College of Natural Resources





College ^{of}Natural Resources

MISSION

The College of Natural Resources provides education, research and outreach in integrated natural resources management and environmental education, and in paper science. The College of Natural Resources:

1. Provides undergraduate and graduate instruction that combines theoretical concepts with practical experience, such as laboratory and field oriented courses, summer camp, internships and special projects.

2. Promotes scholarly activities that enhance the creation or application of knowledge or contributes to the resolution of environmental and natural resource management issues, especially through student research.

3. Shares faculty and student expertise with citizens, communities, agencies and industries through outreach, scholarship, and consulting.

PHILOSOPHY STATEMENT

The College of Natural Resources embraces the philosophy of integrated natural resource management. All students in the College, regardless of major, need to understand and appreciate relations between natural resources and human needs. They need to understand the scientific method and its application to environmental problem solving. Critical thinking and problem solving strategies based on integrated resource management and education will be promoted though the College's teaching, scholarship, and outreach activities.

The College is composed of faculty, staff, and students, each with their own expertise, strengths, attitudes, and values. This diversity contributes to the education offered by the College because of our integrated philosophy. Responsibilities and appointments vary among College faculty and staff. Most have teaching appointments, some have extension appointments, while others serve mainly in research or administrative capacities. Faculty and administrators will capitalize on the strengths and diversity of College personnel to promote integrated resource management through teaching, scholarship, and outreach.



Cover photo: "Bear denning" with the Wisconsin Black Bear Research Project – Spring 2010 (Photo by Steve Menzel)



For the fiscal year beginning July 1, 2009 and ending June 30, 2010

Ongoing CNR initiatives and noteworthy accomplishments

Academic Initiatives/Accomplishments

- Graduation
 - 248 undergraduates in the CNR received bachelor degrees in FY 2010 (Aug.' 09, Dec. '09, May '10) including numbers in the following majors:

Forestry	61
Resource Management	64
Soil & Waste Resources	15
Water Resources	35
Wildlife	65
Paper Science	8

• 22 Graduate students in the CNR received master's degrees in FY 2010.

• Job Placement

- 77% (175) of 2009 CNR graduates found employment in their field of study or elected to pursue further schooling; 11% found employment outside of their field of study.
- 60% of 2009 CNR graduates who reported employment are working in Wisconsin; the remainder found jobs in 27 other states throughout the country.
- 100% placement for 2009 Paper Science & Engineering graduates, with starting annual salaries averaging \$66,000.
- Student Internships
 - CNR placed 167 students in paid intern positions with about 92 state, federal, municipal, and private agencies, with an annual payroll of \$763,000 (includes 26 UWSP-contracted student employees who earned \$130,000).

• Summer Field Training Programs

- 216 natural resource majors were enrolled in the 2010 "summer camp" training program at Treehaven.
- 37 natural resource majors completed the 2009 European Environmental Studies Seminar Program (42 students enrolled in 2010), and 20 students completed NRES 385 (CWES) in summer 2009 (15 students enrolled in 2010), an alternative to Treehaven summer camp.

Paper Science & Engineering Department (PS&E) – Chair: Dr. Gerry Ring

- The Paper Science & Engineering program was accredited by the ABET Engineering Accreditation Commission in September 2009.
- Student recruitment includes 25 new freshmen for fall 2010.
- PS&E achieved 92% retention of last year's freshman class (2009) into the 2010 sophomore year.
- The Trans-Atlantic Paper Science Undergraduate Dual Degree (TAPS) Program completed its first year of student exchanges. Three UWSP

students spent the Fall 2009 semester in Finland and the Spring 2010 semester in Germany. Five Finnish students and one German student spent the entire year at UWSP. All six students participated in the May graduation ceremony.

- Continuing a record since 1973, 100% placement for 2009 Paper Science & Engineering graduates was once more achieved.
 Starting salaries averaged \$66,000, matching the starting salaries for chemical engineering which, according to the National Association of Colleges and Employers, is the second highest paying major in the nation.
- Dr. Amit Arora joined PSE faculty as assistant professor.
- Danielle Mortag joined the department as the academic department associate.
- Jim Carr joined the department as an adjunct instructor and the interim lab manager.
- Jim Servi and Craig French joined the department as instrument technicians.

The Wisconsin Institute for Sustainable Technology (WIST) – Director: Dr. Paul Fowler

- WIST, established as a campus-wide initiative in 2008, concluded a successful search for an executive director with the hiring of Paul Fowler, Ph.D., who comes to UWSP from Wales, UK, where he was director of the Welsh Institute for Natural Resources. WIST is an interdisciplinary initiative that aims to develop sustainable technologies and ideas to benefit the environment and economy.
- The WIST biofuels research program received additional funding from the Department of Defense, bringing total funding to date for this project to \$3.93 million. WIST also received \$1.3 million in additional funding from the USDA National Institute of Food and Agriculture.
- The institute launched its "WIST Scholars" program, which taps the energy and creativity of UWSP faculty and staff and provides an avenue for faculty and staff across campus to advance research or other ideas that further the WIST mission and vision. WIST solicits proposals from all UWSP colleges for sustainability projects in research, education or laboratory services; those winning approval are provided financial, administrative, and/or other support by WIST. In the first round, WIST received 11 proposals from faculty and funded seven for a total of approximately \$119,000.

CNR International Programs & Initiatives



Accredited



- 86 students participated in study abroad programs during the 2010 fiscal year (excluding GEM Student Ambassador program):
 - Kevin Russell and Mike Hansen led the Costa Rica Winterim trip with 23 students.
 - Emeritus professor Hans Schabel led the Tanzania, Africa trip with 10 participant (9 students/1 adult) through UWSP Continuing Education. (The CNR offers international trips to Tanzania, Africa and Mexico/Belize/Guatemala on alternate years).
 - *Kevin Russell* and *Les Werner* led the 2009 European Summer Seminar program with 37 CNR students. Bobbi Kubish participated in the Poland and week one of the Germany itinerary.
 - **Jennie Lane** led the New Zealand spring semester abroad with seven UWSP students who attended the University of Canterbury.
 - Six new GEM Student Ambassadorships were awarded for Summer 2010: Adam Clifford, Alicia DeGroot, Krista Gerrits (Kenya); Andrew Karleigh, Michael Tanner (South Africa); and Amberle Eversen (Oaxaca, Mexico). GEM Student Ambassadorships provide experiential learning opportunities focused on sustainable natural resources management and community based sustainable development. They usually include cultural immersion experiences and may involve applied research, outreach education, internships, and/or other innovative learning enrichment activities.

