November 4, 2015

TO: Sarah Mangelsdorf  
Provost
William Karpus  
Dean of the Graduate School

FROM: Richard J. Straub  
Senior Associate Dean

RE: Department of Forest and Wildlife Ecology Program Review, 2015

The College of Agricultural and Life Sciences Academic Planning Council met on October 23, 2015 where they discussed and approved the academic program review for the Department of Forest and Wildlife Ecology.

The department ranks close to the top of the elite peer group of Forestry and Wildlife Ecology programs in the nation. This outstanding reputation reflects the strength of the faculty and the high caliber of graduate students and postdoctoral fellows trained by them. The undergraduate programs train students who are highly respected by public and private sector employers in the region and beyond. The department’s extension and outreach programs are very strong and highly valued by stakeholders.

In 2007, the departments of Wildlife Ecology and Forestry were merged into one administrative unit with two undergraduate majors, Forest Science and Wildlife Ecology. The Forest Science major has three tracks—Forest Management, Forest Conservation, and Forest & Environment—while the Wildlife Ecology has two tracks—Natural Sciences and Natural Resources.

The Forest Science major is accredited by the Society of American Foresters. If the current Wildlife Ecology major is followed, individual certification can be obtained from the Wildlife Society and the Natural Sciences track is recommended for Wildlife Ecology students interested in pursuing graduate education.

The review committee completed their work in December of 2014 with the departmental response provided in September of 2015. Copies of both are attached. Key recommendations from the review committee follow:
Department’s Standing and Faculty Research Activity
The review committee sites a pressing need for faculty hires in silviculture and for a social scientist in the area of risk and uncertainty in ecosystem modeling. The prospect that SAF accreditation might be lost without faculty capacity to cover required courses in silviculture and allied areas was of deep concern to external stakeholder groups.

In CALS open faculty lines revert back to the college, they do not remain with the department. The college did not release any new faculty positions last year due to budget cuts. This year the college expects to make a limited number of positions available via a competitive process where departments are limited to one proposal each. The department is committed to making a faculty hire in silviculture their top priority for this year.

Facilities
Many faculty, staff and students voiced complaints about facilities. These ranged from the flood prone basement housing computer servers to limited storage and laboratory space. The overall challenge of perceived substandard facilities reaches into graduate training. Forestry is more lab group-based in its office space assignment, and Wildlife Ecology tends to make more ad hoc use of available space. The review committee recommends the unit convene a group to develop a master plan for space use and upgrade of Russell Laboratory’s facilities.

It should be noted the department has limited options to undertake even a small upgrade to space and facilities since those resources are not controlled at the departmental level. However, the department plans to initiate of review of space and facilities use and develop a space policy and plan consistent with their mission and vision.

Undergraduate Program
While students commented favorably regarding the overall curriculum, the review committee found that the Forest Science majors would benefit from having courses/training that would help students better identify various components in the field, additional field techniques courses and a GIS course (for both majors).

The committee also found that students were frustrated on issues related to DARS and they expressed the need for greater curriculum assistance when transferring into the department. While overall departmental climate was described by students as friendly and open, there appears to be limited interaction between the students in the two different majors.

Graduate Program
The FWE grad program has an exclusively direct admit policy. The faculty feel strongly that direct admit allows recruitment of students with specific interests and skill sets. There are no precise acceptance criteria beyond graduate school minima.

One area of concern raised by faculty was the question of whether the department is competitive for top graduate students. It was felt that this is primarily due to stipend level, and subpar facilities. These are areas of concern that should be discussed in CALS to maintain what is historically one of the national leaders in the field.

The committee found that there is no set format Prelims and therefore they vary between labs. The review committee suggests that faculty establish a consistent format for the preparation of the prelim paper and in Wildlife Ecology, the format of the qualifying exam. The department faculty discussed these issues at length and are comfortable with the current process. They cite a diverse student body with diverse career outcomes and want to recognize individual student
direction in developing their degree programs.

The committee also found there doesn’t seem to be a formal recurrent evaluation process for graduate students, however some students felt their advisors were very proactive in communication and goal-setting. It is recommended that the department formalize annual evaluations as a collaborative effort between the graduate student and the faculty mentor.

Neither students nor faculty seemed to know if/where there was a grievance procedure for the graduate programs. The department has since resolved this issue by revising the current handbook and sharing it with faculty and students.

**Department Climate**

There was a substantial feeling of disconnect from the department among the postdoctoral fellows, an important part of its research endeavors. Since this review, the department has worked to engage postdoctoral trainees, particularly with respect to efforts related to career and professional development.

It was anticipated that legacy issues from the departmental mergers might still persist and the review committee found some examples that impact climate. The department is largely vertically split with Wildlife Ecology occupying much of the second floor and Forestry the first floor. Several people viewed this as a long-term barrier towards achieving a cohesive department culture. Some faculty expressed concern about current use and allocation of UW-Foundation funds that were acquired prior to merger.

The department chair has outlined efforts to better integrate the unit, including adding a post-department seminar social, increasing research collaboration across those with wildlife and forestry backgrounds, and more mixing of office and lab spaces. Moving forward, the department expects to fully address this topic through upcoming planning activities beginning in the fall of 2015.

cc: Marty Gustafson
    Daniel Kleinman
    Jocelyn Milner
    Mark Rickenbach
    Kathryn VandenBosch
Ten-Year Review of the department of Forest and Wildlife Ecology
University of Wisconsin-Madison

Submitted December 2014

Review Team

Kevin McSweeney, Professor and Committee Chair
Department of Soil Science

Evelyn Howell, Professor
Department of Landscape Architecture

Krishnapuram Karthikeyan
Department of Biological Systems Engineering

Thaddeus Golos, Professor and GFEC Representative
Professor of Comparative Biosciences
Summary

The department ranks close to the top of the elite peer group of Forestry and Wildlife Ecology programs in the nation. This outstanding reputation reflects the strength of the faculty who are successful in securing extramural funding and training high caliber graduate students and postdoctoral fellows. However, the committee recommends a discussion of whether the addition of some “foundation” courses in forestry would provide a competitive advantage to their graduate students. A discussion is also recommended about how to better integrate the postdoctoral fellows into the functioning of the department.

