Dr. Joanna Endter-Wada of the Department of Environment & Society and four of her colleagues are being lauded for an interdisciplinary research effort that makes innovative use of GIS technology to help growing communities manage scarce water supplies in arid and drought-prone regions.

Enter-Wada, along with USU irrigation engineering alum Fayek Farag PhD’03 and USU faculty members Christopher Neale and Roger Kjelgren are recipients of the 2012 ESRI Award for Best Scientific Paper in Geographic Information Systems. The researchers were recognized at the 2012 Annual Conference of the American Society for Photogrammetry and Remote Sensing in Sacramento, Calif.

The team’s winning paper, Quantifying Urban Landscape Water Conservation Potential Using High Resolution Remote Sensing and GIS, was published in the November 2011 issue of Photogrammetric Engineering and Remote Sensing. Research described in the paper was funded primarily by a USDA-CSREES National Research Initiative Grant and also supported by the Utah Agricultural Experiment Station.

“The paper describes research we initiated more than a decade ago, when we first worked with water managers in the Utah cities of Layton, West Jordan and Logan,” says Endter-Wada. “We selected growing communities, where increasing urban demand for water is causing re-allocation of water from agricultural to urban uses.” To read the full article by Mary-Ann Muffoletto visit: GIS Award
It has been a busy spring and summer in Logan. As you can see from this report, our graduation ceremonies were full of fun and festivities. We congratulate the 66 students who received BS degrees and the 60 students who completed graduate programs in the college. I had the honor of presiding over the CNR commencement and was moved by the mixed emotions that these transitions bring. Our graduates were excited to face the future, concerned whether they’ll do well in their new professions, and somewhat saddened to be leaving the friends, colleagues and teachers who have been a part of their lives these past few years. The parents’ emotions seemed less mixed – a lot of happy and proud faces.

We are experiencing a number of transitions in the college. In addition to my new position as interim dean, we have new interim department heads in Watershed Sciences (Chuck Hawkins) and Wildland Resources (Mike Kuhns). Johan du Toit received a well-deserved sabbatical leave after his six years of exceptional leadership at the helm of Wildland Resources. While on leave, Johan will continue his research programs in Europe and southern Africa.

John Bissonette is retiring as Unit Leader of the Utah U.S. Geological Survey Cooperative Fisheries and Wildlife Research Unit. John expects to spend additional time riding the backcountry of northern Utah and finishing a variety of academic projects. Dr. Phaedra Budy will take over the Unit Leader position and will maintain the productivity of our group. In the next issue of the newsletter, we will highlight the new directions the College is taking in our academic, research and extension programs. Stay tuned for more news.

College of Natural Resources Graduation Snapshots 2012
WILDLAND RESOURCES Leadership Transition

After serving six years as head of the Department of Wildland Resources, Dr. Johan du Toit has chosen to focus his efforts on research and step down as head. His colleague, Dr. Michael Kuhns, stepped in as interim department head on July 1.

During his tenure, du Toit worked hard to pave the road for students’ success. He started the Annual Graduate Symposium, which allows first-year graduate students an opportunity to present their research plans years before their formal presentations traditionally begin. During the exercise, the graduate students receive honest feedback from professors and fellow students in a non-threatening environment.

Du Toit hopes this exercise motivates the students to lay out their research plan early, which he says is the key to success—the execution of a well thought-out plan.

At the undergraduate students’ request, du Toit gave the motivational speech at the 2012 CNR graduation. A week prior to his speech, du Toit visited with leaders of NR agencies, such as the Utah Division of Wildlife Resources, to provide the students with timely tips on how to be hired during these tough economic times.

The students want to thank Department Head du Toit for all his efforts on their behalf.

Professor Michael Kuhns became interim department head for Wildland Resources on July 1.

As he looks back over the past six years, Kuhns says, “Johan has done many good things for his department and has set the stage for continued success into the future.”

Kuhns moved to Logan in 1992 after serving as Extension Forestry Specialist at the University of Nebraska.

For the past 20 years, Kuhns has served Utah and USU by providing extension expertise in the areas of urban and community forestry, landscape tree selection and care, forestry in the wildland-urban interface, and rural forestry/forest education.

Kuhns’ publications include Trees of Utah and the Intermountain West and Trees of Nebraska and two tree guides entitled What Tree is That?

In his new role of department head, he looks forward to helping the faculty and staff of the Wildland Resources Department as they conduct the important research and education programs for which the department is known.

