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Center for Advanced Land Management Information Technologies (CALMIT)
School of Natural Resources
University of Nebraska–Lincoln
http://www.calmit.unl.edu/

Director: James W. Merchant (2008–present); Donald C. Rundquist (1986–2008)

Vision and Mission
The principal mission of the Center for Advanced Land Management Information Technologies (CALMIT) is to conduct research and instruction of the highest quality in remote sensing, geographic information systems (GIS), and related technologies. Our vision is to be internationally recognized as a center of excellence for applications of geospatial technologies to issues in natural resources management.

Background
Established in 1986 by the Board of Regents of the University of Nebraska, CALMIT expanded the UNL Remote Sensing Center founded in 1972. CALMIT serves to focus the significant interdisciplinary expertise in advanced land management information technologies that exists at UNL and in the region. Especially strong programs exist in hyperspectral remote sensing of vegetation, surface water, soils, and coral reefs; remote sensing of water quality and aquatic vegetation; analysis of satellite image data for regional, continental, and global land cover characterization; and GIS-based spatial modeling for renewable resources management, environmental hazard assessment, and land use/land cover change. CALMIT’s facilities, among the best in the United States, include:
- an indoor spectroscopy/water quality laboratory for teaching, controlled experiments, and sensor calibration,
- a 29-hectare field research station at UNL’s Agricultural Research and Development Center near Ithaca, NE,
- several close-range remote sensing platforms to deploy sensor packages that operate from the UV through the microwave spectral bands over both land and water environments, and
- an aircraft outfitted with instruments that include an AISA Eagle hyperspectral (244-band) imaging system and a thermal-infrared camera.

Faculty and staff*
Faculty:
Dr. James W. Merchant, professor and director
Dr. Sunil Narumalani, professor and associate director
Dr. Donald C. Rundquist, professor
Dr. Anatoly Gitelson, professor
Dr. Ayse Irmak, assistant professor
Full-time staff:
Chad Boshart, research scientist
Karin Callahan, research scientist
Galina Keydan, research scientist
Bryan Leavitt, CALMIT facilities manager
The CALMIT faculty and staff are complemented by the following affiliated Faculty Fellows:

- **Dr. Viachaslav Adamchuk (UNL, Biological Systems Engineering)**
- **Dr. Merlin Lawson (UNL, Geosciences)**
- **Dr. Yunwoo Nam (UNL, Community and Regional Planning)**
- **Dr. Jeffrey Peake (UNO, Geography/Geology)**
- **Dr. Larkin Powell (UNL, School of Natural Resources)**
- **Dr. John Schalles (Creighton University, Biology)**
- **Dr. Zhonghong Tang (UNL, Community and Regional Planning)**
- **Dr. Brian Wardlow (UNL, School of Natural Resources)**

In addition, CALMIT employs approximately 15 undergraduate and graduate research assistants.

**Funding**

Although the five core CALMIT faculty are state funded, all staff and student positions, technical equipment, and research support are supported through grants and contracts with federal and state agencies, and occasionally private firms. Principal sources of funding have included NASA, NOAA, USDA, EPA, USGS, NPS, NSF, the Nebraska Department of Natural Resources, the Nebraska Department of Environmental Quality, the Nebraska Department of Health and Human Services, the Nebraska Department of Agriculture, the Nebraska Emergency Management Agency, the Nebraska Military Department/National Guard, and the Nebraska Office of the Chief Information Officer.

**Recent Grants**

Since 2004, CALMIT external funding has totaled approximately $4.6 million. Some representative recent grants:

- GIS Support for Nebraska Army National Guard, Nebraska Military Department, $621,891, 2003–09.
- Geospatial Data Analysis/Support for the Nebraska Department of Health and Human Services, Nebraska Department of Health and Human Services, $684,717, 2004–08.
- NebraskaView, USGS, $253,989, 2004–09.
Quantifying Evapotranspiration, Nebraska Department of Natural Resources, $271,664, 2008–11.
Nebraska Geospatial Data and Web Network, Nebraska Office of the Chief Information Officer, $260,870, 2008–11.