The undergraduate programs train students who are highly respected by public and private sector employers in the region and beyond. The opportunity to obtain accredited degrees is highly valued by students. Many students expressed a need for more field experience. Students value the strong and supportive relationships they have with faculty and staff. Students, faculty and stakeholders emphasized the importance of crafting short/long term strategies to ensure the continuation of the Society of American Foresters accredited undergraduate BS degree.

The department’s extension and outreach programs are very strong and highly valued by stakeholders. Opportunities are emerging for more focused programming at the county-level, which would benefit from further dialogue with UWEX and WDNR. The Wisconsin Cooperative Wildlife Research Unit is a valuable partner in the department’s endeavors and this relationship is important to uphold and cultivate. Finally, the department’s facilities are in need of major upgrade. Development of a facilities master plan for Russell Laboratory is strongly recommended.

Review Process

Kathryn A. VandenBosch, Dean and Director of the College of Agricultural and Life Sciences, convened a committee to conduct a review of the Department of Forest and Wildlife Ecology (FWE). In addition the review addresses the Graduate School requirement for the ten-year review of graduate programs. The review team was composed of Kevin McSweeney, Professor of Soil Science (Chair), Thaddeus Golos, Professor of Comparative Biosciences (Graduate Faculty Executive Committee Representative), Evelyn Howell, Professor of Landscape Architecture and Krishnapuram Karthikeyan, Professor of Biological Systems Engineering. FWE has not been reviewed as a department but the precursor departments, Forest Ecology and Management and Wildlife Ecology were reviewed in 2002 as part of the USDA-CSREES process.

The committee was asked to address several questions that fit under the broad question of “How well is the department fulfilling its mission of research, teaching and service?” The committee used a self-study report, along with interviews of faculty, staff, postdoctoral, graduate and undergraduate students on April 8, 15 and 17, 2014. The committee provided all department members with a memo outlining the scope and purpose of the review. The committee also received responses from a questionnaire/telephone interviews from a select group of stakeholders about how they
value their relationship with the department of Forest and Wildlife Ecology. These exchanges were conducted in October 2014.

**Department’s Standing and Faculty Research Activity**

The department has an entrepreneurial and energetic research culture that is reflected by impressive scholarly productivity, support from grants, contracts and collaborative agreements and global standing among peer disciplines. Funding sources include: NSF, NASA, USFS, USGS, SEA GRANT and DNR Science Services. The department’s self-study report documents a variety of metrics that illustrate its scholarly preeminence in the fields of Forestry and Wildlife Ecology. For example, the National Research Council (2010) published a “Data-Based Assessment of Research Doctorate Programs in the United States”, in which the UW-Madison Forestry program was ranked first in the nation (n=34). Although there was no analogous ranking of wildlife programs, the wildlife faculty ranked second among their peer programs in publications and awards per faculty member. It follows that this cadre of exceptional faculty recruits and train outstanding graduate and postdoctoral students. Graduate and postdoctoral students commonly come to the department from high quality academic and public/private sectors with significant experience, which likely augments the department’s impressive publication record. Analyses by Academic Analytics show that in comparison to 42 other departments oriented towards natural resources (see Table 4; Self-Study Report), FWE exceeds 90% of other programs for most refereed journal measures. Again, the Self-Study report illustrates (Figure 3) the impressive 40% increase in extramural funding over the past five years. This is matched by a commensurate increase in Facilities and Administrative costs returned to the University, which places FWE 5th highest among its sister departments in CALS in this category.

FWE has hired six Assistant Professors since 2005, two of whom were recently promoted to Associate Professor with tenure. This cohort of faculty reported favorably on their recruiting and mentoring process and the broad support provided by the department-at-large. The review committee sensed a strong *esprit de corps* within this cohort, which bodes well for further integration of this still fairly new department.

The three diverse core intellectual areas that comprise FWE research thrusts are generally strong and robustly interconnected, as is reflected by impressive intra-departmental cross disciplinary research. The core areas are Applied Ecology, Spatial Analysis and Modeling and Human Systems. However, it was clear to the committee from discussions with faculty and students that two essential new hires will be needed swiftly to ensure that the strong emerging intra- and established inter-departmental/institutional collaborations are maintained and enhanced. The committee sees a pressing need for hires in silviculture (vice-Lorimer) and for a social scientist in the area of risk and uncertainty in ecosystem modeling. These new hires are also critical for graduate and undergraduate education.

Many faculty, staff and students voiced complaints about facilities. These ranged from the perilous, flood prone basement housing for computer servers to limited storage and laboratory space.

The department has been home to the Wisconsin Cooperative Wildlife Research Unit (WCWRU) since 1972. The WCWRU operates through a cooperative agreement,
which is reviewed and renewed every five years. The current agreement was renewed in August of 2013. The unit is a powerful asset for the department. The Unit Leader, faculty member Christine Ribic and faculty member, Michael Samuel are both salaried through USGS and function as fully integrated members of the department. The WCWRU collaborators provide advising for graduate students and postdocs, they teach occasional courses and deliver numerous guest lectures. They are uniquely positioned within the department to secure federal research work orders, which brings in valuable resources to support collaborative research ventures and training of graduate students and postdocs.

**Recommendations**

- Convene a committee to develop a master plan for upgrade of Russell Laboratory’s facilities.
- Ensure that the WCWRU remains a vital and well-integrated unit within the department.

**FUNCTIONING OF DEGREE PROGRAMS**

**Undergraduate Program Assessment:**

The department offers two majors, namely, Forest Science and Wildlife Ecology with approximately 40 and 110 registered students, respectively. The Forest Science major has three tracks (Forest Management, Forest Conservation, and Forest & Environment) while the Wildlife Ecology has two tracks (Natural Sciences and Natural Resources). Historically, the Wildlife Ecology has had a strong undergraduate program and departmental merger has enhanced the appreciation among all faculty members to maintain a strong undergraduate program for the vitality of the department. The Forest Science major is accredited by SAF (Society of American Foresters) while if the current Wildlife Ecology major is followed, individual certification can be obtained from the Wildlife Society. The Natural Sciences track is quantitatively rigorous and recommended for Wildlife Ecology students interested in pursuing graduate education.