Charles Hawkins - WATS Interim Department Head

Professor Charles “Chuck” Hawkins began serving as interim department head for the Department of Watershed Sciences Jan. 1, 2012, when the previous department head, Chris Luecke, became interim dean. “I’m very pleased that Chuck has agreed to serve in this position,” Luecke says. “We thank him for his continuing efforts to enhance the department.”

An aquatic ecologist, Hawkins serves as director of the USU-based Western Center for Monitoring and Assessment of Freshwater Ecosystems. He joined Utah State in 1983.

“As interim head, my main goal is to keep the department intellectually vibrant, a world leader in interdisciplinary water science and financially healthy,” Hawkins says.

Watershed Sciences was honored in March 2011 with the university’s Department Teaching Excellence Award. The department offers undergraduate degree programs in geography, watershed and earth systems and fisheries and aquatic sciences. Master’s and doctoral degrees are offered in ecology, fisheries biology and watershed science, with specializations in aquatic ecology, conservation biology and fisheries management. To read the full article by Mary-Ann Muffoletto, please see WATS Dept Head.
ENVS Class Promotes Local Foods

Fresh produce, jams and honey products were just a few of the items available to buy at the first-known farmer’s market on the Quad at Utah State University this past Spring.

USU students promoting various environmental causes, and at least six local businesses, took refuge under tents in the rain for one of the many activities scheduled throughout the week to promote sustainability within the USU and Cache Valley communities.

The farmer’s market was part of USU Earth Week, a collection of activities coordinated by USU’s Sustainability Office and faculty member Roslynn Brain’s sustainable living class. The 35 students in Brain’s class spent an entire semester preparing for the week, which concluded with a campus-wide Sustainability Fair.

“It’s fulfilling in a way to get to see your hard work on display and see how people respond to it,” said Kelly Anderson, a senior Environmental Studies major. “Hopefully, it will instill passion in the participants to live a more sustainable life.”

Anderson’s booth had a poster asking people to “Join the Mooov-ment” against mass production of red meat. “Red meat has twice the carbon footprint than other meats,” Anderson said. “We’re trying to get people to realize they can make more sustainable food choices.”

Brain, an assistant professor in USU’s Department of Environment and Society and Sustainable Communities Extension Specialist, said Earth Week was designed as an event “where (my) students could implement all that they learned throughout the semester in a manner that fostered pro-environmental change in others.” ■ See Local Foods, page 5
While there was seemingly no shortage of insects that a small army of children with small nets managed to collect at Denzil Stewart Nature Park, one little girl brought home the gold.

The brilliant yellow of a goldenrod crab spider had both parents and children raving as they admired it sitting atop an equally colorful flower inside a glass jar.

"Look at that thing! That's awesome!" proclaimed one. "That is a beautiful spider!" declared another.

Forty-five minutes earlier, it's hard to say how many of the kids and adults in the park would have had an appreciation for a spider. But following a presentation titled "Give a Bug a Hug" by local entomologist Virginia Bolshakova, young and old alike seemingly couldn't wait to wade into deep grass and explore trees and rocks in search of unique insects. "I'm really excited," Jamie Clark admitted.

A student at Utah State University, Clark has made Cache Valley No Child Left Inside Week her master's project. The insect appreciation class was the first of a dozen different events scheduled throughout the week at parks in Cache Valley.

"I...came up with the idea right after I started last fall," Clark said. "I...love working with kids, and [know how] important it is to get kids outside and into nature. So we thought it would be fun to do a couple of classes during the week and really get kids out there, get them involved and show 'em how important it is." All of the activities led up to a bioblitz at 10 a.m. Saturday, when participants gathered at all three locations to survey living creatures in the area.

"We're going to have everybody bring a digital camera and take pictures of what they're finding," Clark said. "And then we'll have a contest to see how many different species of bugs and insects and birds and wildlife that they can find."

The events were sponsored by the Cache Valley chapter of No Child Left Inside, the Bridgerland Audubon Society and Stokes Nature Center. To read the full article by Jeff Hunter please see No Child Left Inside

Promoting Local Foods

Brain said Earth Week has been “very well received by the community,” and that it helped heal what she saw as a “disconnect between the community and the school.”

“I definitely think Earth Week will become a yearly staple on campus,” Brain said. “We have had such a positive response from faculty and students, and attendance at our events has been great.”

Daniel Bishop, a student of Brain’s spearheaded the farmer’s market activity.

“The Cache Valley population is largely unaware of the benefits that local food production has,” Bishop said. “It is not only environmentally friendly, but it connects the consumer with the grower, and it helps us invest in the local economy.” USU also has a Sustainability Council, headed up by Nat Frazer, former dean of the College of Natural Resources.