**Major/Recent Publications**
Since 2004, CALMIT faculty and staff have authored more than 100 refereed publications. Some representative examples:


**Future Prospects**

Demand for research, instruction, and outreach in geospatial information sciences continues to increase nationwide, and this bodes well for CALMIT’s future. CALMIT’s research volume will, of course, depend on many factors, including federal and state budgets, but several developments are promising. For example, in 2008 Dr. Ge Lin, a GIS specialist, joined the faculty at the University of Nebraska Medical Center, and subsequently became a courtesy faculty member in SNR and a CALMIT affiliate. Dr. Lin’s affiliation may lead to new research and teaching initiatives related to public health. In addition, SNR is in the midst of recruiting a new faculty member in GIS and environmental modeling who, when hired, will contribute further to CALMIT’s mission. Finally, the addition of the geography program to SNR will provide CALMIT with new opportunities for collaboration and for recruitment of students.

**Role of CALMIT in SNR**

CALMIT faculty teach all SNR undergraduate and graduate courses dealing with remote sensing, GIS, and GPS. All SNR graduate students specializing in these technologies are advised by CALMIT faculty. CALMIT faculty and staff regularly serve on SNR committees, and several faculty (Merchant, Rundquist, Narumalani) have held positions as SNR coordinators and/or committee chairs. SNR staff provide outreach to the community through the NebraskaView program and, in this capacity, frequently assist colleagues in SNR in obtaining and using geospatial data in research and teaching.

**Linkages**

CALMIT faculty and staff collaborate regularly with colleagues affiliated with SNR’s High Plains Regional Climate Center, National Drought Mitigation Center, Great Plains Regional Center for Global Environmental Change, USGS Cooperative Fish and Wildlife Unit, and UNL Water Center. Strong linkages also exist with the USGS Center for Earth Resources Observation and Science (EROS), NASA, NOAA, USDA, many state agencies, and the Nebraska GIS Council.
Great Plains Regional Center for Global Environmental Change
School of Natural Resources
University of Nebraska–Lincoln

Director: Shashi B. Verma

Vision
The Great Plains Regional Center for Global Environmental Change (GPRC) is devoted to interdisciplinary research that develops quantitative information on the role of key ecosystems as sources and sinks of carbon dioxide (CO$_2$). Through understanding gained by such research, the GPRC will provide scientific information required for accurate prediction of future CO$_2$ concentrations and the climate.

Background
The GPRC was established in 1993 by the Board of Regents of the University of Nebraska. It became one of the six regional centers of the National Institute for Global Environmental Change (NIGEC). The overall vision of NIGEC may be stated as the performance of (academic) research on the (regional) interactions between ecosystems and climate in support of the climate change program of the U.S. Department of Energy. This vision led to the development of a series of priority research goals that guided the areas to which NIGEC support was directed, the most enduring of which was the measurement of the exchanges of carbon and energy between the atmosphere and terrestrial ecosystems and the use of those observations to evaluate climate and carbon cycle models. Other goals that have been identified as relevant over the years include atmospheric radiation and aerosols, modeling of the response of regional ecosystems to climate change, and integrated assessment of the impacts of environmental and ecological changes. In order to better integrate environmental research programs, the DOE decided to terminate funding for NIGEC in 2007. As mentioned above, the GPRC is a UNL center approved by the Regents of the University of Nebraska and continues its operation with an updated focus, outlined in the previous section.

The GPRC was initially led by Dr. William Easterling as director and Dr. Blaine Blad as associate director. In 1997, Dr. Shashi Verma became the GPRC director after Dr. Easterling left the University of Nebraska. In July 2001, Dr. Blad retired.

Research Activity
A primary purpose is to support a research program that increases basic understanding of how agricultural and grassland ecosystems exchange CO$_2$ with the atmosphere and how environmental change is likely to impact these ecosystems in the region. Net ecosystem CO$_2$ exchange is measured year-round using tower eddy covariance flux systems. Faculty, students, and staff from several UNL departments (e.g., Agronomy and Horticulture, Biological Systems Engineering, Biological Sciences, Biochemistry, School of Natural Resources) collaborate with GPRC personnel on detailed process-level studies of soil carbon dynamics, vegetation growth and partitioning, soil moisture, soil gas exchange, and residue decomposition. A collaborative effort with CALMIT scientists is intended to provide regional extrapolation of CO$_2$ exchange using tower flux and satellite observations. Another collaborative project with scientists at the National Soil Tilth Laboratory (Ames, IA), NOAA-Atmospheric Turbulence and Diffusion...
Appendix D – GPRC - 2

Division (Oak Ridge, TN), and the University of Minnesota and USDA-ARS (St. Paul, MN) focuses on a synthesis of tower CO$_2$ and water vapor flux observations in key agricultural systems in the North American Carbon Program MCI (Mid-Continent Intensive) region. Also, using the data from national and international carbon flux networks (e.g., AmeriFlux, CarboEurope, Fluxnet), GPRC personnel collaborate with several scientists in North America and Europe to help develop comparative information on processes controlling CO$_2$ and water vapor exchanges in a variety of ecosystems (e.g., agricultural crops, grasslands, forests).