• Trans-Atlantic Paper Science and Engineering Dual Degree (TAPS)

- Three UWSP Paper Science and Engineering Students travelled abroad to Finland and Germany in fall 2009/spring 2010 for the TAPS program: Katherine Mess, Scott Gewiss, Stephen Chastain.
- Six European students participated in the TAPS program at UWSP and successfully finished the academic year here. These students were Alex Pohl from Germany and, Tomi Santeri Harjula, Laura Maria Tuulikki Makinen, Mikko Juhani Nissinen, Timo Tapio Vartiainen, Eerik Antero Vehmasmaki from Finland.
- Dr. Gerry Ring visited Boston, Massachusetts in October 2009 for a Fund for the Improvement of Postsecondary Education



(FIPSE) Project Directors' meeting to collaborate with the Trans-Atlantic Paper Science and Engineering Dual Degree (TAPS) partners from Finland and Germany as well as learn how the three UWSP students were doing overseas.

- The Finnish grant partners for the TAPS program visited UWSP and North Carolina State University (NCSU) in March to give lectures and visit the six European TAPS students at UWSP. They also visited NCSU and finalized the student exchange agreement for paper science and engineering students who will be traveling abroad. Staff who came included:
 - Tampere University of Applied Sciences (TAMK) Dr. Ulla Haggblom-Ahnger (Professor and Chair of Paper Science)
 - Jyvaskyla University of Applied Sciences (JAMK) Professor Anneli Kakko (Professor of Physics)

• Les Werner, Forestry, travelled to King George Island, Antarctica in January. The purpose of this travel was: to participate in a 2-week polar research field seminar; to



establish collaborative research activities; and to identify educational opportunities for faculty and students within the College of Natural Resources (CNR) who are interested in inter-disciplinary approach to polar research. The coordinating organization was the Association of Polar Early Career Scientists (APECS), currently based in Tromsø, Norway. APEC's director, Dr. Jenny Baeseman, is an alumna of the UW-Stevens Point's College of Natural Resources and has expressed a strong desire to include UW-Stevens Point among the list of collaborating universities.

 Dan Sivek, Environmental Education, travelled to Cuba in June to investigate the potential for future exchanges of students and faculty. Dr. Sivek and graduate advisee, Korie Klink of Reedsburg, also initiated a project assessing the effectiveness of a Cuba-U.S. environmental education exchange focusing on wetlands and Sandhill cranes. The crane project was a continuation of Ms. Klink's previous work in Cuba and the International Crane Foundation. Contacts for both efforts were made with the University of Havana, the Cuban Institute for Friendship with the Peoples (ICAP), the Cuban Ministry for Science, Technology and the Environment (CITMA), and others. Visits were also made to several sites in Havana and central and eastern Cuba. This effort is supported by grants from the University and the Christopher Reynolds Foundation. A grant from the Wisconsin E



and the Christopher Reynolds Foundation. A grant from the Wisconsin Environmental Education Board is supporting the Wisconsin portion of the project.

- Holly Petrillo, John Sheffy, and Bobbi Kubish, travelled to Kenya in May with the GEM Student Ambassadors, to follow up on project work at Nyumbani Village (where the GEM Student Ambassadors spend their summer and GEM and Petrillo have initiated research projects). They also met with former CNR forestry graduate students Nicolas Syano, Doris Kaberia, and Elijah Mujuri to discuss partnership opportunities with their non-profit organizations: Dryland Natural Resources Center (Nicolas) and Rural Initiatives for Sustainable Agriculture and Development (Doris and Elijah), visit rural communities in the Makueni and Meru districts and discussed partnership ideas with Nairobi University, Kenyatta University, and Kenya Methodist University faculty.
- In 2009-10 there were 19 international students with CNR majors including 9 students from China, 5 from Finland, 3 from South Korea, and 1 student from Germany and India each.

- CNR Peace Corp Masters International (MI) Program
 - Current MI student, Daphne Mayes (Advisor: Holly Petrillo), has been stationed in Zambia since February 2009 as a LIFE volunteer (Linking Income, Food, and the Environment through forestry and agriculture). Daphne maintained a blog chronicling her experience at: http://www.uwsp.edu/cnr/international/students.aspx
 - Current MI student, Heidi Hull (Advisor: Aga Razvi), has been stationed in Uganda since August 2009 as a Sanitation and Water Extension Volunteer and will depart in August 2010.
 - Current MI student, Scott Benton, (Advisor: Ron Crunkilton), has been assigned to Cape Verde, Africa and will depart in July 2010 as a small-scale economic development volunteer focusing on water resources.

Facility updates and renovations

• Completed major dormitory renovation at Treehaven. Grand Opening and ribbon-

cutting event were held on April 29, 2010.

- Completed remodeling of Treehaven dining room.
- Completed remodeling of Schmeeckle Reserve Visitor Center meeting room.
- Completed
 remodeling of



TNR 120 lecture room, including all new upholstered seats.

- Construction in progress for a new waste management building at UWSP.
- Planning underway for renovation of a lab on the second floor that has not been updated since the building was built.