“I think sustainability is such a broad topic people don’t know where to start to make changes in their daily lives,” Anderson said. “They can start by buying local food or walking or riding a bike as opposed to riding a bus, for instance.”

According to Brain, more than 500 students signed petitions for different environmental causes. Pledges ranged from recycling to biking to school. To read the full article by Kevin Opsahl please see Local Foods

Vendor Lis Butcher, left gives a sample of her jam to USU employee Melissa Ranglack during a gardener’s market on the USU campus.

Gabby Baker, age 4, checks her net to see if she caught a bug while attending ‘Give a Bug a Hug.’ The event was part of ‘No Child Left Inside Week.’

To read the full article by Jeff Hunter please see No Child Left Inside
NEW understanding of animal behavior can transform the economics of raising livestock, and the landscapes they are raised on, researcher Fred Provenza believes.

The Wildlands Resources Emeritus Professor at Utah State University, Dr. Provenza has spent decades digging deep into animal learning and behavior. For instance, livestock can add weeds to their daily menu - not because they are forced to, but because they get a payback from the weeds’ nutrients. Or, stock can be trained not to eat certain plants. Provenza’s team has trained sheep to mow vineyard grasses without touching the vines.

The big picture, Provenza thinks, is creating livestock herds adapted to specific landscapes. These herds could browse a wide suite of plants, denting the competitive vigor of weeds, and maintaining their health and vigor through their intake of different compounds. But achieving this will mean a new angle on farm biodiversity, and on animal behavior.

"We have to move away from this idea that animals are machines, and that genes are destiny," said Provenza, who ran a Colorado sheep ranch before becoming a scientist. "Animals are learning from conception on, and there’s a million knobs and dials to tweak along the way. While they are learning, genes are switching on and off in ways that allow the whole genome to adapt to what’s happening. If you can wrap your mind around that, you create a ton of opportunities."

When Provenza began working on learned behavior in animals, the conventional scientific wisdom was that animals couldn’t select their diet based on nutrient or toxin feedbacks. “They have this huge rumen, this vat, and everything is mixed together,” said Provenza on the thinking of the time. "How are they going to pick up signals?"

Thanks to a research flock of goats that refused to browse palatable new growth on blackbrush, a forage shrub, and instead chose to eat old woody growth, Provenza’s team established that animals definitely do alter their diet in response to plant compounds.

To read the full article by Matthew Cawood visit: Farm Weekly

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Stephanie Graham Awarded Scholarship

Congratulations to Stephanie Graham a master’s student in the Department of Wildland Resources, mentored by Terry Messmer, for being awarded the Rusch Memorial Game Bird Research Scholarship. The award will be presented to Graham in October 2012 at the Wildlife Society’s 19th Annual Conference in Portland, Ore. The award includes a certificate and generous scholarship payment. The selections was made from a nation-wide group of graduate students conducting research on game birds—the competition was stiff. Good job, Stephanie!
The Minnesota River Basin, which stretches across southern Minnesota into neighboring South Dakota and Iowa, fuels the upper Midwest’s breadbasket. The lifeblood of the rich agricultural region, the river has become one of the nation’s most polluted waterways.

Fingers point to intense farming practices and the resultant runoff, but Dr. Patrick Belmont, assistant professor in the CNR’s Department of Watershed Sciences, says the causes are much more complex. “A web of human and natural interactions, including a changing climate and the river’s geologic history, has altered the basin,” says Belmont.

Belmont and colleagues from University of Minnesota, University of Illinois, Johns Hopkins University, Iowa State University and University of Washington recently received a $4.3 million grant through the National Science Foundation’s Water, Sustainability and Climate program to develop tools to identity “hot spots” of environmental sensitivity. The research team, based at the University of Minnesota will offer this information to target remediation efforts.

“We’re using a human-amplified natural change or ‘HANC’ approach,” Belmont says. “This hypothesis says areas of the landscape most susceptible to human, climatic and other external changes are those undergoing the highest rates of natural change. “Our aim it to determine the land and water management options needed to produce a sustainable, resilient thriving system that balances human and environmental needs,” Belmont says.

Erik Hegeaman (left) was honored for a presentation she delivered at the 2012 Society for Freshwater Science annual meeting. Her talk was based on a paper she authored with Scott Miller (right) and Karen Mock of USU’s Department of Wildland Resources.
NR alum Paul N. Scherbel ’40 (range management) was honored in the Casper (Wyo.) Star Tribune’s “They Served with Honor” section.