Curriculum development is performed by the Undergraduate Committee with the last major revision of the Forest Science curriculum occurring in 2011. An outcome was the removal of the Forest Ecology track, which was not well received by some students. Students in all three Forest Science tracks take courses in Wildlife Ecology (e.g., FWE 360). A significant number of Forest Science faculty are involved in teaching undergraduate courses with eight of them teaching at least one undergraduate core course. A few faculty members also actively participate in teaching undergraduate Biology courses. While students commented favorably regarding the overall curriculum, the Forest Science major would benefit from having courses/training that would help students better identify various components in the field (e.g., understory plants), additional field techniques courses (similar to F&W ECOL 561), and a GIS course (for both majors).

Accreditation by SAF was considered very crucial for undergraduate recruitment and for maintaining strong relationship with the Wisconsin DNR and other industry groups. All faculty members expressed a strong preference to continue to maintain accreditation and the need to fill important faculty positions (with retirement) in a timely
fashion for this purpose. The Forest Science students interviewed were aware of the accreditation program and, in fact, there was an implicit assumption/expectation for all programs at UW-Madison to be accredited. The department does not keep track of the number of Wildlife Ecology students completing the certification program mainly due to the time (~5 years after graduation) it takes to receive it. The Wildlife Ecology undergraduate students are aware of this certification program.

Currently, undergraduate recruitment occurs only via the SOAR program and there are no additional recruitment efforts. According to the students, the Forest Science program is not well advertised (they indicated that the emphasis should be on land & resources management aspects) and, consequently, the program has very few freshmen.

A fair amount of initial advising (i.e., course selection to adhere to a 4-year roadmap) is being performed by Ms. Sara Rodock (an Academic Staff member). There are no undergraduate handbooks for either major. Students provided positive comments about faculty advising (openness, availability, willingness of help, advice on technical aspects of the curriculum, career choices), but expressed some frustration on issues related to DARS. It should be pointed out that faculty will experience greater trouble with undergraduate advising without assistance from Ms. Rodock. Double majoring, in Forest Science and Wildlife Ecology, is not a popular choice among students. However, a significant number of students receive Environmental Certificates. Linkages with the graduate program are primarily through taking classes together and being involved in laboratory research. Forest Science had a 5-year BS/MS program that was discontinued due to low enrollment. Students expressed the need to provide greater curriculum assistance for those transferring into the department.

A significant number of undergraduate students (40-50% of Forest Science and ~30% of Wildlife Ecology majors) are involved in laboratory research, which enhances the overall undergraduate learning experience. Study Abroad program is quite popular among the students. Likewise, the internship requirement (only for Forest Science majors) was considered a plus. The Wildlife Ecology majors recommended making internship a requirement for their program as well. The two-week optional field camp was considered quite valuable by the students, who recommended making it a requirement. This camp was listed as a favorite in almost all Exit Interviews. Forest Science and Wildlife Ecology camps are offered during alternate years. Students preferred receiving additional guidance from faculty members for student club activities (separate clubs for the two majors). In general, students expressed satisfaction with the program (proud to be a graduate) and most of them complete in a timely fashion. Forest Science students are able to find jobs after graduation (due to program size and strong industry component), while it is extremely difficult (and faculty/staff highlight this issue) for Wildlife Ecology majors to obtain immediate full-time employment. It was suggested to conduct seminars providing additional information for post-graduation opportunities. While overall departmental climate was described by students as friendly and open, there appears to be limited interaction between the students in the two majors.

**Recommendations**

- Develop/offer Forest Science courses/training related to field skills and techniques, and a GIS course.
• Improved promotion/advertising of the Forest Science Program emphasizing the land and resource management aspects.
• Develop an undergraduate student handbook and supplemental training among other staff members to provide additional support for Ms. Rodock.
• Facilitate increased interaction between students from the two departmental majors.

**Graduate Program Assessment**

**Overview:** Following the merger of the Forest Ecology & Management and Wildlife Ecology departments in 2007, the long-standing Ph.D. programs in Forestry, and Wildlife Ecology, have remained separate. They are administered by a Graduate Program Committee, which includes representation from both PhD programs within FWE, as well as graduate students. The grad committee signs off on admissions, reviews programmatic questions (but also forwarded questions to the full faculty if broader buy-in was sought); the members felt the process worked very well. Grad students (and especially junior faculty) felt the split programs did not pose barriers to communication or interaction or collaborations.

The committee had discussions with the Graduate Committee, and with a spectrum of graduate students, including M.S. candidates in both Forestry and Wildlife Ecology (1-2 of each), and more advanced Ph.D. students (~3 from each program). In addition, the committee also met with faculty, postdocs, and staff not only to review the graduate program, but also to address postdoctoral training within the Department.

**Recruiting and Admissions:** The FWE grad program has an exclusively direct admit policy. The faculty strongly feel that direct admit allows recruitment of students with specific interests and skill sets. Recruitment is very lab-based, an ad hoc approach 1-on-1 between prospective student and professor. The extensive 1-on-1 interactions between prospective graduate students and the faculty member likely contribute to the essentially 100% rate at which students who visit campus commit to the program. There are no precise acceptance criteria beyond graduate school minima; the faculty approval process is “pretty loose” (faculty quote). However, the recruiting process is very successful. Of an average of ~30 (but as many as 100) applications per year for sometimes only a few Ph.D. positions, around 5 offers are made, and all visiting applicants accept the offers made. Clearly the program is highly attractive to productive and qualified applicants- students who visit, really are won over by the program. Regardless of direct admit, faculty perceived that UW is being outcompeted by better-funded schools, and there is geographical variability in where our applicants come from. We are getting the top Midwest students but not the coasts.

As a summary of the graduate student cohort in FWE, the review committee was provided with the Departmental “Request for Recruiting Funds” submitted to the Graduate School in Spring 2013. The document primarily contained information from 2009-2013; we were told that records for earlier years were not readily accessible. There are an average of 6.4 students admitted per year, and their credentials are good, with a cumulative GPA of 3.49, and GRE scores in the 60th-80th percentile. 6 of the 14 students entering in recent years held independent fellowships (e.g., Fulbright, Doris Duke, UE). Institutions attended for their previous degrees include SUNY-College of Environmental
Science, Penn State, UW-Madison, and Cornell. Nearly all had M.S. degrees, usually from other institutions, as well as previous research publications.

The administration of the Ph.D. programs is carried out by Sara Rodock, who monitors graduate student progress, updates the web materials, and is the go-to person with questions regarding all aspects of graduate study. While there was much praise from graduate students and faculty regarding Sara’s performance in this capacity, it is of some concern to the committee that Sara seems to be the sole repository for much of the program information, while as a Hub staff member, she only devotes part of her time to the FWE department. In several instances it was clear that grad students do not rely on their advisors for information about the program, but on Ms. Rodock.