New Faculty/Staff

- Amit Arora, Post Doctoral Research Associate, WIST
- James Carr, Associate Lecturer, Paper Science and Engineering Department
- Paul Fowler, Director, WIST
- Craig French, Instrumentation Specialist, WIST
- Jinjun Gong, Post Doctoral Research Associate, WIST
- Kyle Herrman, Assistant Professor, Water Resources Discipline

- Eric Jensen, Associate Research Specialist, Wildlife Discipline
- James Servi, Jr., Instrumentation Specialist, WIST
- Aaron Thompson, Assistant Professor, CLUE/HDNRM
- Amy Wiberly, Post Doctoral Research Associate, WIST
- Brent Wiersma, Administrative Specialist, GEM

Spring 2010 Colloquium Series

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The College of Natural Resources (CNR) once again sponsored a colloquium lecture series, which aims to expose faculty, students, and the general public to new research, issues, and ideas from within and outside of the campus community. This spring's colloquium series *"Woody Biomass and Renewable Energy"* focused on woody biomass and the opportunities that exist to use this renewable resource to meet our energy needs today and in the future. John DuPlissis, forestry outreach specialist at the CNR, coordinated this year's series along with CNR assistant professor of forestry, Holly Petrillo. The Series included the following expert topics and presenters:



• February 3 Introduction to Forest Biomass

Don Peterson, President, Renewable Resource Solutions, LLC, Crystal Falls, MI

- February 17 Boiler Basics Comparative Energy Potential and Costs Bob Govett, Professor of Human Dimensions of Natural Resource Management & Manager of the CNR's Wood Utilization Lab, UWSP
- March 3^a Domtar / WE Energies Cogeneration Biomass Plant Project
 Jeff Plunkett, Fiber Procurement Manager & Jim Freiber, Pulp & Utilities Unit
 Leader, both of Domtar Paper Mill, Rothschild, WI
 - March 17: UWSP Biomass Boiler Project Bob Oehler, UWSP Director of Facility Services, UWSP; Al Andersen of A.L. Andersen Companies, Inc., Waunakee, WI; & Carl Rasmussen, UWSP Director of Facilities Planning & Space Management
- March 31: Woody Biomass to Bioenergy Sustaining Forestry and Energy Development Ken Skog, Project Leader Economics & Statistics Research Unit, US Forest Service, Forest Products Laboratory, Madison, WI
- April 7: Flambeau River Biofuels' Biomass Fuels to Liquid Project
 Bill Gilbert, Biomass Procurement Manager, Futurewood Corporation, Hayward, WI
- April 21: Life Cycle Assessment

Karyn Biasca, UWSP Professor of Paper Science & Engineering, UWSP

- April 28: Wisconsin Institute for Sustainable Technology Gerry Ring, Professor and Chair of UWSP's Paper Science & Engineering
 - Department, UWSP and WIST

Faculty and Staff Achievements - a few examples of success

- Karyn Biasca, professor of Paper Science & Engineering, wrote a successful UW System grant to develop electronic portfolios for the assessment of student learning. Dr. Biasca also became one of the first Wisconsin Institute for Sustainable Technology (WIST) Scholars. Her WIST project will encompass the development of a continuing education course in Life Cycle Assessment.
- **Don Guay,** was promoted to associate professor and accepted a coposition as Director of WIST Laboratory Services.
- Jeremy Solin, director of the CNR's LEAF (Learning Experiences & Activities in Forestry) K-12 forestry education program, received the 2009 W.D. Hagenstein Communicator Award from the Society of American Foresters -- the world's largest forestry education organization -- for LEAF's efforts to strengthen the understanding of the science of forestry
- Michael Hansen, CNR professor of fisheries and an expert in fisheries population dynamics of walleye in inland lakes and lake trout in the Great Lakes, received the Excellence in Fisheries Education Award from the American Fisheries Society (AFS), the Society's highest award for an educator.

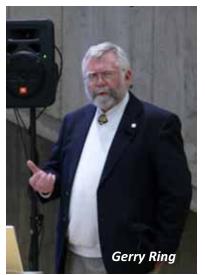


- **George Kraft**, professor of water resources and director of the CNR's Center for Watershed Science and Education, received the American Water Resources Association (Wisconsin section) Distinguished Service Award, the organization's highest honor given to water resource professionals, scientists and policymakers who have made exceptional contributions to enhance the quality of water resources in Wisconsin.
- Diane Lueck, lecturer in natural resources and former director for the CNR's Becoming an
- Outdoors Woman (BOW) program, was named the 2010 Educator of the Year by the Safari Club International Foundation. Lueck was cited for conducting and coordinating educational activities to a variety of organizations and youth groups both nationally and internationally.
- Michael Dombeck, UW System Fellow and professor of global conservation at UWSP, received the 2010 Ansel Adams Award from The Wilderness Society in May for his major role in protecting the national forests. Other winners of the Ansel Adams Award include Mo Udall, Stewart



Udall, and President Jimmy Carter. Also, last fall, Dombeck received the Michael B. Olbrich Award for Outstanding Career Contributions to Natural Resources Policy from the Friends of the Arboretum at UW-Madison.

- Alan Haney, emeritus professor of forestry who served as CNR dean from 1988 to 1999, has published a new book, "Restoring Ecological Health to Your Land," a primer on ecological restoration.
- Don Guay (BS-Paper Science & Engineering, '96), assistant professor of paper science & engineering, was part of a 3-member research team at UWSP that received the 2009 Innovation Scholar of the Year Award by the WiSys Foundation, an organization dedicated to bringing UW System research to the marketplace. Guay's work has helped to launch UWSP's Wisconsin Institute for Sustainable Technology (WIST) initiative.
- Michael Hansen, CNR professor of fisheries, provided testimony before the Congressional Committee on Transportation and Infrastructure in February on the Asian carp problem and the fish's threat to the Great Lakes. Hansen chairs the Great Lakes Fishery Commission.
- Sara Windjue, Energy Education Specialist for CNR's K-12 Energy Education Program (KEEP) and Ron Tschida, Communications Manager for the Wisconsin Institute for Sustainable Technology (WIST), were appointed co-editors in January for the UWSP Online Journal, a web-based, refereed publication devoted to highlighting the best work of students from across the UWSP



campus.

• **Dan Sivek**, professor of environmental education and discipline coordinator of CNR's Human Dimensions of Natural Resource Management, recently completed a visitor services plan for the Vieques National Wildlife Refuge in Puerto Rico. The 139-page plan culminated several years of work which included a professional sabbatical during the 2008-09 academic year to conduct on-site visits, personal interviews and surveys.