**Faculty and Staff**
Shashi B. Verma, professor
Andew E. Suyker, research assistant professor
Todd Schimelfenig, research technologist
Dan Hatch, data processing technician
Amy Rung, project assistant

**Funding (Last 5 Years)**

**Linkages/Collaborations**
GPRC personnel collaborate with a number of scientists within and outside SNR. A few examples are given below.
- School of Natural Resources: Drs. Anatoly Gitelson, Ken Hubbard, and Elizabeth Walter-Shea
- Department of Agronomy and Horticulture: Drs. Tim Arkebauer, Ken Cassman, and Dan Walters
Appendix D – GPRC - 3

- Department of Biological Systems Engineering: Dr. Derrel Martin
- Department of Biological Sciences: Dr. Johannes Knops
- Department of Biochemistry: Dr. S. Madhavan

**Major Refereed Publications (Last 5 Years)**


NOAA\textsuperscript{i} High Plains Regional Climate Center  
School of Natural Resources  
University of Nebraska–Lincoln  
http://www.hprcc.unl.edu

**Director:** Martha Shulski (2009–present); Kenneth G. Hubbard (1987–2009)

**Vision**
Since its inception in 1987, the High Plains Regional Climate Center (HPRCC) has provided climate services to federal, state, and local government agencies, commercial and noncommercial industries, students and researchers, and private citizens. The vision is for a science-based national climate service, with three tiers (national, regional, and state), that supports improved decisions to enhance industries, protect the environment, and promote public policy.

**Background**
Congress passed the National Climate Program Act in 1978 to promote an understanding of climate and to provide for climate service. The act directed the development of a network of regional climate centers (RCCs) to meet regional climate service needs. The HPRCC was established in 1987 at the University of Nebraska–Lincoln. The Coordinating Commission for Postsecondary Education in Nebraska approved the High Plains Regional Climate Center as an official University of Nebraska–Lincoln unit on April 26, 2005.

The HPRCC emphasizes:
- Providing services based on direct interaction with climate stakeholders
- Distributing accurate and unbiased climate data, data products, and information
- Enhancing climate services and developing decision support tools through applied research
- Educating stakeholders on emerging regional climate issues

**Faculty and Staff**
Martha Shulski, director  
Kenneth G. Hubbard, regional research climatologist  
Shellie Hanneman, climate assistant  
Jensheng You, research assistant professor  
Jun Li, programmer  
Glen Roebke, weather monitoring specialist  
William Sorensen, senior programmer/analyst  
Natalie Umphlett, regional climatologist  
Alan Curtis, intern: Service  
TBA, intern: Products  
TBA, ontern: Web

**Funding (5 Years)**
High Plains Climate Center Budget, NOAA, $460,000, May 2004–April 2005.  
High Plains Climate Center Budget, NOAA, $383,000, May 2005–April 2006.  
High Plains Climate Center Budget, NOAA, $525,000, May 2008–April 2009.
Improvement of Instrumentation Record, NOAA CPO, $169,000, July 2006–June 2009.

Linkages/Collaborations
HPRCC has participated in the following activities: weekly input to the U.S. Drought Monitor; NIDIS working groups; site surveys for CRN and HCN with NCDC and state climatologists; NOAA panels, work groups, and committees; AMS committees; NOAA Test Beds for Climate and Hydrometeorology; integration with NWS WFOs, Regions, and RFCs; development and management of NWS climate information systems; NOAA National Data Stewardship Team; National Climate Extremes Committee implementation and support of WeatherCoder 3 for NWS; creation of Datzilla for reporting errors; research with the National Climatic Data Center; research with the National Drought Mitigation Center.