An area where the program is not so strong is in success at attracting under-represented minorities. In the past 3 years, there have been only 8 URM applicants, and 2 domestic and 2 international applicants have been made offers (all accepted). The committee was informed that there is increasing interest at the undergraduate level among URM, and faculty participate in the IBS-SROP Ecology, Plants and Environmental Systems program. The department, for the most part, does not have significant independent efforts at URM recruiting but does participate in some of the campus-wide programs, such as the BOPS program, and coordinates with staff from the CHANGE-IGERT program for recruitment conferences.

Program outcomes: From 2008-2012, there was an average of 36.2 students enrolled in the Ph.D. program, with an average time to degree of 5.89 years. Students are very productive, and had published 5.15 papers, 3.24 as first author during their graduate work. Students are also very successful in garnering individual fellowships and other awards to support their research, including such sources as NASA, USDA, NSF, and the Smithsonian Institute. However, the majority of students are supported by research assistantships on faculty individual research grants. The Ph.D. graduates are able to transition to postdoctoral positions at well-regarded institutions in the field, such as Oregon State University. Students also obtain positions in industry, with the US Forest Service, with nonprofit Non-Governmental Organizations, and with the Wisconsin DNR, all highly thought of in the field.

There are M.S. and Ph.D. degrees available for both Forestry and for Wildlife Ecology. 2/3 of the WE students are M.S. students and the M.S. is required to proceed to the Ph.D. Many students take additional WE courses so the cohort that proceeds through the Ph.D. had a common background of basic knowledge/exposure to the field. The needs are assessed in a qualifying exam which takes place in the first 1-2 years although the format seems quite variable- one student we talked with wrote a research proposal for her quals, however no other students had this expectation.

Ph.D. Program: Forestry.
The Forestry Ph.D. does not have any required courses. There are requirements for credits in several categories as well as credits in courses 300 level or above. The Ph.D. requires a 9 credit minor, based on course work. Students in the Ph.D. track are not required to do the M.S., and there is not a qualifying exam. Forestry has the students do a
certification review in the 1st/2nd year of study to identify areas of technical weakness to be able to recommend additional coursework to be taken as needed.

One Forestry faculty stated the program was “proud of its no-required course” status: the faculty are very diverse in their areas of research, and the program is “not designed to produce foresters”, but to have a strong research program in fundamental and applied ecology. So, there is a high degree of flexibility among students, depending on their program. Faculty in Forestry are in three of the four Graduate School divisions, indicating their diversity and supporting a flexible curriculum. The several grad students we met with liked the course flexibility- but they’d like to be able to take more courses within the Department, which might allow greater familiarity with faculty research.

**General Comments:** Prelims are very different between labs- there is no set format so some students get oral as well as written exams, although most only get oral exams. The format of the prelim paper also differs quite a bit among laboratories. We were told during a meeting with extension faculty that taking prelims at the beginning of the 4th year would be “early”.

Wildlife Ecology Ph.D. students give a required “entrance” seminar early in their grad careers, and an exit seminar as part of their dissertation defense. Forestry Ph.D. students only give an exit seminar. However most students get ample opportunity to give seminars in lab groups, at conferences, etc.

**Funding:** How are grad students funded? A table of M.S. vs Ph.D. funding in the program documents indicates that most are funded by RAs, however Grad School documents suggested that up to 20% of students do not receive full funding. During the review it was explained that there is home country support for foreign nationals which isn’t captured by Grad School, and there are also “noncompeting funds” which are provided through the Nelson Institute (government contracts). In addition, some students accept positions outside UW while holding dissenter status and so they’re technically “unfunded”. The self-study document stated that students are enrolled only if they have assured funding their entire program—but discussion indicated that that is an optimistic statement since most funding is for 2-3 years. Students in the graduate programs are successful in garnering individual fellowships, including NSF and NASA which have national competition.

TAs were stated to be sparse in FWE; the Techniques class is said to sorely need a TA for this larger class. Having said that, there are TAs available in 4 undergrad FWE courses. Two of these positions are discussion/quiz section type assignments, and two are laboratory TA positions. There are also “unofficial TA” opportunities (unsalaried), which are ad hoc opportunities that arise when a professor may need assistance with a particularly time consuming lab exercise, for one example. Graduate students were very clearly interested in additional TA opportunities, not just in terms of funding, but also as opportunities for teaching experience which they clearly see as being able to contribute to their future professional development and marketability.

**Communications and Climate:** The departmental climate survey indicated that many graduate students (29%) felt isolated in their laboratories, and nearly half (45%) had not had a thorough evaluation in the past year. Indeed there doesn’t seem to be a formal
recurrent evaluation process, and although some students felt their advisors were very proactive in communication and goal-setting, this was clearly ad hoc and dependent on the advisor. Students felt that it was very difficult to get committee meetings organized, having to schedule months in advance with faculty for group meetings. One-on-one meetings with committee members, however, was easier than trying to meet with the entire committee.

We asked students if there was a grievance procedure in the graduate programs. Neither students nor faculty seemed to know if/where there was a procedure described. Anecdotally, a student commented that a peer did go through this recently and wasn’t sure where to start so the program assistant helped the process to get started. Depending on the lab, some students feel marginalized. They would like the department to promote more collegial interactions of labs and students, so that big and small labs all feel part of the same program. Nonetheless, overall, in the climate survey, 82% of graduate students and postdocs ranked the climate as positive (59%) or very positive (23%).

Postdocs.
The postdoctoral fellows in FWE laboratories are a diverse group, including internationally trained scholars. Several times discussion with faculty indicated that postdocs are preferred by some faculty because of the costs of graduate student training. A common complaint was that there was very little orientation at all to the department, they came in and got to work and had little introduction to people, procedures, etc. Postdocs generally were invisible in the department even though they clearly have an important presence in the labs.

There does not appear to be formal mentorship in terms of annual reviews, formal goal-setting etc. Some fellows do get to mentor grad students or undergraduates. Some get formal lecture opportunities from their PIs.

