Dear Randy,

Please find below my evaluation of the Natural Resources Management (NRM) graduate program at Texas Tech. University (TTU). My evaluation is based upon the self-study document for the period 2005-2011, as well as, the site visit that was conducted on January 23-24, 2012. During the site visit, members of the review committee had the opportunity to meet with faculty and graduate students from both the NRM program and the Texas Cooperative Fish and Wildlife Unit (Coop Unit), and visit on campus facilities and off campus field sites.

The department currently offers MS and PhD degrees in the Wildlife, Aquatic and Wildland Science, and participates in a long distance CASNR Master of Agriculture program. Additionally, the department benefits from the teaching and research services provided by the faculty of the Coop Unit and staff of the U.S. Fish and Wildlife Services.

There was a total of 22 faculty in the self-study document identified as having full-time tenure-track appointment in NRM between 2005-2011. However, the department had faculty turnover and retirements during this period, with only 14 faculty currently remaining on board (one faculty recently passed away). As a result, the NRM program has experienced a drop in the number of offered courses and graduate students, with impacts being disproportionate among disciplines within the department (i.e., fisheries and range/wildland science were more impacted than wildlife science). Additionally, the department's policy for only accepting funded students exasperated the problem due to the low generated external grants and reduction in the Special Line Item funds that the program receives on an annual basis. Significant improvements have occurred over the last year which have been attributed to the new leadership (new chair) and the positive environment that this has brought to the unit, and to the junior faculty and their positive attitude and determination to deliver quality program despite all the challenges. We expect that filling the 5 new faculty positions will further help NRM to move forward with its mission to become a leader in natural resources education and research.
Faculty output and publications in NRM are comparable to peer-institutions (4/year/faculty). In fact, faculty should be commended on their productivity given the recent reduction in available resources, low external funding, and high teaching load (4 classes per year). However, given the uncertainties associated with the Special Line Item and the need to allocate these funds to new hires and junior faculty, it is imperative that faculty seek other sources of funding to maintain both the quality of the research and the graduate program.

**Program Overview and Mission (good)**

The graduate program focuses on preparing students for careers in Natural Resources Management. The department offers one MS and one PhD degree in Wildlife, Aquatic, and Wildland Science. Recent faculty turnover or retirements, the reduction in available resources, and aging facilities have impacted the program and made it challenging for the department to meet its mission of becoming a leader in natural resources education and research. As I mentioned above, the new leadership and junior faculty have worked hard to keep the program running. Additionally, the 5 new faculty positions (in climate science, fire ecology, aquatic science, quantitative applied science, and natural resource planning) are expected to fill a much needed gap in the department, which based on our visit with graduate students and faculty, this gap have resulted in several setbacks and created challenges for students to obtain quality education and graduate in a timely fashion.

Proposed changes to departmental policy aiming at providing better mentoring and more resources to junior and new faculty hires will assist NRM in meeting its goals of becoming a leader in natural resources education and will permit faculty to pursue external state and federal funding.

A major concern was raised regarding TAs allocation to MS students and the expectations from these students to serve as class instructors in introductory courses. These expectations in many cases were not outlined in the student’s contract.

Piggyback courses that combine senior undergraduate and graduate level courses are too many and students have raised concerns about the rigor of some of these offered courses.

For the graduate program, NRM adheres to the requirements of Graduate School, but requires additional 9SCH during the summer session which has been viewed by several senior graduate students as excessive and imposes financial burden on the students.

**Faculty Productivity (very good)**
Faculty’s primary mission is to drive excellence in research, scholarship and creative activity. This could be demonstrated in many ways, including peer-reviewed publications, research funding, citations, national honors, etc. Despite faculty departure and turnover, existing faculty in NRM continued to produce high quality disciplinary and interdisciplinary publications with colleagues and/or graduate students. The average number of publications per faculty is 4 per year which is equivalent to what one would expect from faculty in peer institutions. It should be noted however, that close examination of the self-study document revealed that some faculty were significantly more productive than others. I believe this should be addressed by the department and faculty need to be provided incentives and encouraged to excel in research and scholarly output.

Faculty funding for research has been mostly acquired from the Special Line Item through direct faculty summer salaries and/or support for graduate students, or through state agencies which provides little to no overhead. Given the uncertainties associated with these funds, it is imperative that the faculty increase their efforts in seeking external federal funding. Faculty need to be given incentives and rewarded by the chair and CASNR, and teaching loads should be revisited (being 2 and 2) to permit faculty to develop professionally.

Regarding the commitment of faculty to quality graduate education, as a committee, we felt that existing faculty should be commended for their mentoring efforts and continuing commitment to delivering quality education and research experience to graduate students, despite the shortage of resources and aging classroom and lab facilities (which relative to peer institutions are lacking significantly behind). The committee has also raised major concerns about the ability of the department to attract top candidates for the proposed 5 positions in the absence of attractive start-up funds and the lack of quality lab space.

Another concern was the low number of female faculty in NRM, there was only one female and graduate students have raised this issue as a concern.

**Graduate Students (very good)**

The committee had the opportunity to visit with around 20 graduate students. We found the diversity, quality and maturity of graduate students to be impressive, and faculty should be commended on their successful recruitment efforts. Students shared with the committee the many positives about the program, as well as, their concerns regarding inconsistent expectations, research challenges, training in grants writing and preparation of research thesis proposals and manuscripts, TA allocations, piggyback courses, summer tuition, support for travel to conferences and scientific meetings, and staff support.
The committee although acknowledges the high quality students, has concerns about the distribution of students among disciplines, i.e., the majority of students focus on wildlife research, with very few students focus on aquatic and wildland science. Efforts should focus on addressing the low enrollment in these areas.

State of the art lab facilities are lacking in the department, which forces students to either use labs in other units (e.g., biology), or send samples for analysis elsewhere. Efforts should be made to improve NRM facilities, this is crucial for obtaining external funding, conducting quality research, increase recruitment, and improve unit ranking relative to peers.

Several PhD students had concerns about the lack of opportunities for grant writing workshops which are critical for future academic success. Additionally, concerns were raised about the large number of piggyback courses that do not address the needs of graduate students, and the present lack of appropriate ecological statistic courses in the department and on campus. Students have also raised concerns about the required 9 SCH and financial burden that it had on some. Changes in students’ contract after accepting a position in the department was a concern to some, particularly, one MS student was accepted as an RA to find out later that she will have to serve as a TA, this is of great concern to the committee since it jeopardizes the reputation of NRM and TTU. In this specific case the student was enrolled in the MS program and had no interest in teaching and felt that being the main instructor in an introductory course was a big challenge. The committee recommends that MS students should not be serving as main lecturer in any class, they may however assist faculty with lab preparations and oversee lab activities.

Facilities and resources (satisfactory)

It was clear to the committee that NRM lacks modern infrastructure and lab facilities, and that its faculty and graduate students are distributed over several buildings which clearly has impacts on the quality of research, attraction of top candidates, interdisciplinary collaborations, attraction of large grants, delivery of quality program, and capacity to grow in the future. The unit’s partnership with the Coop Unit alleviated some of these concerns.

The presence and close proximity of the native grasslands community to campus is a big plus for both undergraduate and graduate programs. This area needs to be protected for education and research at TTU.