Select Recent Publications (2006 to present)


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1 The National Oceanic and Atmospheric Administration.
National Drought Mitigation Center
School of Natural Resources
University of Nebraska–Lincoln
http://drought.unl.edu

Monitoring Program Area Leader: Mark Svoboda
Planning and Social Science Program Area Leader: Cody Knutson
GIScience Program Area Leader: Brian Wardlow

Vision and Mission
To reduce societal vulnerability to drought by promoting planning and the adoption of appropriate risk management techniques.

Background
The NDMC was established in 1995 around the drought management program built by Dr. Donald Wilhite from the early 1980s through the early 1990s. It was officially approved as a center by the University of Nebraska Board of Regents in March 2005. The NDMC’s activities include promoting and conducting research and outreach activities on drought mitigation and preparedness technologies; improving coordination of drought-related activities and actions within and between levels of government; and assisting in the development, dissemination, and implementation of appropriate mitigation and preparedness technologies in the public and private sectors. Emphasis is placed on research and outreach projects and mitigation/management strategies and programs that stress risk management measures rather than reactive, crisis management actions.

Faculty and Staff
The NDMC started with six staff in 1995. That number has grown to twenty-four (six faculty, three post-docs, fourteen staff, and one visiting scientist). Four graduate students work with the NDMC as well. The staff have diverse backgrounds in climatology, meteorology, hydrology, remote sensing, geography, anthropology, public participation, economics, journalism, community and regional planning, GIS, computer science, history, human dimensions, agricultural leadership and education, environmental studies, and rural sociology.

Faculty:
Deborah Bathke, climatologist
Ya Ding, economist
Michael Hayes, director
Cody Knutson, water resources scientist
Jae Ryu, hydrologist/climate management specialist
Toshihiro Sakamoto, visiting scientist
Mark Svoboda, climatologist
Tsegaye Tadesse, climatologist
Brian Wardlow, remote sensing specialist
Donna Woudenberg, drought management specialist
Staff:
Tonya Bernadt, research/outreach specialist
Karin Callahan, GIS/remote sensing specialist
Ann Fiedler, administrative assistant
Brian Fuchs, climatologist
Denise Gutzmer, Drought Impact Reporter moderator
Tonya Haigh, research specialist
Jun Li, programmer
Jeff Nothwehr, GIS and research specialist
Chris Poulsen, geospatial analyst
Soren Scott, GIS specialist
Kelly Helm Smith, science communicator
Nicole Wall, public participation specialist
Melissa Widhalm, climatologist
Deborah Wood, publications specialist

Funding
Support for the NDMC comes through a mix of competitive grants, special grants through the congressional earmark process, and state funding. Since 1995, the NDMC has received approximately $10 million of funding from USDA. A majority of that has been received from competitive grants ($7.5 million) and the rest has been through the special grants or earmarks ($2.5 million). In addition, the NDMC has received competitive grant funding from the following agencies: NOAA, NASA, NSF, USGS, the Bureau of Indian Affairs, and the Bureau of Reclamation. The state pays for one faculty-funded position (Michael Hayes, director) and part of one staff person. The rest of the 24 staff are soft-money funded. The congressional earmarks have been very valuable in three ways: providing the initial funding to help sustain the NDMC, particularly in the early years; providing some base support for operating expenses; and supporting operational service-oriented activities not otherwise covered within competitive grants, such as the U.S. Drought Monitor map.

Recent Grants
In 2009, the NDMC is involved in projects totaling approximately $5.8 million from USDA and approximately $3.5 million from non-USDA agencies. Grants still pending, and involving the NDMC, have been submitted to NSF, NOAA, and the Centers for Disease Control.

Publications
NDMC staff have published 33 peer-reviewed journal articles since 2005. A sample of peer-reviewed articles from 2008–09 is included below. The NDMC has also produced 65 book chapters and other drought-related publications since 2005, and disseminates a quarterly newsletter called DroughtScape [http://drought.unl.edu/droughtscape/droughtscapecurrent.htm].


