likely to be in place to ensure that the school acts as one integrated unit, not as a confederation of three or four units? The guidelines call for four administrative layers. The currently proposed structure would seem to add one layer (Head of the School) while retaining the Directors/Chairs of Departments/Sections. Would a faculty member in, for example, the Section of Microbial Sciences report to a section/department director/chair or the Head of the School?

Our goal in creating the School of Life Science is to create an integrated program that provides a clear academic home for our large undergraduate programs in Biology (over 700 majors) and General Sciences (over 900 majors) and that coordinates those programs with very successful undergraduate, graduate, and research programs in what are now the Departments of Zoology, Microbiology and Biochemistry and Biophysics.

The School will function as an integrated unit, but the mechanisms and structures to enable that are still under discussion. We in fact expect that the School will begin as a confederation with core responsibility for Biology and General Science and will evolve the management mechanisms necessary for such a complex unit. We note that our intention is that the School Head will be one of the Division Heads/Chairs (much as the Divisions are led by one of the Deans involved) and that the proposed structure fully meets the administrative guidelines.
In addition to Biology and General Sciences, each of the three units involved has over 150 undergraduate majors, very large graduate programs, and very large externally funded research programs. In that regard, the situation is somewhat different than that in CLA, where integrating existing research and graduate programs in the new school model is less an issue than is growing research and graduate programs from the school model. We expect our approach to be equally effective, but more evolutionary. There are well over 2000 undergraduate majors in the School as well as the programs that constitute the core of undergraduate life science degrees for the entire university. Many of those majors are in our pre-professional health programs and are among the most academically accomplished students at OSU. We believe that a certain degree of thought and careful transition is essential in changing a program that impacts so many students and such an important part of OSU’s research portfolio. The discussions on the precise internal structure remain a work in progress.

- Microbial Sciences are indicated in two places, the School of Life Sciences and the Department of Plant, Microbial and Insect Sciences. Have there been discussions to determine if this redundancy is necessary or desirable? Will it lead to confusion among students and stakeholders? How will hiring decisions in the microbial sciences be coordinated?

Microbial science is already highly distributed at OSU. Microbiologists are on staff in the Departments of Microbiology, Food Science and Technology, Botany and Plant Pathology, Crop and Soil Science, Horticulture, and Forest Science and in the Colleges of Veterinary Medicine, Oceanography and Atmospheric Sciences, and Pharmacy—and I’ve probably missed a few. This is why we have suggested pursuing the creation of a Graduate Program in Microbiology at OSU. There is a tremendous opportunity here and such a program would provide a vehicle for coordinating staffing discussions in the various units.

We believe that the multiplicity of units that do microbial work is a strength of OSU, in the same that that the multiplicity of programs doing work in ecology is a strength. We have, in fact, multiple units at OSU with ecology or ecological in their titles. There is no reason we can’t have a term in multiple names if it is appropriate.

However, it is important to provide clarity for our students. CAS did not have any discussions with us about the unit names they proposed, but we understand the Plant, Insect and Microbial Science unit to be principally the current Botany and Plant Pathology unit. The microbial component in that group is largely (though not exclusively) the plant pathologists. Microbiology in the Division of Microbiology in the proposed School of Life Sciences is much broader, including biomedical and pathogenic work (most of the undergraduate majors in the program are interested in health science careers), environmental microbiology, and microbial evolution and genomics. It might be clearer if the proposed CAS unit were named Plant and Insect Sciences, as Plant Sciences would presumably encompass plant pathology. Plant and Insect Biology might also be an appropriate title.

- The College jointly administers three departments with the College of Agricultural Sciences (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?
It is not our intention to continue this; the Deans of Science and Agricultural Sciences have talked about this at length. Science will be the lead College for these units. CAS will be the lead unit for what is now Botany and Plant Pathology. We will likely retain joint positions, but accountability for the productivity of those positions will be between Deans. This is a major change in the current process that has all four Departments reporting to both Deans. For the committee’s information, Science supports about 96% of the base budget for Chemistry, 84% for Statistics, 62% for Microbiology, and 41% for Botany and Plant Pathology.

We note that we agree with the comment of the College of Agricultural Sciences, in their response to SABRR, that the unit leaders for these three departments highly 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. As we anticipate having jointly funded positions in those units, we will need to make sure that we find a mechanism to continue to joint strategic planning and investment between the Colleges and units that we have shared investments in.

We note in the next section our difference of opinion with the committee about jointly funded positions. CAS and COS have had many such positions over the years and the positions have been successful. While we intend to change the joint administration model, we intend that the units will continue to include jointly-funded positions and that there will be accountability for those positions between the Deans.

- Creating situations where faculty report to more than one department chair/head or where unit heads report to more than one dean generally lead to administrative challenges that are best avoided whenever possible. Similarly, jointly funded positions, or positions funded by one unit and managed by another lead to uncertainties in priority for and expectations of those positions. The current plans have many such shared or jointly funded positions. The College is encouraged to consider more simplified structures that result in cleaner reporting lines.