Overall Summary
Strengths: There are many distinct strengths of the FWE graduate program. Foremost is the exceptional faculty. Many faculty are widely recognized as national leaders in their disciplines. In addition, the junior faculty in the program are very enthusiastic and motivated, and bode well for a productive and collaborative future. The graduate students are likewise a strength of the program. Students typically come to the Ph.D. programs from academic and private/public sectors with significant experience which likely underpins, at least in part, their very impressive publication efforts.

Challenges: This is a unique situation with one department having two historically, and still very much, distinct graduate programs. Most faculty stated that while they were generally satisfied with the departmental merger, nonetheless, areas where the programs differed, such as mechanism of graduate student office space assignment or graduate course curriculum did pose the risk of some tension. As the younger faculty grow into and take greater leadership roles in the program, it is felt that these cultural differences will likely continue to diminish.

The overall challenge of perceived substandard facilities also reached into graduate training. Forestry is more lab group-based in its office space assignment, and
Wildlife Ecology tends to make more ad hoc use of available space. There were mixed feelings about space assignment, but no easy solution was offered.

The two Ph.D. programs differ in their required didactic graduate courses. It does not seem that the differences generate significant concern among the students, however the Forestry program should consider a serious discussion addressing the perception that the Forestry Ph.D. program may not produce faculty who can teach forestry to undergraduates. There was some concern that students with a Ph.D. in “Forestry” are at a disadvantage because of the implications of the degree name. Perhaps renaming the degree to “Forest Ecology” or “Forest Science” would better reflect the expertise and background of the students emerging from the program.

Recommendations

Overall, the review panel was impressed by the enthusiasm of the students, and the quality of the scholarly research being undertaken by the Ph.D. students in particular. Several suggestions are offered for consideration.

- It might be appropriate for faculty to discuss a consistent format for the preparation of the prelim paper, and in Wildlife Ecology, the format of the qualifying exam.
- One area of concern raised by faculty was the question of whether the department is competitive for top graduate students. It was felt that this is primarily due to stipend level, and subpar facilities. These are areas of concern that should be discussed in CALS to maintain what is historically one of the national leaders in the field.
- While there are several teaching assistantships that are available within the department, it was stated in several venues that a TA is sorely needed in the FWE Techniques course. We recommend that CALS consider TA funds for this course, which is required for undergraduate majors.
- The review committee recommends a discussion of whether the addition of some “foundation” courses to the Ph.D. in Forestry would provide a competitive advantage to their graduate students.
- It is recommended that the departmental Ph.D. programs formalize annual evaluations as a collaborative effort between the graduate student and the faculty mentor.
- It is recommended that a grievance procedure be formally introduced to the web handbook, and all students and faculty are aware of appropriate channels for problems to be resolved.
- There was a substantial feeling of disconnect from the Department among the postdoctoral fellows, an important part of its research endeavors. An organized discussion on how to better integrate the postdoctoral fellows into the functioning of the Department is encouraged.

Effectiveness and Impact of Extension and Outreach

The consensus between agency and stakeholder groups is that the department has a very talented faculty many of whom conduct important fundamental research that attracts impressive funding. They recognize that these funds often preclude direct application to WI. However, they urge the faculty whose funding requires an outreach/extension
component to prioritize collaboration with state-based partners. They note the number of faculty with Extension appointments is small and expertise does not cover the full spectrum of the state’s issues and needs. Existing programs, which generally operate at the state-level, are viewed as strong and valuable. FWE Extension contributions to the wood products industry were highlighted as an excellent model for UW-industry collaboration. It was widely mentioned that many faculty without Extension appointments, such as Professor Van Deelen provide important outreach that greatly benefits the state in the tradition of the Wisconsin Idea.

However, it was noted that there is an opportunity to rebalance the department’s role in the state through more dialogue about prioritization / utilization of McIntire-Stennis funds and helping to craft DNR research and policy agendas. Changes in DNR research and UWEX-CNDRD leadership offer opportunities to refresh these important partnerships. Some of the stakeholders suggested that FWE consider more active engagement with private and non-profit entities to raise the profile of forest and wildlife issues on the agendas of decision-making bodies in Wisconsin. The example of the Cranberry Growers Association was cited as a model, with the recognition that such alliances are driven by the private sector and not UW-Madison. They noted that it could be cumbersome working with UW-System to develop such relationships, especially related to IP and overhead questions. Nevertheless, some felt discussions along these lines could be productive.

The bulk of FWE Extension effort focuses on statewide programming. Both UWEX and DNR envisage opportunities for Extension faculty and others to become more engaged with county-level programs. Both entities are keen to explore these opportunities with FWE.

The prospect that SAF accreditation might be lost without faculty capacity to cover required courses in silviculture and allied areas was of deep concern to all agency and stakeholder groups. It was noted that the DNR-Forestry, like Wisconsin Counties and private forestry enterprises require SAF certified graduates. DNR hired four forestry graduates this year and prospects for further hiring across the spectrum of forestry entities in Wisconsin look promising. DNR also hires UW students with advanced degrees in forestry, who are a very strong asset to the agency. The quality and depth of training provided to UW undergraduates (in comparison to other programs in the region) was highlighted as a strong asset that is important for developing the next generation of key leaders in Forestry and Wildlife Ecology.

**Recommendations**

- Explore rewards/incentives for faculty/staff without extension programs who conduct significant outreach that benefits WI and beyond.
- Strategize and develop plans in collaboration with UWEX and DNR that targets FWE programs at the county-level.
- Convene seminars/workshops for undergraduates led by Agency, UWEX, Industry and NGOs colleagues that address employment/career opportunities in Forestry and Wildlife Ecology.
- Explore ways to provide short/long term coverage to ensure the continuation of the SAF accredited undergraduate forestry BS degree.
• Investigate opportunities for stronger relationships with stakeholder groups to raise the profile of Forest and Wildlife issues to decision-making bodies.

**Department Climate**

The department deserves great praise for fostering a broadly collegial, engaging and supportive climate since its merger in July 2007. Undergraduate students reported favorably on support, guidance and access to faculty. These students tend to align along disciplinary lines (Forestry – Wildlife Ecology) and do not appear to intermingle. Similarly, graduate students have largely high praise for the faculty and staff support they receive. They too, appear to cluster along laboratory lines with limited mixing among labs. Several graduate students were concerned that there is not a clear pathway to follow if grievance issues arise. Recently hired faculty have high regard for the mentoring and support they have received during the tenure process. This group collaborates well as a cohort and is in a strong position to build the foundations for an emerging new department culture. Some faculty were concerned that insufficient effort and creativity has been devoted to recruiting women and minorities.