• **Gerry Ring**, Professor and Chair of CNR's Paper Science and Engineering Department was elected vice-president of the Pulp and Paper Education and Research Alliance (PPERA). He also accepted copositions as Director of WIST Division of Education and Associate Director for Education of the Wisconsin Bioenergy Initiative (WBI). Dr. Ring is also working with Dr. Kevin Czerwinski, UWSP Department of Chemistry and WIST Scholar, to develop and patent highly reactive cellulose.

Outreach and Extension Initiatives and Accomplishments (selected highlights from various units)

- Schmeeckle Reserve Director: Ron Zimmerman
 - Moses Creek Restoration Project -- Work began on a \$1.3 million mitigation project funded by Wisconsin DOT to restore the stream meanders and 17 acres of wetlands along Moses Creek in Schmeeckle Reserve. The restoration project will improve drainage with flood prone areas north of campus, provide high-quality habitat, increase the diversity of flora and fauna, offer unique educational opportunities, and serve as a pleasing recreational corridor for the campus and community. More information can be found at <u>www.uwsp.edu/schmeeckle/moses_creek</u>.

- Schmeeckle Reserve Visitor Center renovation – the Center's meeting room was recently renovated with new carpeting, portable tables, chairs, paint, and blinds through funding from the CNR Dean Christine Thomas. The meeting room is used nearly 300 days out of the year by conservation groups, educational classes, and non-profit organizations from around the state.
- Environmental monitoring systems --An upgraded environmental monitoring station is being installed near the Schmeeckle Reserve Visitor Center, which will monitor air and soil temperature, wind speed and direction, relative humidity, soil moisture, and precipitation. Also installed was a new data logging system that will be connected to the university network, allowing students, faculty, and the public to access realtime and historic monitoring data



online from any internet computer. This will have major benefits for natural resources, ecology, and biology classes, as well as research projects such as bat and flying squirrel monitoring.

- Rebuilt Plank Trail The Reserve's narrow, aging "Plank Trail" connecting Lake Joanis with the Green Circle Trail was replaced with a new, accessible, four-foot wide boardwalk that artistically winds through the wetlands and woods.
- Candlelight Hike Festivals -- The Reserve held public Candlelight Hike Festivals in October and May. The festivals feature themed campfire programs presented by students in the Environmental Education/Interpretation Practicum, a 1-mile trail lit by Tiki torches, thematic research stations, crafts, and snacks. The fall festival (October 30) attracted a record 800 people.
- Schmeeckle Reserve was voted as one of the best places to work on campus by student employees for the third year in a row. The Reserve hires nearly 60 students during the academic year, who operate the visitor center, maintain and construct trails, manage exotic species, patrol trails, sell items in the Browse Shop, and construct cedar signs.

- Central Wisconsin Environmental Station (CWES) Director: Scott Johnson
 - Installed a new public address and video projector system in Sunset Lodge for visiting groups to use.
 - Rebuilt large retaining wall area and stairway to waterfront.
 - Added locally grown organic potatoes and carrots from Malek Farms into food service program when in season.
 - o Began purchasing fair trade coffee from Emy J's in Stevens Point.
 - Added cage free eggs and locally produced hormone free humane certified milk from Red Barn Family Farms.
 - Added a mobile microscope lab to Sunset lodge including equipment to stream microscope images to a 47-inch flat panel LCD screen.

• Treehaven – Director: Corky McReynolds

- Treehaven received the "Travel Green Wisconsin" Certification from the Wisconsin Department of Tourism, a distinction marking efforts and achievement towards energy conservation and environmental sustainability practices in programs, operations and facilities.
- Treehaven has been re-certified (50 year member) in the American Tree Farm Program. This certification included a third party audit and Green Forest Sustainability certification

through the Programme for the Endorsement of Forest Certification -- PEFC (similar to SFI or FSC certification). Its forest management and forest products are now certified sustainable.

 New trail signs and maps (produced by Schmeeckle Reserve students) are being installed on the Treehaven property at all trail intersections, and interpretive signs at unique features and management areas on the property.



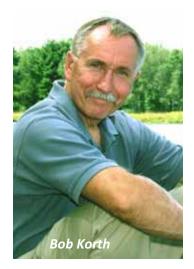
- An additional \$60,000 in timber revenues was generated recently from much-needed harvesting on the property.
- Treehaven has initiated an on-going partnership with the Lincoln Hills Juvenile Correctional Facility, by providing work training on natural resource management. The hope is to expand into educational opportunities with the school.
- Treehaven's dorm renovation was completed, adding private baths off each room and two new efficiency apartments.
- Treehaven's classroom facility was insulated and paneled with tongue and grove paneling using wood from the Treehaven property milled by CNR students.

• Global Environmental Management Education Center (GEM) – Director: Victor Phillips