There is no proposal where a faculty member would report to more than one department head nor is there any proposal that would have a unit head reporting to more than one dean. In fact, we have proposed moving our four departments that do have dual reporting to a model with the unit being managed within one College and the unit head reporting to one Dean, with accountability for joint investments between the Deans.

There is an assumption here that jointly funded positions are bad because they complicate reporting lines. With all due respect we think that is actually backwards. We have explicitly looked for opportunities for more joint appointments because we have found they foster joint investment, responsibility, ownership, and in the end productivity. We have joint positions with Agriculture, Forestry, and Veterinary Medicine now. We have shared support for positions in COAS and CLA in the past. In nearly every case, those individuals have been successful in tenure and promotion---were I to do the statistics I believe it is likely at a higher rate than non-joint positions.

To be successful, joint positions must be done thoughtfully. We have had positions that were split between departments (Geosciences and History, History and Zoology). Those are harder to manage
but in both cases they were very successful. In the current case, we propose no situation where a faculty member would report to more than one chair. Neither do we suggest any department chair report to more than one Dean. The accountability for positions funded jointly is to be between Deans.

We disagree strongly that jointly funded positions are in anyway prone to more uncertainty in expectations. Again, looking at history, jointly funded positions have caused no more nor less issues around position descriptions, tenure and promotion, or raises than have solely funded positions. Our experience with ALL of our partners has reinforced that joint positions provide ways to create real, tangible inter-College investment and can create positions that are more attractive to faculty with interdisciplinary interests. We believe it is the responsibility of those of us in administrative positions to define processes that make it possible to invest in positions like that. Avoiding them to create “cleaner reporting lines” would be a mistake, at least for our tenure-rank faculty.

It should be noted that the current discussions about Botany and Plant Pathology are not about the efficacy of jointly funded positions, but about differences of opinion regarding strategic missions and expectations.

The COS organization plan describes a School of Earth and Environmental Sciences, which is somewhat inconsistent with the COAS plan to include Geosciences in a new College of Earth Sciences. What is the current status of ongoing discussions with COAS concerning this issue?

The two Colleges remain in conversation about developing a College of Earth Sciences to capitalize on our substantial international reputation and strategic opportunity in basic earth, ocean, and atmospheric sciences. There is probably some inconsistency of language, as some of the COAS documents refer to Geosciences, and the College of Science documents refer to a School of Earth and Environmental Sciences. Faculty representing Geosciences, COAS, Environmental Sciences, and other units are all engaged in the conversations.

The conversations to date are agreed that we seek to create a more integrated entity whose focus is education and research in Earth sciences, an area where OSU has real stature and visibility. However, how to create that integrated entity remains a topic of conversations. A single merged unit has been suggested. However, the faculty members of the two units continue to work on the outcomes and vision for the “joint venture” and the deans of the two Colleges continue to work on identifying the right mechanism to enable that vision for a “College of Earth Sciences”. There are many models for Colleges or Schools in major research universities that work effectively in structures that are not single administrative or budget entities. It could be argued that we would be well served to figure out how to make a truly “joint enterprise” work than to assume we can only do things in traditional models.

The committee appreciated the College’s thorough analysis of the number of courses under the enrollment guidelines and agrees that the small number not meeting the guidelines is to be expected for a college of that size and complexity.

We appreciate the acknowledgment of that issue.
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?

To be candid, the organizational changes themselves do little to address short falls in revenue. There are negligible savings simply in the changes—in fact there will be net costs in the relocation of offices and staff to align with the organizational structure. The College has spent nearly 20 years cutting everything out of programs but their core. Since 1993 the tenure-rank faculty numbers have decreased by 24%, while SCH went up by 27%, and undergraduate and graduate majors went up by 38%. From 1997 to 2009 our annual grant and contract revenue went up 124%, to $26M. We long ago took any “excess” out of our overhead. It is why reorganizing provides little cash. However, the organizational structure does identify priorities for investment and says something about what is important. If we see cuts of 10% or more, we will have to make decisions about closing programs with substantial enrollment or reducing our commitments to other parts of our mission like research. There are not really other alternatives (assuming no new revenues) and organizational change won’t solve those problems for us. We continue to work to increase revenue from sources other than state funding to blunt the inevitable decline of the dollars we get from Oregon.

The Committee is expected to develop recommendations for the Provost’s consideration by the end of May and, therefore, would appreciate receiving your response by April 30, 2010. In your response, please clearly identify substantive changes that would need University approval.

There are a number of proposals here that will generate requests for name changes in units or programs. Those would presumably be carried out through normal curricular processes. Decisions to realign reporting relationships for some units will require University approval.

If the Committee has any further questions, please let me know.

Sincerely yours,

Sherman H. Bloomer
Dean, College of Science