**Future Prospects**

The issues surrounding drought, water, and climate change will only become more critical in the future locally, across the United States, and around the world. The NDMC is well positioned and experienced as an end-to-end organization emphasizing research, operations, and applications connecting the science with all stakeholders dealing with these issues. As an example, the NDMC has been a key participant in the process to define and implement the National Integrated Drought Information System (NIDIS), and will continue to play a major role within NIDIS. This involvement includes helping to organize NIDIS-sponsored workshops around the country and implementing several pilot projects. The NDMC also chairs the NIDIS Portal Development Committee and provides a help desk for portal users. The NDMC’s Drought Impact Reporter tool exists on the cutting edge of a growing citizen science movement called Participatory GIS or Voluntary Geographic Information (VGI). Agencies like USDA and NOAA are realizing the importance of interacting with and understanding the wide range of stakeholders, and the expertise within the NDMC’s planning and social science program area provides an excellent opportunity to develop these connections with stakeholders. One final
example of a developing need occurs within the topic of public health and how it relates to drought, water, and climate change. Several NDMC staff have been involved with recent projects related to the Centers for Disease Control and have participated in the development of a drought and public health document, soon to be released.

**SNR Linkages**
The NDMC has strong linkages with the other centers within SNR, particularly the High Plains Regional Climate Center (HPRCC). In addition, NDMC faculty have identified four different SNR faculties as their primary faculty (applied climate science, geography/GIScience, human dimensions, and water). Although the faculty concept is relatively new within SNR, the diversity of interests within the NDMC improves our interactions with other faculty and staff within SNR.

**Additional Linkages**
The work of the NDMC is widely recognized and respected nationally and internationally. This is reflected through the variety of linkages maintained locally, nationally, and internationally. The NDMC hosts the conversations held by the national drought community as part of the U.S. Drought Monitor process, and interacts closely with drought scientists and managers within NOAA (including RISAs and RCCs) and within many states (including Nebraska). For example, scientists and officials in North Carolina, Colorado, Arizona, and Hawaii are all teamed with the NDMC to help improve the local reporting of drought impacts for the Drought Impact Reporter tool. Internationally, the NDMC works directly with U.N. organizations such as the Food and Agriculture Organization (FAO), the International Strategy for Disaster Reduction (ISDR), the World Meteorological Organization (WMO), and the U.N. Convention to Combat Desertification (UNCCD), but also with officials and scientists in numerous countries. In 2008, the NDMC hosted scientists and officials from Portugal, Spain, the Czech Republic, India, Saudi Arabia, Tanzania, Ethiopia, and Australia. Since 2002, the NDMC has hosted 231 visitors. A Japanese scholar specializing in remote sensing and climate change applications is spending two years at the NDMC, beginning in October 2008. The NDMC has distributed the Standardized Precipitation Index (SPI) to more than 150 scientists in 60 countries around the world, and SPI training is one of the most requested topics when the NDMC participates in international workshops. Linkages also result from the NDMC’s tradition of providing data and information on drought and water management issues for requests from local, state, and federal agencies; tribal governments; international organizations; and foreign governments. The NDMC staff also respond to more than 1,000 requests for data, information, and interviews per year, including 400-600 media requests. Media requests in 2008 included CNN, CBS News, CBS Radio, NBC News, Public Television, NPR (both local stations across the country and national), The Weather Channel, Associated Press, *USA Today*, *Washington Post*, *New York Times*, *Wall Street Journal*, *Atlantic Journal Constitution*, *Time Magazine*, *National Geographic*, *Reader’s Digest*, and *Redbook Magazine*. NDMC staff give approximately 150 presentations per year to a variety of audiences around the world.
Vision and Mission: The Vision of the UNL Water Center is to assist the University of Nebraska in becoming an international leader in water research, teaching, extension, and outreach. As part of that vision, we hope to facilitate and promote UNL programs that will result in UNL becoming a premiere institution in the world in the study of water use in agriculture.

Mission – The UNL Water Center implements and facilitates water-related research, extension, teaching, and public outreach/education on all aspects of water resources with a focus on Nebraska, in the context of the region, while addressing issues of national and global concern.

Background: Established in 1964 as part of the Water Resources Research Act, the UNL Water Center is one of 54 such water institutes nationwide, with one located in each of the 50 states plus its territories. Through three name changes and eight directors, the fundamental goals of the Water Center have not changed, as reflected in the original charge from the WRRA: (1) arrange for competent research that addresses water problems or expands understanding of water and water-related phenomena; (2) aid the entry of new research scientists into the water resources fields; (3) train future water scientists and engineers; and (4) distribute the results of sponsored research to water managers and the public. An independent panel appointed by the Secretary of Interior evaluates the performance of each institute (the UNL Water Center passed its last review in 2004).