We anticipated that legacy issues might still persist and we found some examples that impact on climate. The department is largely vertically split with Wildlife Ecology occupying much of the second floor and Forestry the first floor. Several people viewed this as a long-term barrier towards achieving a cohesive department culture. Some faculty expressed concern about current use and allocation of UW-Foundation funds that were acquired prior to merger and suggested this issue needs more careful review.

A number of faculty and staff expressed specific concerns about operation of the Hub, which impact climate. These concerns will be addressed in a separate evaluation of the Russell Laboratories Hub.

Department Chair, Bill Karasov commissioned a climate survey (appended to Self-Study Report), which reflects well the impressions we gathered during our discussions with faculty, staff, post docs and graduate students. The department has a climate similar to many laboratory-based cultures on campus; prompting a desire for more social interaction and inquisitiveness about their colleagues activities. Various efforts are underway to improve social interactions, notably the establishment of a committee with departmental climate as its focus. Rethinking the department seminar as a both a social and academic gathering with a good mix of department-based research may help build further cohesion and communication.

Support from the classified and academic staff responsible for student affairs and business services is judged to be exceptional by the department at large. These staff also reported that they feel valued by the department and enjoy their positions. They manage with adequate resources and support to perform their responsibilities, yet back up is fragile to non-existent.

Several department members reported that annual merit/performance reviews have been spotty in recent years. Although, pay plans have been sparse in recent years, they still considered it important to receive annual feedback on their performance. Faculty with jointly funded appointments indicated frustration about salary negotiations and pay rises.
Recommendations

• The committee recommends annual reviews for all department faculty and staff.
• The committee recommends review of the scope, purpose and allocation of all FWE funds managed by UW-Foundation.
• The committee recommends a more proactive approach towards recruiting and hiring women and minorities.
• The committee recommends that its Space and Facilities Committee develop a long-range plan that includes intermingling office/laboratory space

Considerations for the Department’s Functions and Interactions within CALS to Consider During the Strategic Planning Process

During our discussions with the department it was evident that they are poised to undertake planning on a variety of issues. Clearly, the CALS strategic plan provides a broad guiding framework for them to utilize. The department is exceptionally well equipped to provide essential intellectual, educational and extension/outreach in 3 of the college’s 6 priority themes:

Bioenergy and Bioproducts
Changing Climate
Healthy Ecosystems

These are themes that the department can leverage skillfully via its demonstrated success in securing extramural funding and its rich tradition of collaboration within CALS, across campus and beyond.

The department’s focus on ‘internal’ planning should consider:
• Forthcoming selection of a new department chair
• Facilities Master Plan
• Strategies to ensure continued SAF accreditation
• Undergraduate curriculum review and revision
• Leveraging further opportunities provided through collaboration with WCWRU
Date: September 25, 2015  
From: Mark Rickenbach, Forest & Wildlife Ecology Chair  
To: Dick Straub, CALS Senior Associate Dean  
RE: Department response to 10-year review recommendations

Per your May 22, 2015 memo, I am writing to provide the Department’s response as requested by the CALS Academic Planning Council and your office. Our response entails two components. First, we address two specific items raised by the APC, as well as our current direction with respect to Department planning in the body of this memo. Second, we provide a point-by-point response to the twenty-eight recommendations in the original review team’s report (attached).

APC Item #1: “…improve the communication with Wildlife Ecology students regarding employment after earning a degree.”

In several courses across the wildlife ecology curriculum and through advising, specific attention is given to job opportunities in the field and what it takes to secure employment. Indeed, one of the first course students take, F&W Ecol. 101 (Orientation to Wildlife Ecology), goes to great lengths to inform students of the challenges associated with wildlife employment. Advising also centers on informing and positioning our students toward careers. As one measure of our commitment, exit interviews with Wildlife Ecology graduates often find that we are “too harsh” and should be more “optimistic” about the potential.

That said, there is always room to improve and ensure that our students are ready. Our Forest Science program is in the first year of offering a professional development seminar (F&W Ecol. 675) that will better prepare students to enter the job market. If we find this successful, we will consider a parallel wildlife offering in the future.

APC Item #2: “…consider specific efforts that could be undertaken to continue building the department into a more cohesive unit.”

The merger remains a work in progress and recent developments contribute to continued harmonization. Starting last academic year (i.e., prior to report and review completion), we added a post-department seminar social. We’ve also seen increased research collaboration across those with wildlife and forestry backgrounds and more mixing of office and lab spaces. Moving forward, I fully expect that this topic will receive more attention through our upcoming planning activities described next.

Department planning

Beginning in Fall 2015, the Department will undertake the creation of a strategic framework to revisit our mission, vision, and strategic priorities for the next five-eight years. Our current strategic plan dates to the time of our merger and reflects a different time in our history. Moreover, the campus environment is
much changed and it is important that we position the Department for long-term success and impact. We have appointed a project team that over the next academic year will create a framework for eventual adoption by the Department. Rickenbach is leading this effort with support from the Office of Quality Improvement. Along with the mission, vision, and strategic priorities, we will also identify specific major “projects” to work on in subsequent years. The ten-year review has informed our thinking toward this effort and we fully expect several review team recommendations to surface as major projects (e.g., space and facilities planning, SAF accreditation).
# Department of Forest and Wildlife Ecology Responses to Ten-year Review Report Recommendation

