Dean’s message

Successes abound in the Quinney College of Natural Resources. A measure of our success is reflected in the employment statistics for recent graduates. The USU Career Services Office indicates that over 70% of the QCNR graduates from 2013 found gainful employment in natural resource professions. Students completing the BS degree had mean starting salaries of $35,700; those with an MS degree averaged $47,400, and PhD recipients started at $55,000. It is a positive sign that society is once again investing in the sustainability of our planet by hiring the next generation of natural resource professionals.

Faculty in the QCNR received record amounts of research funding during the past year. Interdisciplinary, large-scale, ecosystem-based investigations dominate our research with studies examining links between snow geese, arctic vegetation, and polar bears to impacts of climate change on water resources in the Intermountain West. Our focus is shifting from assessing impacts of changing climates to ways society can adapt to these new environments. Success in these endeavors is of critical importance.

We hope you enjoy reading about our activities and sharing in our adventures. Best wishes to all for the coming school year.

Best wishes,

Chris Luecke

Facts and Figures

Externally funded research projects continue to define activities of faculty and students in our College. The enthusiasm and diligence of our faculty to secure this funding is a testament to their dedication to the natural resource professions. The state of Utah provides about 20% of our funding. This percentage is a bit less than it has been in the past, because of the increase in other sources of research funding, not a decline in state support. The generosity of our donors is especially helpful in that these funds provide us with the flexibility to support special activities such as undergraduate research, student travel to scientific meetings, and internships programs.

The National Science Foundation provides about half of our research funding. The iUtah project, a collaborative venture among 8 state institutions to build capacity in water research, education, and outreach, accounts for half of the NSF funding. Other federal agencies (US Forest Service, Bureau of Land Management, Geological Survey, NASA, and the Bureau of Reclamation) contribute substantially to our programs. Our state partners at the Divisions of Wildlife Resources, Water Quality, and Transportation play key roles in our efforts to fulfill the land-grant mission of the University. QCNR faculty work closely with environmental organizations to promote the sustainability of ecosystems and the communities that depend on them. Foundations that work with us allow us to better understand our western landscapes and to better educate the next generation of natural resource professionals.
New Research

Dendrochronology
Jim Long
The College of Natural Resources houses Dr. Long’s ‘Dendro Lab’. Jim’s Ph.D. student Justin DeRose established the lab in 2005 in response to the need for state-of-the-art tree-ring analyses. Federal researchers and graduate students contribute to our understanding of wildfire beetle interactions, spatial patterns of beetle outbreaks, and extreme-climate variation over the past 1,200 years. Tree-ring reconstructions documented multiple droughts that lasted for as long as three decades. The Dendro Lab fosters inter-disciplinary research among researchers across campus and serves as a hub for inter-institutional research. The Dendro Lab is also an excellent place for QCNR undergraduates to find meaningful employment, providing an important first position for these enthusiastic students.

Sage Grouse
Terry Messmer and Nicki Frey
Drs. Terry A. Messmer and Nicki Frey, with a host of current and former graduate students, continue to provide the scientific basis for the implementation of Utah’s Greater Sage-grouse Conservation Plan. During the past 17 years, they collaborated with over 2,000 members of local sage-grouse working groups to bring science to decisions regarding sage-grouse conservation and community sustainability. Their collective efforts demonstrated that locally driven incentive-based approaches to sage-grouse conservation can benefit the species and engaged stakeholders. Their research continues to validate their motto, “If it’s not good for the community, it’s not good for wildlife.”

Arctic Lakes
Phaedra Budy
The Arctic is warming faster than any other region on the globe, with a 2.1 °C increase in air temperature observed during the last 30 years. Dr. Phaedra Budy and her students are using a combination of long-term monitoring, computer simulations, and field experiments to better understand the effects of climate change on arctic fish populations. Results indicate that individual fish will eat and grow more during warm summers, but the number of overall fish in lake populations will be reduced. Dr. Budy is experimentally warming lakes in northern Alaska to create more ice-free days and directly measure how fish respond. This work will be the first of its kind, and an important step in understanding the impact of climate change on arctic ecosystems.

Climate Change
Peter Howe
Research by Dr. Peter Howe shows that people around the world recognize that the climate is changing as they experience warmer temperatures and more extreme weather events. Here in Utah, a majority of the population thinks that global warming is happening. A new online mapping tool being developed by Dr. Howe with colleagues at Yale University will provide unprecedented geographic detail on how people perceive climate change across the U.S.
Undergraduates

This year 402 undergraduates were enrolled in QCNR. Ninety-eight students completed the requirement for the BS degree, including 31 majors in Wildlife Science, 17 in Environmental Studies, 11 in Recreation Resource Management, and 8 in Conservation and Restoration. Congratulations to all our graduates and best wishes for the start of your careers.

The QCNR partnered with Logan City, the United States Forest Service, and the Utah Division of Wildlife Resources to offer 18 internships. Students are working in wildlife, fisheries, timber, sustainability, emissions, soils, recreation, trails, and interpretation.

Graduate Students

Forty-seven QCNR students were awarded graduate degrees during the 2014 commencement ceremonies. Ten students received doctoral degrees, 24 MS degrees were awarded, and 13 students earned the Master of Natural Resource Degree. Many of these graduates are already working in agencies or universities across North America.

Internships

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Where are they now?

Jascha Zeitlin  
MS Recreation Resource Management 2009  
Natural Resources Specialist US Forest Service

Lisa Winters  
MS Ecology 2014  
Colorado River Fish Biologist

Ryan O’Donnell  
MS Ecology 2013  
Biologist at USGS SW Biological Science Center

Robins Awards

The Robins Awards are the most coveted of all Utah State honors. People from the Quinney College of Natural Resources received an unprecedented number of awards in 2014.