- GEM Healthy Watersheds and Sustainable Livelihoods Project completed -- GEM and four Mexican university partners collaborated to complete a five-year capacity building project in the Sierra Norte, Oaxaca, Mexico. The project trained 998 participants (5 times the initial goal) in 80 workshops, graduated two Mexican master's students (Clarisa Jiménez Bañuelos and Marco Hernandez Castañeda), provided long-term scholarships for 14 Mexican graduate level students, and coordinated 23 student internships. Additional capacity was built through the training of 10 Mexican professionals and the development of seven technical training manuals and five microenterprise business plans that address needs expressed by the local citizens. Future citizen-based efforts in Mexico will use the GEM Healthy Watersheds model for improved watershed health as well as increased jobs and income generation locally.
- GEM "Critical Issues" International Seminar Series -- Through its sixth year, GEM has invited and hosted 24 distinguished speakers from 17 nations to share insights and perspectives on important natural resource management issues. During the 2009-2010 academic year, the seminar theme was "Serving Society for Sustainability," and drew an audience of students, faculty and community members to evening presentations at the Dreyfus University Center Theater. Three international speakers and one panel were featured:
 - Susan Kilani, Director of Resources Quality Protection and Director of the Laboratories and Quality Department, Water Authority of Jordan -- "Water resource issues in Jordan—Facing limits in an arid environment"
 - Dr. Helena Cotler, Head of Integrated Watershed Management Directorate, Instituto Nacional de Ecología, Mexico -- "Lessons learned to improve watershed management sustainability in Mexico"
 - Helen Fox, Environmental Officer, Institute for Water Research, Rhodes University, South Africa – "Action research at Boksburg Lake, South Africa: Social-ecological learning interactions towards a sustainable future"
 - Special Panel Discussion "Protecting the Environment and jobs by addressing deforestation and illegal logging" – featuring Khoirul Anam, President of the Indonesian Forestry and Allied Workers' Union (Kahutindo), Rulita Wijayanindya, International Secretary of Kahutindo, Michael Bolton, Director of District Two of the United Steelworkers Union, and Anne Middleton, Forest Campaign Outreach Coordinator of the Environmental Investigation Agency.
- GEM Student Ambassador Program -- In summer 2009, GEM sponsored four Student Ambassadors on international assignment—two in Kenya, one in Mexico, and one in South Africa. In summer 2010, six Student Ambassadors were deployed overseas—three posted to Kenya, two to South Africa, and one to Mexico. These CNR students complete practical, service-learning projects in natural resources, while gaining important experience working with diverse cultures. Through external GEM grant funds, the GEM Student Ambassador Program has invested over \$212,000 to provide 56 (49 undergraduate and 7 graduate) allexpenses-paid ambassadorships in 11 different nations since its inception in 2002.
- GEM Permaculture Design Certificate Course -- GEM Director Victor Phillips and UW-Milwaukee Conservation and Environmental Science Program Coordinator Mai Phillips led an intensive two-week permaculture design certificate course to six participants (five American and one South African) at the UWM Biological Field Station in August 2009. GEM is offering this same comprehensive, practical course again in summer 2010 to at least eight participants representing four nations (Haiti, Kenya, Mexico, USA) and four states (DC, ID, MO, WI).

• UW-Extension Lakes Program – Director: Bob Korth

- UWEX Lakes Program partnered for the 2nd consecutive year with the WDNR and the Department of Workforce Development on a project for the American Recovery & Reinvestment Act to train young adults to conduct watercraft inspections for the Clean Boats Clean Waters (CBCW) program throughout Wisconsin in an effort to prevent the spread of Aquatic Invasive Species (AIS). The CBCW program involves about 1,200 volunteers and interns.
- The award-winning Lake leaders Institute began its 12th year, with 20 participants from around the State making up this year's "Crew VIII." The Institute has produced more than 200 graduates from around the state since its start in 1998, who have become advocates for local lakes by conducting educational programs, spearheading



management projects, working with the media and forging partnerships that support lake stewardship.

- Over 1500 volunteers monitored more than 650 Wisconsin lakes as part of the Citizen Lakes Monitoring Network, a grass-roots partnership of individual citizens, UWEX Lakes, the WDNR, and other members of the Lakes partnership.
- UWEX Lakes staff developed and distributed information and educational materials including the quarterly newsletter, <u>Lake Tides</u>, which reaches 26,000 lake homes and the <u>Lake List</u>, a database linking over 920 lake organizations and related businesses working with lakes. Management and rehabilitation of shorelands has been the focus of conventions, workshops, and informational materials in recent years.

• Wisconsin Environmental Education Board (WEEB) – Administrative Specialist: Ginny Carlton

The Wisconsin Environmental Education Board is a 17 member, state legislated Board whose mission is to promote environmental education in all segments of society. WEEB is legislatively tied to UW-System and administratively linnked to UW-Stevens Point and its College of Natural Resources. Recent activities of the Board include:

- Funded 48 proposals -- WEEB received 103 grant proposals requesting more than one million dollars. A total of 48 proposals in three grant categories (forestry, school forest, and general environmental education) received over a half million dollars. Projects included state-wide initiatives such as support for the LEAF (K-12 Forestry Education) and Wisconsin Bird Conservation Initiative programs; as well as local projects such as a mussel survey program of the Kickapoo River watershed by citizen science monitors.
- No Child Left Inside Coalition's Environmental Literacy Plan Development WEEB is assisting with this statewide strategic planning document that addresses the environmental education needs of Wisconsin's pre-K-12 grade schools, including teacher pre-service and in-service professional development opportunities. Document publication is expected in the Fall 2010.

 Selecting DPI's next Environmental Education Consultant -- WEEB continued to remain involved in establishing a presence for environmental education within the Department of Public Instruction. In the spring of 2010, WEEB chairman Scott Ashmann reviewed application materials submitted by candidates seeking to become the State's Environmental Education Consultant. Victoria Rydberg, a founding teacher of River Crossing Environmental Charter School in Portage, was selected and began her duties on June 28, 2010.

• Wisconsin Center for Environmental Education (WCEE) – Director: Randy Champeau

WCEE assists in the development, dissemination, implementation and evaluation of teacher and student K-12 environmental education programs. It was established by the Wisconsin legislature in 1990 and placed within the College of Natural Resources at UWSP. This connection allows the WCEE staff to work with more than 100 faculty and staff in various disciplines. Statewide programs and services include: an Environmental Education Resources Library; Wisconsin Environmental Science Teacher Network; Masters Degree for K-12 Teachers in Natural Resources/Environmental Education; High School Conference on the Environment; Wisconsin K-12 Energy Education Program (KEEP); LEAF (K-12 Forestry Education); and Global Environmental Teachings (GET).