**September 23, 2015**

<table>
<thead>
<tr>
<th>Review committee recommendation</th>
<th>Department response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> Research</td>
<td></td>
</tr>
<tr>
<td>1.1 Convene a committee to develop a master plan for upgrade of Russell Laboratory’s facilities.</td>
<td>See 6.2.</td>
</tr>
<tr>
<td>1.2 Ensure that the WCWRU remains a vital and well-integrated unit within the department.</td>
<td>See 6.5.</td>
</tr>
<tr>
<td><strong>2</strong> Teaching</td>
<td></td>
</tr>
<tr>
<td>2.1 Develop/offer Forest Science courses/training related to field skills and techniques, and a GIS course.</td>
<td>The Department offers several field skills and techniques courses and courses with significant lab components (e.g., F&amp;W Ecol 410, 550/551, 658). We also recently added F&amp;W Ecol 675 that emphasize career development tools in conjunction with Forest Science students’ required internships. Further offerings might be beneficial; however, recent departures limit teaching capacity and the new campus budget model requires units to balance large and small enrollment offerings. In 2017, we’ll have the opportunity to again benchmark our performance to Society of American Foresters (SAF) accreditation standards and expectation. (See 6.3.)</td>
</tr>
<tr>
<td>2.2 Improved promotion/advertising of the Forest Science Program emphasizing the land and resource management aspects.</td>
<td>Moving forward, we believe that adding 2-3 Forest Science students per year over the next 4-5 years (i.e., total increase of 8-15 students) is sustainable, assuming consistent teaching capacity. However, growth beyond that will require additional teaching capacity with aspects that depend on other units across campus. For example, Dendrology (Botany 402) is a bottleneck course for our students, so increased enrollments may increase time to graduation. (See 6.3.)</td>
</tr>
<tr>
<td>Review committee recommendation</td>
<td>Department response</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>2.3 Develop an undergraduate student handbook and supplemental training among other staff members to provide additional support for Ms. Rodock.</td>
<td>While there aren’t undergraduate handbooks, all the information is available on the web, and faculty and staff do have advising handbooks. We will also work with the Russell Laboratories Administrative Support Center and the Departments of Entomology and Plant Pathology to ensure adequate support and backup for Ms. Rodock.</td>
</tr>
<tr>
<td>2.4 Facilitate increased interaction between students from the two departmental majors.</td>
<td>While there is some interaction among students in our undergraduate programs, our experience and that of our peer institutions has shown that Wildlife Ecology and Forest Science students are two distinct sub-populations with differing expectations for their undergraduate experiences and career outlooks.</td>
</tr>
<tr>
<td>2.5 Convene seminars/workshops for undergraduates led by Agency, UWEX, Industry and NGOs colleagues that address employment/career opportunities in Forestry and Wildlife Ecology. [was bullet #3 under extension and outreach]</td>
<td>Many courses regularly invite practicing professionals from the private, public, and not-for-profit sectors to share their knowledge and experiences in classroom settings. Such sessions often include some discussion of careers. Our student groups regularly host similar individuals as part of regular meetings. New additions include the new course, F&amp;W Ecol 675 (see 2.1), and a proposed LinkedIn group to connect current students with alumni.</td>
</tr>
<tr>
<td>2.6 Explore ways to provide short/long term coverage to ensure the continuation of the SAF accredited undergraduate forestry BS degree. [was bullet #4 under extension and outreach]</td>
<td>Through generous CALS support, the Department recently hired a faculty associate to assist in teaching three courses (F&amp;W Ecol. 375, 401, 550/551) and to sole teach a fourth (F&amp;W Ecol. 501). This is much needed assistance to cover required courses for the SAF-accredited Forest Science. This is not a sustainable model, and does little to support our research mission and graduate training. The Department’s primary need is to hire a silviculturist to bolster the long-term viability of forestry as a discipline on campus. However, additional needs, notably in forest and tree health, are also looming and will continue to require attention by the Department and College.</td>
</tr>
<tr>
<td>Review committee recommendation</td>
<td>Department response</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td><strong>3 Graduate Instruction</strong></td>
<td></td>
</tr>
<tr>
<td>3.1 It might be appropriate for faculty to discuss a consistent format for the preparation of the prelim paper, and in Wildlife Ecology, the format of the qualifying exam.</td>
<td>The faculty discussed this issue at length, both in the Graduate Affairs Committee and as a whole. The faculty are comfortable with our current processes. We have diverse students headed toward diverse career outcomes and our approach attempts to recognize student direction in developing their degree programs.</td>
</tr>
<tr>
<td>3.2 One area of concern raised by faculty was the question of whether the department is competitive for top graduate students. It was felt that this is primarily due to stipend level, and subpar facilities. These are areas of concern that should be discussed in CALS to maintain what is historically one of the national leaders in the field.</td>
<td>The Department has limited options to unilaterally increase stipends or significantly upgrade space and facilities (see 6.2). In recent years, we have used Graduate School recruiting dollars to offer signing bonuses that provide immediate resources to incoming students. Assuming that resources are available in the future, we will continue to do this.</td>
</tr>
<tr>
<td>3.3 While there are several teaching assistantships that are available within the department, it was stated in several venues that a TA is sorely needed in the FWE Techniques course. We recommend that CALS consider TA funds for this course, which is required for undergraduate majors.</td>
<td>We concur that F&amp;W Ecol. 561 would benefit from TA support and would welcome such support from the College. However, we are fully cognizant that TA allocation in the College is a zero-sum game, not just among departments, but also within departments. More than a new TA for any single course, our Department would prefer multi-year allocations and flexibility to staff high-demand and high-contact courses.</td>
</tr>
<tr>
<td>3.4 The review committee recommends a discussion of whether the addition of some “foundation” courses to the Ph.D. in Forestry would provide a competitive advantage to their graduate students.</td>
<td>Similar recommendations related to the Forestry PhD (and MS) program in past review since the 2000s. Each time the Forestry faculty have thoughtfully considered such recommendations, but have preferred the flexibility of our current model. Faculty advisors in the Forestry graduate program until recently included all four divisions and now include three. Accommodating and maintaining such diversity requires flexibility. Moreover, teaching demands at the undergraduate level preclude the regular offering of graduate courses that might form the basis of a foundation.</td>
</tr>
<tr>
<td>Review committee recommendation</td>
<td>Department response</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td><strong>3.5</strong> It is recommended that the departmental Ph.D. programs formalize annual evaluations as a collaborative effort between the graduate student and the faculty mentor.</td>
<td>The revised handbook includes this and the information has been shared with faculty and students.</td>
</tr>
<tr>
<td><strong>3.6</strong> It is recommended that a grievance procedure be formally introduced to the web handbook, and all students and faculty are aware of appropriate channels for problems to be resolved.</td>
<td>The revised handbook includes this and the information has been shared with faculty and students.</td>