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Getting Involved

NR Week was held in late March. Activities included the Predator vs Prey run, Empty Bowls Food Bank fundraiser, the Logger’s Ball, and the photo contest.

Participants in the Predator-Prey run

Photo contest
Student Recruitment

Mykel Beorchia, our academic advisor, and Aimee Tallian (PhD Student) visited 400 high school juniors in Indiana who were taking Advanced Placement courses in biology, calculus, and environmental science. Aimee shared her research on predator-prey interactions to help students understand how the principles learned in AP courses relate to research. They also met with high school and transfer students from Utah, Idaho, California, and Wyoming.

New Quinney Scholars for Fall 2014

- Sierra Allen is from Grantsville, Utah and will be studying Rangeland Resource Management.
- Erin Butikofer comes to USU from Robins Air Force Base, Georgia and will be studying Wildlife Science.
- Bret Moosman comes to USU from Heber City, Utah and will be pursuing a degree in Wildlife Science.
- Cheyne Warren is from Salt Lake City, Utah and will be studying Wildlife Science.
- Darianne Willey is from Boise, Idaho and will be studying Watershed and Earth Systems.
- Margaret Hallerud is from Lombard, Illinois and will be pursuing a degree in Wildlife Science.

Faculty Highlights

Sarah Null

Sarah Null is a water resources modeler working to understand how aquatic ecosystems can be managed to enhance water resources. Dr. Null’s research philosophy is that high quality science can improve water management and policy. Her primary research interests include management of water quantity and quality, analysis of water infrastructure, and development of ways to minimize the impacts of climate change. During the past year, she published three high-quality, peer-reviewed journal papers and had her work featured in multiple newspaper and magazine stories.

Jim Lutz

Jim Lutz, assistant professor in Wildland Resources, is developing the Western Forest Initiative. In this research project, Jim examines the community dynamics of late-successional forests in western North America. Dr. Lutz compares the formation and development of forests in 26 hectare plots in Yosemite National Park, the Gifford-Pinchot National Forest in Washington, and Cedar Breaks National Monument in Utah. The analysis of birth, growth, and death of over 30,000 marked trees allows Jim and his research team to understand the impacts of climate variability on forest ecosystems. Jim collaborates with researchers studying similar plots in 50 other locations across the globe to assess spatial and temporal patterns of forest development.

Claudia Radel

Claudia Radel is a geographer who studies human-environment interactions. She’s currently involved in a number of different projects, examining labor migration, gender, and social inequalities in natural resources. In her National Science Foundation project, Claudia seeks to understand how household activities shape the impact of labor migration on agricultural and natural resource use in Mexico and Central America. This research has important implications for understanding the wellbeing of people in low-income communities.

Dr. Radel was also part of a small team of U.S. climate change experts working to facilitate development of university-level climate change curriculum for six countries in S.E. Asia. Faculty at 12 universities in the participating countries collaborated to develop four new courses, including an interdisciplinary social science course on reducing emissions from deforestation.
New Initiatives

2015 Year of Water
The Quinney College of Natural Resources will participate in two University-wide initiatives during the coming year. We will be celebrating the "Year of Water" during 2015 to commemorate the 50th anniversary of the Utah State Water Research Laboratory and the continued excellence of water science at USU. "Year of Water" highlights will include Student Posters on Capital Hill, the Water Lab Open house for Utah Legislators, Spring Runoff Conference, and the 50th Anniversary Party for the Water Lab. It should be a fun year. Congrats and thanks to Mac McKee, Director of the Water Lab, for bringing these events together.

Climate and Water
Utah State University will also launch a new research initiative in Climate and Water. The Quinney College of Natural Resources will be playing a large part in this plan to assist the state and region in efforts to prepare for predicted climate-related changes to water resources in the Intermountain West. We plan to focus on understanding the links between evapotranspiration, ground water, and snow pack on the distribution and allocation of water resources for our region.

Welcome to Logan

New Department Heads

Peter Wilcock arrived in Logan on July 1 to begin his tenure as Department Head of Watershed Sciences. Peter comes to us from Johns Hopkins University where he was full professor in the Department of Geography and Environmental Engineering. Peter was elected to the American Geophysical Union Fellows in 2013 for his exceptional scientific contributions to our understanding of sediment dynamics in rivers and his eminence in the field of fluvial geomorphology.

Chris Lant arrived in early August as Head of the Department of Environment and Society. Chris comes to us from Southern Illinois University where he chaired the Department of Geography and Environmental Resources and directed the University’s Council on Water Resources. Chris’ expertise in water policy, environmental economics, and environmental law will augment the College’s activities in these areas.

Transitions

Dr. Todd Crowl left Utah State to become director of the Southeast Environmental Research Center at Florida International University. We thank Todd for his 23 years of service to USU and the Quinney College, and wish him and Rita Teutonica well in their new positions in Miami.

Dr. Chris Call retired from the Department of Wildland Resources this past December. Chris is now Emeritus Professor after serving the University for 26 years. Chris was recipient of the QCNR Teacher of the Year Award in 2011 and stays in touch with a host of past students through activities in the Society of Range Management.

Dr. Richard Toth retired from the Department of Environment and Society after serving as director of the Bioregional Planning Program for the past 16 years. Dick was named a Fellow of the Council of Educators in Landscape Architecture in 2014. Dick plans to keep a hand in the Bioregional Planning Program during the coming years.

New Faculty

Dr. Jerome Gaeta joined the faculty in Watershed Sciences this summer. Jerome comes to us from the Center for Limnology at the University of Wisconsin in Madison. His previous research focused on the effects of woody debris on fish communities in lakes. Jerome hopes to begin research projects on Bear Lake and Utah Lake.

Joe Wheaton brings drones to remote sensing at USU

In 2015 students and faculty will help with Logan River planning