- Wisconsin K-12 Energy Education Program (KEEP) Director: Jennie Lane
 - \circ $\,$ Nearly 500 teachers registered for KEEP courses this past year.
 - <u>Energy and Your School</u> Activity Guide was published in 2009 by Melissa Rickert. The includes a school energy efficiency curriculum designed for K-12 teachers to use in their classrooms.
 - Sara Windjue publshed an article in the June issue of <u>Solar Today</u>, highlighting KEEP's educational outreach activities at the annual Midwest Renewable Energy Fair.
 - KEEP awarded over \$40,000 in grants to schools or teachers to either develop a School Energy Policy and Education Plan, implement energy saving measures, or secure resources that will improve energy literacy in the both the classroom and greater school community.
 - KEEP coordinated the statewide Bright Idea Fundraiser, where students sell compact fluorescent light bulbs (CFLs) and LED holiday lights to earn money for school programs. Eighty four organizations (schools, clubs, and churches) sold a total of 16,808 CFLs and 6,956 LEDs. The organizations raised \$54,484 and prevented 21,282,853 pounds of CO2 from being released into the atmosphere. This is the equivalent of taking over 150 cars off the road. They have also saved their customers \$910,326 in energy savings.

LEAF Program (K-12 Forestry Education) – Director: Jeremy Solin

- Provided 30 professional development trainings reaching 436 teachers statewide.
- Consultation was provided to 22 school districts working on their school forest education plans. Currently 60 school districts have approved school forest education plans. There are now 372 registered school forest parcels in 207

public school districts, 8 private schools, and 7 higher education institutions in Wisconsin.

- Coordinated the 2009 Wisconsin High School Conference on the Environment with a theme of "Our Changing Forests: Opportunities and Challenges for Wisconsin's Students." Attendees included 235 students and 38 teachers from 36 different schools.
- The Goodman-Armstrong Creek School District became LEAF's first "School of Excellence." LEAF partnered with Goodman-Armstrong Creek to integrate the school forest and human communities as the setting for and purpose of learning in the school.
- o Global Environmental Teachings Program (GET) Coordinator: Susan Schuller
 - Teacher Exchange Program in South Africa –20 teachers from Wisconsin and South Africa learned about ecology, history, and society in South Africa through a teacher exchange held June 22-July 12, 2009.

• Center for Watershed Science & Education (CWSE) – Director: George Kraft

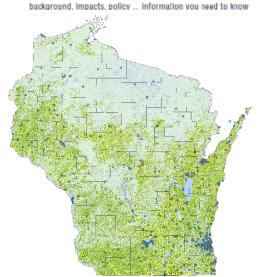
- CWSE is collaborating with WDNR on monitoring the Wisconsin River and its tributaries (from Tomahawk to Lodi) for nutrients and other pollutants that hinder water quality and the aquatic ecosystem. Staff are monitoring twice weekly at 31 tributaries and 16 Wisconsin River locations, and the WEAL facility is providing analyses. These data will be used in pollutant modeling to calculate pollution loads and reductions necessary to achieve water quality health.
- Obtained a \$450,000 National Science Foundation (NSF) grant to upgrade instrumentation for water analysis. This instrumentation will allow measurement of toxic metals (such as arsenic and lead) at much lower levels, and identification of pesticides, pharmaceuticals and other trace organic pollutants in water. NSF review panel was enthusiastic about our combination of research, education and outreach.
- Developing tools to estimate the impact of shoreland development on lake water quality. During 2010, CWSE assisted DNR, lake groups and legislators involved in developing new regulations.
- Completed studies detailing amounts of missing water in central Wisconsin lakes and streams due to groundwater pumping. Conducted a dozen or more sessions for elected officials, irrigators, lake and stream property residents, and conservation advocates on the issue.
- Advised state legislature working groups on groundwater pumping policy matters.
 Participated in the joint groundwater committee as a technical advisor. Provided groundwater knowledge and policy advice to senators, assembly persons, and their staff.
- Created educational resources for Fond du Lac County citizens summarizing 20 years of groundwater quality data.

- Awarded 24 schools and nature centers with sand-tank groundwater models and trained 48 educators how to incorporate groundwater education into their curriculums at a series of 3 workshops throughout the state.
- Worked with Extension and Land & Water Conservation Dept. colleagues around the state to organize 14 Drinking Water Testing and Interpretation programs in 9 different counties serving over 1000 households.
- Conducting stream, lake, and watershed studies with partners from citizen groups, county conservation agencies, WDNR, and US Forest Service, including Bear Lake (Forest County); Park Lake, Lazy Lake, Tarrant Lake (Columbia County); Montello Lake (Marquette County); Portage County Lakes; and Waushara County Lakes.

• **UW – Extension Center for Land Use Education** – Director: Anna Haines

- Organized and presented 15 regional workshops providing training to 750 local government officials, plan commissioners and zoning board members.
- Completed <u>Wisconsin Land Use Megatrends: Climate</u> <u>Change</u> publication which was distributed to nearly 1,000 local government officials, educators and others.
- Lynn Markham authored <u>The Magic Goggles:</u> <u>Discovering the Secrets of the Lake</u>, a full-color, 24-page children's picture book. Approximately 700 copies sold.
- Wrote <u>Living with Lawns</u>, a 4-page fact sheet about the health effects of lawn pesticides, and managing pesticide-free yards that was distributed through events and state-level newsletters to over 1,500 people.
- Developed a spatial model to calculate the availability of forest harvest residue within a 100-mile radius of Stevens Point which was presented at Focus on Energy's June 2010 Research Exposition: Impacts of Emerging Energy Technologies: Solar, Wind, Bioenergy, and
- Electric Cars.
 With the Center for Watershed Science and Education, continue to participate in the Lake Management Project for Portage County. The team is creating lake management plans for 29 lakes in Portage County.
- Conducted research on the importance and creation of community "third places" (gathering places) in small and rural communities as part of a grant funded by UW-Extension's Program Innovation Fund grant.
- **Anna Haines** serves as co-chair of the Community Sustainability Task Force as part of Extension's North Central Region to create an on-line curriculum focused on issues and topics related to community sustainability, such as energy, local foods, and mobility.