</tr>
<tr>
<td><strong>3.7</strong> There was a substantial feeling of disconnect from the Department among the postdoctoral fellows, an important part of its research endeavors. An organized discussion on how to better integrate the postdoctoral fellows into the functioning of the Department is encouraged.</td>
<td>Since the review, the Department has worked to engage post-doctoral trainees, particularly with respect to efforts related to career and professional development (e.g., IDP trainings, seminar on informational interviews, etc.). This will continue. For the year ahead, we plan to encourage new (and current) post-doctoral trainees to present seminars on their prior work as a way to introduce them to the Department.</td>
</tr>
<tr>
<td><strong>3.8</strong> In text, rename graduate Forestry degree to Forest Science.</td>
<td>This topic has been discussed in the past with no action. As part of our strategic planning, this topic will again be considered with expected action in spring or fall 2016.</td>
</tr>
<tr>
<td><strong>4</strong> Extension and Outreach</td>
<td></td>
</tr>
<tr>
<td><strong>4.1</strong> Explore rewards/incentives for faculty/staff without extension programs who conduct significant outreach that benefits WI and beyond.</td>
<td>Our merit review policy does include recognition of outreach impacts by non-extension faculty, but the lack of regular merit exercises limits the effect of the policy. Moreover, most discretionary resources in the Department are targeted toward teaching and research. In addition, developments at the campus level related to the new budget model would seem to work against rewarding such activities. That said, recent discussions related to the re-organization of Cooperative Extension might yield real opportunities in this space. Ultimately, though, our faculty engage in these activities regularly consistent with our applied mission and our grounding in the Wisconsin Idea.</td>
</tr>
<tr>
<td>Review committee recommendation</td>
<td>Department response</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>4.2 Strategize and develop plans in collaboration with UWEX and DNR that targets FWE programs at the county-level.</td>
<td>The re-organization of Cooperative Extension will be the key determinant of how extension programs will be directed in the future. The Department and its extension faculty and staff are willing to engage in local programming, but the demand-side (i.e., county extension faculty) has been uneven. Current efforts in the Department include a wildlife extension needs assessment of county educators and a proposed forestry economics in-service for county educators in the North Central (Wisconsin) Cooperative Extension region.</td>
</tr>
<tr>
<td>4.3 Investigate opportunities for stronger relationships with stakeholder groups to raise the profile of Forest and Wildlife issues to decision-making bodies.</td>
<td>The Department found this recommendation curious. Our faculty regularly contribute to state, regional, and national policy issues. For example, faculty regularly contribute to Wisconsin Department of Natural Resource science and policy review teams. Faculty also serve as scientific advisors on endangered species plans, and as members of government and not-for-profit boards.</td>
</tr>
<tr>
<td><strong>5</strong> <strong>Department Climate</strong></td>
<td></td>
</tr>
<tr>
<td>5.1 The committee recommends annual reviews for all department faculty and staff.</td>
<td>Under the new HR System reviews of academic staff will be routinized with clear reporting expectation and sanctions. We expect all faculty who supervise academic staff to comply with the new system. Since spring 2014, the Department’s Merit Salary Committee has met and reviewed faculty performance, which has assisted the Chair in arguing for salary adjustments.</td>
</tr>
<tr>
<td>5.2 The committee recommends review of the scope, purpose and allocation of all FWE funds managed by UW-Foundation.</td>
<td>The Chair, Development Committee, and Schorger Committee will provide annual reports as appropriate on the scope, purpose, and allocation of all resources managed by both the UW Foundation and Alumni Association and the UW Trust.</td>
</tr>
<tr>
<td>Review committee recommendation</td>
<td>Department response</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td><strong>5.3</strong> The committee recommends a more proactive approach towards recruiting and hiring women and minorities.</td>
<td>With respect to future faculty hires, the Department is committed to a more pro-active and intentional approach to inclusive searches. With respect to graduate students, recruiting has not been an emphasis at the Department level. However, recent successes combining NSF-IGERT and AOF resources indicate that we can build a diverse graduate recruiting model. One option is to build on this experience using our Department RA as match for AOF and individual PI resources.</td>
</tr>
<tr>
<td><strong>5.4</strong> The committee recommends that its Space and Facilities Committee develop a long-range plan that includes intermingling office/laboratory space.</td>
<td>See 6.2.</td>
</tr>
<tr>
<td><strong>6</strong> The department’s focus on ‘internal’ planning should consider:</td>
<td></td>
</tr>
<tr>
<td><strong>6.1</strong> Forthcoming selection of a new department chair</td>
<td>Rickenbach was selected Chair and began service on July 1, 2015, but there is on-going dialogue about future leadership and what leadership model might best serve the Department moving forward. The Department doesn’t see this as an immediate concern, but one to be worked out as other planning activities move forward.</td>
</tr>
<tr>
<td><strong>6.2</strong> Facilities Master Plan</td>
<td>Beginning in Fall 2015, the Department will undertake the creation of a strategic framework as described earlier in this document. That framework will be provided a guiding framework in which to both initiate of review of space and facilities in the Department, as well as develop a space policy and plan consistent with our mission and vision. We expect this topic to emerge as a “major project” to work through post-framework creation.</td>
</tr>
<tr>
<td>Review committee recommendation</td>
<td>Department response</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td><strong>6.3</strong> Strategies to ensure continued SAF accreditation</td>
<td>At least in the short term, our highest priority for the continuation of the Forest Science major and forestry as a discipline on the UW-Madison campus is a faculty hire in silviculture. At the same time, we will also undertake a review of the curriculum to ensure that our teaching capacity and teaching partnerships are best aligned to sustain the undergraduate Forest Science program into the future. We expect this topic to emerge as a “major project” to work through post-framework creation.</td>
</tr>
<tr>
<td><strong>6.4</strong> Undergraduate curriculum review and revision</td>
<td>See 6.3 with respect to the Forest Science degree. We fully expect that the lessons learned during that process will allow us to similarly review our Wildlife Ecology curriculum. It is likely that any substantive efforts related to the Wildlife Ecology curriculum we follow that for Forest Science, but the Department will look for synergies between the majors.</td>
</tr>
<tr>
<td><strong>6.5</strong> Leveraging further opportunities provided through collaboration with WCWRU</td>
<td>Recent efforts have focused on securing the potential to maintain the Wisconsin Cooperative Wildlife Research Unit. Notably, we identified an workable to ensure future federal hires can supervise and mentor graduate students and have further integrated the Unit administrative functions within the Russell Laboratories Administrative Services Center consistent with federal requirements. The Department also advocates for the Unit within the College and with the Wisconsin Department of Natural Resources, as well as nationally. As part of our planning efforts moving forward, it will be essential to include the Unit and its unique contributions and opportunities toward mutual benefits.</td>
</tr>
</tbody>
</table>