

# Strategic Plan 2002-2007

## Department of Fisheries and Wildlife Sciences

### **Introduction**

The Department of Fisheries and Wildlife Sciences is poised to become the world's premier comprehensive program in Fisheries, Wildlife, Conservation ecology, and Aquaculture after only 30 years as a department. As such, our programs are essential to Virginia Tech's goal to increase graduate programs and enrollment in programs of global importance. We provide essential facilities and expertise for initiatives in Biodiversity Conservation, Water and Environmental Studies, and Food, Nutrition and Health, we support cooperative research units with U. S. Geological Survey and U. S. Forest Service, and we collaborate with interdisciplinary units, such as Conservation Management Institute, Commercial Fisheries and Seafood Technologies, and Virginia Water Resources Research Center. Our faculty's passion for excellence in research will help place Virginia Tech in the top 30 research universities.

### **Vision**

By 2010 we will be the top program in North America addressing fish and wildlife issues of national and global concern, we will generate new knowledge at the cutting-edge of research in the conservation sciences, we will be recognized by peers for excellence in teaching, research, and outreach, and our faculty will be leaders in their respective disciplines.

### **Department Philosophy**

We in fisheries and wildlife are passionate about natural resource conservation and management and about making a difference in how our society values natural resources. To achieve our vision, we are committed to serving as role models for excellent research, teaching, and public service. We intend our program to be the best place to attract and nurture outstanding people who will lead in making legacy decisions. We are a self-organized, adaptive unit, and we recognize that our effectiveness is best achieved by sharing our time, talents, wisdom, and enthusiasm to enable others to act and to excel. We will continue to improve the status quo and celebrate our successes in changing the world, one person at a time.

### **Mission Statement**

**The goal of the Department of Fisheries and Wildlife Sciences is to be a center of academic excellence in aquaculture, conservation ecology, fisheries and wildlife sciences by providing quality programs in teaching, research and outreach that will enhance fish and wildlife resource management at state, national and international levels.**

More specific objectives are:

- To graduate high quality professional fisheries and wildlife researchers and managers who will assume leadership positions in resource agencies, the professions, citizen organizations and the private sector.
- To provide non-professional students with an understanding and appreciation of fisheries and wildlife conservation so they can assume leadership roles in their communities and foster a land and water ethic within the general public.
- To provide and maintain effective teaching-learning and research facilities, including demonstration and training areas and other facilities for effective on-campus and extended campus education and research.

**To accomplish this we will promote and inculcate the Ethics, Values, and Promise of Fisheries and Wildlife Sciences.**

- Academic integrity fosters professional ethics and influence.
- We are leaders in science and practice of conservation, development, and wise use of wild living systems.
- Good advising and mentoring produce long-lasting results.
- Nurturing, yet challenging, climate for intellectual and skill development.
- Service to community is our obligation and privilege, and teaches how to judge what is beautiful and good.
- To teach is to create a space in which the community of truth is practiced.
- We respect and find joy in diversity and multiculturalism.
- We recruit and work to retain the best and brightest emerging scholars and leaders while considering multiple intelligences.
- Excellent teaching means that students are actively involved in authentic tasks.
- Our research and inquiry with students are expected to meet the greatest needs of society.
- We strive for social and environmental justice.

**Why should people care about the “Department of Fisheries, and Wildlife Sciences?”**

- We are the only teaching program in Virginia that leads to certified fisheries or wildlife scientists. We are the only program conducting research and practicing extension in fisheries and wildlife in Virginia.
- We provide a fundamental understanding of natural resource issues and their solutions among the general public and university student population.
- We are educating a significant number of the next generation of natural resource leaders, scientists, and managers.

- We are addressing natural resource issues important to sustained economic development of the state and nation.
- We are a Land-Grant institution responsive to the information needs and problems of legislators, landowners, voters, and taxpayers.
- We provide research information and develop new technology and innovative approaches leading to enlightened fisheries and wildlife management in the Commonwealth, the nation, and world.
- We provide national and global leadership to our professions.
- We are a nationally recognized program already among the top 3 fisheries and wildlife programs in the nation.

### **Research and Scholarship**

We will enhance the stature of Virginia Tech as an internationally recognized university for research and scholarship, as indicated by competitively awarded extramural support for research, the recognized quality of our faculty's scholarship, and the rankings of our graduate programs.

#### **1. GOAL: Increase the stature of Virginia Tech as a national research university in quality of research and scholarship.**

Attract, recruit, and retain world-class scholars via new initiatives in conservation biology (herpetology) and water and the environment (wetlands and watershed sciences)

Increase research collaborations and scholarly publications with the Conservation Management Institute

Produce scholarly works of the highest quality, especially focused on solving important conservation problems whether local, regional, national or international dimensions

Organize symposia and conferences on emerging issues of regional and national concern.

Emphasize the essential role of scholarly publications to advance the sciences and study. Create a fund to pay page charges for publications by students

#### **2. GOAL: Increase the stature of Virginia Tech as a national research university in quantity of research and scholarship.**

Increase scholarly publication to 4 per faculty per year on average (currently less than 2)

Add new research facilities and unique research capabilities to at least 2000 sq. ft/per faculty

Invest new faculty hire in emerging area of wildlife conservation.