• Becoming an Outdoors Woman (BOW) -

International/Wisconsin BOW Director: Peggy Farrell

- Conducted 16 outdoor skills workshops for over 250 participants, with activities ranging from loon observation to sea kayaking to pheasant hunting to charter fishing.
- Peggy Farrell oversaw the reservation and guiding process for the annual public program for viewing prairie chickens on their booming grounds. 326 viewers reserved blind space for this spring's season.
- Provided hunter education class, Stevens Point, Wisconsin.
- BOW's 2010 hunter education class certified 16 students and trained eight new Wisconsin hunter education instructors.
- Peggy Farrell gave BOW presentations to UW-Green Bay students and staff, LIFE participants at UWSP, Trout Unlimited State Convention, and Westfield High School.



• Environmental Education & Training Partnership (EETAP) – Director: Rick Wilke

EETAP has provided professional development for over one million educators across the

nation and around the world during the five years it has served as the national environmental education training program for the U.S. Environmental Protection Agency (EPA).

- Provided direct or indirect training for 397,000 educators nationwide last year.
- Developed the course, "Making EE Relevant for Diverse Audiences," offered online for undergraduate or graduate credit through UWSP. There is a waiting list of professional educators from across the nation to take the course.
- Assisted educators at over 50 nature centers, zoos, museums, national wildlife refuges and other facilities serving more than 1,115,000 people per year to evaluate and then improve their environmental education programs through UWSP's course "Applied EE Program Evaluation."



 Completed a national study of the professional development needs of environmental educators which is now guiding the professional development offerings for educators provided by several federal agencies, including the EPA.

College-Wide Initiatives

- **CNR Retirement & Awards Recognition Dinner** This 5th annual event, held May 3, 2010 at Sentry World High Court, was attended by 99 people. In addition, the College presented 16 service and achievement awards.
- **2010 CNR Student Research Symposium** A CNR highlight event, this 11th annual symposium was held April 9, 2010, and featured 71 student presenters participating in 17 oral presentations and 42 poster presentations (more on this event under *Activities and Accomplishments in <u>Student-Centered Excellence</u>).*

Student Recruitment, Diversity Initiatives, Activities, Achievements

- Fall 2009 Recruitment Success: 274 new freshman; 157 new transfer students.
- Student recruitment for Paper Science & Engineering includes 26 new freshmen for fall 2010 (up from 14 in 2009).
- The Trans-Atlantic Paper Science Undergraduate Dual Degree (TAPS) Program completed its first year of student exchanges. Three UWSP students spent the Fall 2009 semester in Finland and the spring 2010 semester in Germany. Five Finnish students and one German student spent the entire year at UWSP. All six students participated in the May graduation ceremony (see "CNR International Programs & Initiatives" for more details).
- Treehaven again hosted the *Treehaven Inner City Environmental Program* for two Milwaukee inner city middle schools in March of 2010. 45 School children and their classroom teachers participated in programs that gave the students an opportunity to learn about the environment and receive first-hand experience in outdoor skills and activities. The program, in its 13th year, was made possible by a grant from the Kopmeier Family Fund of Milwaukee and longtime Treehaven benefactor, Dorothy K. Vallier and her son, William Kummer.
- CNR's EETAP program (Environmental Education & Training Partnership) developed the course, "Making EE Relevant for Diverse Audiences," offered online for undergraduate or graduate credit through UWSP. There is a waiting list of professional educators from across the nation to take the course.



Activities and Accomplishments in <u>Student-Centered Excellence</u>

Ishing and creel surveys. Is biologists collect length and weight arements along with calcified structures. Immon calcified structures used to attain age imates are scales, otoliths, and dorsal spines. are estimated by counting annuli.

Ben Kissinger presents at the 2010 Symposium

• 2010 CNR Student Research

Symposium – An annual CNR highlight event established in 2000 by former Dean Victor Phillips to celebrate student excellence in undergraduate research. This year's Symposium, held April 9, 2010, featured 71 student presenters participating in 17 oral presentations and 42 poster presentations. Since 2000, a total of 525 student scholars have now presented applied research and community service project results in ten annual CNR Student Research Symposia. The 2010 event was made possible through support from the UWSP/UWEX Lakes Program and the John & Anne Meyer Fund for the CNR.

- CNR Rendezvous Awards Program This annual spring event was held on April 9, 2010 at Sentry Theater in Stevens Point and attended by over 300 people. Distributed at the event were 250 student scholarships totaling \$242,480 contributed by about 85 sponsors (excluding paper science donors). Scholarship sponsors included individual donors, conservation clubs, businesses, and conservation organizations. Twelve outstanding student awards were presented and *Dan Isermann* was selected by students for the CNR Outstanding Teaching Award.
 - Paper Science Scholarships 79 scholarships totaling \$55,780
 - GEM Ambassadorships 6 totaling \$24,000
 - Trans-Atlantic Paper Science Undergraduate Dual Degree (TAPS) Scholarships 3 scholarships totaling \$36,000
 - CNR Scholarships 162 totaling \$126,700

GRAND TOTALS – 250 scholarships totaling \$242,480 (minus Paper Science awards - 168 scholarships = \$150,700)

- Earth Day Fellowships Three CNR graduate students were awarded \$1,585 Gaylord Nelson Earth Day Fellowships in spring 2010 in recognition of significant contributions to promoting conservation ethics and environmental education and for exhibiting future leadership potential in the field of environmental education. The students were: Elena Krieger of Amherst Junction, Jenna Gatzke of Traverse City, MI, and Lesley Sheridan of Dubuque, IA.
- Wendy O'Donnell Schmidt Memorial Scholarships of \$800 each from the Association of Great Lakes Outdoors Writers (AGLOW) were awarded to **Amanda Cyr**, a CNR graduate student of Stevens Point, and **Kaitlin Boseo**, a CNR undergraduate student from Helenville, WI. The AGLOW scholarship program assists students with their work in natural resources and encourages their participation in the field of outdoor communication.

 CNR senior Cody Salzmann of Hazel Green, WI, and junior Logan Bliss of Cottage Grove, WI, won the Stephen F. Austin Bucketmouth Bass Tournament in Broaddus, Texas, last December. The pair netted seven fish totaling 24.16 pounds. Ninety-eight collegiate anglers representing twenty four schools from seven states participated in the tourney, which was held at Sam Rayburn Reservoir in east Texas.