Everywhere the fleet tug went, it towed. Its job was to haul destroyers, and when a ship was in trouble, the tug was there to help rescue—Cmdr. Paul Scherbel was the one in charge.

After earning his bachelor’s degree at USU, Scherbel enlisted in the Navy on Jan. 15, 1941. His pay was $21 a month. In July, he was sent to Columbia University to be a midshipman, which involved classroom work and a lot of marching.

An APC-109 auxiliary personnel ship was his first assignment, and the ship was to haul Marines to the beach. But Scherbel caught pneumonia. When he got out of the hospital in San Francisco six weeks later, he joined the fleet tug USS Pakana ATF-108. The Pakana carried about 100 men and was about the size of a destroyer. Before long, the captain promoted Scherbel to navigator and second officer. The four quartermasters helped Scherbel manage the navigation, but “I was basically in charge of the ship,” he said.

Scherbel recalls one rescue mission—the Japanese kamikazes had attacked the destroyer USS Bush. On the way over, kamikaze flew right over the Pakana. No one saw it coming. “I could have thrown a rock where I was,” he said. When the fleet tug arrived, the Bush had sunk. The Pakana crew spent the night sending out a two small boats, shining an arc light, searching for survivors.

Over the course of the war, some Pakana crew members were injured by shrapnel, but, “we never lost a man,” Scherbel said.

After returning home Scherbel worked for the Soil Conservation Service and was the first surveyor to serve on the Board of Registration of Professional Engineers and Professional Land Surveyors. To read full article by Margaret Matray please visit: Casper Star Tribune

Paul N. Scherbel

NR alumni James Geier ’78 (fisheries and wildlife) hiked with his eighteen-year-old son Jonah, who was born with cerebral palsy, three miles, and 480 feet over slickrock trails, and red rock steps to share with Jonah a worldwide symbol of the Arches.

“We love the National Parks of Utah.” said James’ wife Carla Zambreno. They have become an annual tradition for our family. We took Jonah to Capitol Reef Nat’l Park for its 75th Anniversary Celebration on August 2, 2012.

Up until last year, Jonah travelled by backpack. When he reached 70 lbs., James contacted Dixon Roller Pack to build a travois for Jonah. The first one designed for a person. It has opened the door for many more years of hiking.

James and Carla transferred to CNR in 1974 from a college in Chicago, Ill. They both enrolled in the fisheries & wildlife program. After graduation they made Logan their home where they raised three children Noah, Laura, and Jonah.
In Memory

1941  Sidney B. Ralph, Forestry
1950  Donald E. Nagel, Forestry
1950  John H. Engelken, Forest Management
1951  William F. Bones, Jr., Forest Management
1952  Donald C. Laub, Geology
1952  Carl I. McCammon, Ecology-F&W
1953  Harold McElroy, Forest Management
1955  Robert I. Smith, Fisheries & Wildlife
1956  Eugene Paul Ruetz, Forest Management
1956  William J. Clark, Fisheries Management
1957  Temple A. Reynolds, Fisheries & Wildlife
1959  Duane Lloyd, Range Watershed Management
1960  Jerome L. Mahrt, Game Management
1963  Dallas T. Taylor, Game Management
1963  Jerry Lynn Green, Range Management
1963  William J. Hoffmeier, Forestry
1967  Jay T. Hughes, Fisheries & Wildlife
1967  William A. Larson, Forest Recreation
1968  Kenneth G. Walker, Range Management
1968  John C. Peterson, Fisheries & Wildlife
1970  Andrew J. Kemmerer, Ecology-F&W
1971  Tommy R. Gilliam III, Forest Recreation
1974  Robert William Johnson, Range Science

Early photo of Forestry Students at Summer Camp
(date estimate—late 50’s)

*If you can identify these students—please let us know by sending an email to shauna.leavitt@usu.edu.

Alumni Receptions

♦ The Wildlife Society Annual Conference, Portland, Ore.
  Monday, October 15, 5:30-7:30pm, Location: Oregon Convention Center, C125

  Thursday, October 25, 6:30-8:30pm, Location: TBA

♦ Society for Range Management Annual Meeting, Oklahoma City, Okla.
  Tuesday, February 5, 6:00-8:00pm, Location: TBA

The new Wildland Resources Interim Department Head, Mike Kuhns, will be at all three receptions to greet alumni and friends and give an update on the department and programs.

Please check conference programs to confirm reception locations.

See the newsletter online http://www.cnr.usu.edu/htm/alumni