Add new technical support technician and invest in new captive animal research space

Increase sponsored research expenditures to \$200,000 per faculty (average per year)

Expand our capabilities in human dimensions of biodiversity conservation via adjunct appointments and college, and multi-university collaborations

Explore the development of formal partnerships with the Smithsonian Institution, World Bank, and World Wildlife Fund, Conservation International, Wildlife Conservation Society.

### **3. GOAL: Develop mechanisms for accountability and a culture of continuous improvement.**

Consider change of department name to reflect broader emphasis on the conservation sciences. e.g. "Department of [ Conservation Ecology, ] Fisheries, and Wildlife Sciences" or something shorter

Revise and discuss departmental guidelines and standards for promotion, tenure, and post-tenure review.

Increase balance on external advisory board to represent diverse publics and emerging trends.

Hold annual meetings of faculty and department head on faculty annual reports and annual expectations.

### **Graduate Education**

We will increase the quality of graduate programs and the number of students completing graduate degrees with a research component at Virginia Tech.

#### **1. GOAL: Increase the quality of the graduate programs**

Increase the numbers of doctoral graduates to 6 per year (compared to 3/yr historically).

Develop departmental standards and requirements for Masters and PhD study.

Encourage and facilitate real interaction with other departments via interdisciplinary studies.

Lead a University effort to create a graduate degree in Conservation Ecology, Policy, and Management.

Employment of graduates in fisheries and wildlife will exceed 95%.

**2. GOAL: Increase the diversity of the graduate student population.**

Increase faculty and student recruiting with a long-range vision via Minorities in Agriculture, Natural Resources, and Related Sciences and other professional organizations.

Create and nurture partnerships with selected Historically Black Colleges and Universities.

**3. GOAL: Change the ratio of full-time graduate to undergraduate students to support the research mission.**

Change the balance of undergraduate and graduate students to approximately 3 to 1 (currently 2001 it is 4.5 to 1).

Manage enrollments at approximately 30 doctoral students, 40 masters students, and 220 undergraduate students with undergraduates split evenly between fisheries and wildlife sciences.

Encourage scholarly publications with students by supporting page charges and valuing publications coauthored with students equally with single authored publications

**Undergraduate Education**

We will ensure that the content and quality of undergraduate educational experiences at Virginia Tech prepare our students to lead fulfilling, productive lives and to make contributions to society.

**1. GOAL: Maintain a current, relevant, and comprehensive undergraduate curriculum.**

Add new curricular option in aquaculture.

Engage in intensive curriculum review to develop outcomes-based curriculum.

Create a senior teaching experience for all in-honors majors.

**2. GOAL: Strengthen the quality of undergraduate instruction.**

Incorporate service learning activities and outreach activities in the curriculum.

**3. GOAL: Create learning experiences for undergraduate students that maximize the benefit of attending a large research university.**

Encourage undergraduate research

Revise curricula with an emphasis on increased scientific rigor and preparation for professional and graduate school.

**4. GOAL: Expand the university's leadership role in the effective integration of instructional technology with pedagogy.**

Investigate the delivery of the Principles course and other courses to a broader audience, including Historically Black Colleges and Universities and international students

**5. GOAL: Manage the undergraduate enrollment to ensure a quality undergraduate experience and fiscal responsibility.**

Maintain and monitor continuing enrollment requirements to ensure students are progressing toward degrees. Target enrollments and adjust faculty FTEs to approximate a 16:1 student - faculty ratio (~2 doctoral, 3 masters, and 12 undergraduates per FTE)

**6. GOAL: Welcome and nurture diversity of people and ideas at the university.**

Partner with other units on campus (Women's Studies, Black Studies, Native American Studies, and Center for Interdisciplinary Studies) to develop a Culture and Conservation course.

Seek university collaborators in rural sociology to develop and coordinate doctoral program in natural resources sociology

**Outreach**

We will strengthen Virginia Tech's leading role in the transfer of knowledge and expertise between the university and society, to the benefit of both.

**1. GOAL: Sustain the university's commitment to the outreach mission.**

Launch an outreach effort to educate Virginia's youth on endangered species, resources management, and causes of species imperilment.

Sponsor biennial conference on biodiversity conservation.

Support and encourage the Wildlife Society and American Fisheries Society to develop outreach efforts.

Increase the number and quality of news articles and mass media articles written by faculty on conservation and management issues based on the best quality science.

Provide accountability for outreach efforts via annual faculty reviews, promotion and tenure reviews, and post-tenure reviews.

**2. GOAL: Expand quality life-long learning programs.**

Develop new courses for online delivery

**3. GOAL: Strengthen the relationship between Outreach and Extension.**

Increase attendance of faculty members at annual Cooperative Extension retreat.

**4. GOAL: Organize, coordinate, communicate about, and integrate the various economic development activities at Virginia Tech.**

Promote nature-based tourism and sustainable aquaculture via conferences and workshops

**5. GOAL: Strengthen Virginia Tech's role as a recognized leader in distance and distributed teaching and learning, research and scholarship, and outreach.**

Increase the number of faculty teaching shortcourses and workshops conducted via distance technology