• CNR senior **Sarah Johnson**, a forestry administration and

utilization major, received one of the two \$1,500 John Mabry Forestry scholarships awarded by the Railway Tie Association in 2009. Criteria for the award included leadership qualities, career objectives, scholastic achievement, and financial need.

• **13th Annual CNR Career Fair** was held in February 2010, attracting over 300 students and 47 employers with booths that provided information on summer jobs, internships and permanent positions.

Activities and Accomplishments in Partnerships

CNR faculty, staff and students earned 22 *intramural* grants in FY '10, totaling \$45,960

CNR faculty and staff earned 86 *extramural* grants totaling **\$6,613,298** in FY '10 (excludes pending grants). Partners include 38 different agencies:

- Clintonville Wastewater Treatment Facility
- Columbia County
- Community Foundation of Central Wisconsin
- County of Dane
- Energy Federation, Inc.
- Fond du Lac County
- Fort Atkinson Wastewater Utility
- Friends of Rib Mountain
- Great Lakes Fishery Commission
- Marathon County Solid Waste Department
- Marquette University
- McIntire Stennis
- Menominee County
- Michigan State University

- Minnesota Department of Agriculture
- Minnesota Dept. of Natural Resources
- Montana Fish, Wildlife & Parks
- National Council for Air & Stream Improvement
- Northside Elevator
- Portage County
- Rocky Mountain Elk Foundation
- Sawyer County Zoning Administration
- Southwest Wisconsin Technical College
- Stevens Point Water & Sewage Commission
- Town of Blackwell
- U.S. Army Research Office/Dept. of Defense
- U.S. Dept of Interior Geological Survey
- U.S. Dept. of Education FIPSE
- USDA/NIFA (National Institute of Food & Ag)
- UW-Madison
- UW-Sea Grant Institute
- Waupaca County Solid Waste and Recycling
- Waupaca Northwoods LLC
- We Energies
- Whiting Utilities
- WI Association for Environ Education
- WI Department of Transportation
- WI Dept. of Natural Resources

Development Success

- Total Gifts of Cash or Stock in FY 2010 (7-1-09 to 6-30-10)\$456,072
 - 442 gifts from 330 donors
 - Increased CNR endowment principle by \$152,512 in FY 2010 (June 2009 = \$4,347,302 vs. June 2010 = \$4,499,814; does not include market adjustment)

Highlights of new support committed in FY 2010:

- Veolia Environmental Services (Wisconsin Rapids, WI) \$5,000 to provide Veolia Environmental Services Scholarships for five CNR students in 2010.
- Thomas A. Plein Foundation LTD (Henderson, NV) \$16,000 to the Thomas A. Plein Scholarship Endowment for CNR students with strong financial need. The support comes on the recommendation of Steve Plein (BS-Soils, '77), of New Port Richey, FL, a nephew of the late Thomas A. Plein.
- Robert & Kim Spoerl /Premium Brands, Inc. (Waupaca, WI) \$10,000 to support the CNR Fall Migration event and the TNR West Lobby Renovation Project.
- Marvin & Sandra Kramer (Waupaca, WI) \$5,000 for 2010 Marvin and Sandra Kramer Summer Academic Scholarships.
- Bruce & Barbara Munson (Ames, IA) \$6,000 to support the Erik Munson Memorial Graduate Research Endowment.
- John & Patty Noel (Stevens Point, WI) \$25,000 to support the Daniel O. Trainer Natural Resources Building West Lobby Renovation Project.

- Mark & Eva Schroeder (Riverside, CA) \$25,000 to support the Mark & Eva Schroeder Scholarship Endowment.
- Dorothy Kopmeier Vallier Foundation (Milwaukee, WI) \$88,472 to provide support for the fifth consecutive year for the Vallier Treehaven Resident Ecologist position at Treehaven, currently held by Kevin Burns (BS-Forestry Administration, '91; MS-Natural Resources, '94).
- Kopmeier Family Fund/Greater Milwaukee Foundation (Milwaukee, WI) \$18,000 to support for Treehaven Inner City Environmental Program to provide outdoor experiences at Treehaven for Milwaukee's inner city youth.
- Dorothy Vallier (Milwaukee, WI) \$10,000 to construct Dragonfly Pond teaching dock at Treehaven and support upgrades to the audio/visual equipment for the Sylvester Auditorium at Treehaven.
- Timothy Kroeff (Sturgeon Bay, WI)
 \$5,329 to support the Timothy G. Kroeff
 Field Scholar Endowment.
- James & Joanne Bernd (Waupaca, WI)
 \$5,000 for the 2010 James and Joanne Bernd Family Scholarships.
- Susan Clark (Stevens Point, WI) \$20,000 bene bequest in memory of Forest Clark to establish the Forest J. Clark Forestry Endowment.



Dorothy Vallier, longtime UWSP and CNR benefactor, turned 100 in May 2010.

- Des Plaines Wetlands Conservancy (Kenosha, WI) \$9,000 to support the Phil Sander Memorial Freshman Conservation Scholarship Endowment and the Phil Sander Memorial Undergraduate Conservation Scholarship Endowment.
- Gerald & Helen Stephens (Peoria, IL) \$50,000 to support the Boone and Crockett Chair of Wildlife Project.
- The Johnson Foundation, Inc. (Racine, WI) \$16,000 to support the work of Michael Dombeck, UW System Fellow for Global Conservation.
- Alice Agnew (Tomahawk, WI) \$4,000 to the Agnew Leadership Endowment to support education programs at Treehaven.

• New Scholarships:

Six new donors supporting thirty three new scholarships

- Davey Tree Scholarship (5)
- Grand River Marsh Turkey Club, Inc. Scholarship (2)
- Mark John Kutz Memorial Scholarship (2)
- Trout Unlimited-Frank Hornberg Chapter Scholarship (1)
- Wilson Outstanding Achievement Awards and scholarship (18)
- James and Joan Bernd Family Scholarship (5)