The UNL Water Center has focused a majority of its efforts over the past five years on: (1) facilitating research by competitively awarding seed grants ($15,000 to $20,000 each for one year; weighted for younger faculty); (2) facilitating research and training of new scientists by holding, for example, an annual Water Research Colloquium, water summits, and a spring water seminar series; (3) conducting extensive outreach education via, for example, an annual summer water tour.

Faculty and staff: The Water Center does not oversee faculty appointments, although the director has a 50% administrative appointment to allow him/her to carry out duties related to the Water Center (see Specific Questions, in section V.), and currently, the manager of the Water Sciences Laboratory is partially evaluated by the Water Center director (final responsibility lies with the SNR director). There are more than 100 UNL faculty who work directly on water, including faculty from five colleges (Agricultural Sciences & Natural Resources, Architecture, Arts & Sciences, Engineering, and Law), and more than 15 academic units. In addition, there are several water faculty members located at other institutions in Nebraska who are affiliated with the Water Center, by inclusion in our annual USGS 104b RFA and Water Current (newsletter) mailing lists, having received 104b funding, or by their elective inclusion in the recently updated water faculty directory.
Currently, there are six Water Center staff members.* These individuals are highly skilled, dedicated employees who each have many years of water-related program experience. It is worthy of note that the Water Center staff increased threefold over the past two years, in large part as a result of Water Resources Research Initiative activities and related funding. As the WRRI now winds down, their duties remain much the same, as we strive to accomplish our vision.

### Funding:

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* USGS distribution: 60% seed grants, 21% tech. transfer/extension, 19% program administration  
** $235,000 Agricultural Research Division, $45,000 Extension Division, $363 College of Agricultural Science & Natural Resources, includes all non-Water Science Lab staff stipends  
*** dedicated to the Water Science Laboratory  
† 2009/10 budget unknown, but likely less than 2008/09  
† earmarked for spring water seminar series

### Extramural Funding:

The following is a summary of only WRRI faculty grant proposals and awards, 2004-2007.*

| Total Awards for 2004-2008 | $1,704,219 |
| Total of All Proposals Submitted (incl. awarded, rejected, & pending) for 2004-2008 | $51,617,571 |

Through both the Water Center and WRRI, several larger federal grant proposals were facilitated over the past five years, for example:

“Integrated Environmental Science, Engineering, and Policy in Impacted Watersheds” (NSF-IGERT) $3,123,787 S. Fritz, K. Hoagland, B. Ramamurthy, A. Tomkins, S. Zellmer (not funded)

“Complex, Inter-related Natural and Human Dynamical Systems: Climate, Water, and Agriculture in the Great Plains” (NSF-Dynamics of Coupled Human and Natural Systems) $1,475,799 R. Oglesby, S. Irmak, E. Istanbullouglu, K. Schoengold, D. Scott, J. Williams, S. Zellmer, V. Zlotnik (not funded)

“Natural Resource Regulation: Business Adaptations, Socio-Psychological Mediators, and Consequent Impacts on Resource Availability and Ecosystem Services” (NSF-Dynamics of Coupled Human and Natural Systems) $1,483,000 A. Tomkins, A. Samal, K. Hoagland (Lead PI’s) (not funded)


In addition, numerous other grants* have been supported directly via Water Center and/or WRRI funds (e.g., partial support for a graduate student, small equipment grants), or simply by hosting a workshop that brought together a new team of interdisciplinary faculty. As part of WRRI, a large number of facilitation activities have been conducted since 2004. *A cooperative work agreement was also signed by the Water Center with the Nebraska Department of Natural Resources, resulting in ten new projects ($2,319,752) for UNL water faculty.

Publications: Again, no faculty members are directly administered by the Water Center, nevertheless papers were published only by Water Initiative faculty alone over the past five years. *

Future Prospects: As water availability and quality continue to grow in importance in Nebraska and globally, the importance of statewide coordination, facilitation, and advocacy for water research, education, and outreach/extension will continue to increase. The history, track record, and overall importance of many of the functions served by the Water Center in these three primary areas clearly justify not only continuing its current efforts, but also strongly suggest that its flat budget over the past ten years or more should be reexamined and likely enhanced.

Role of the Water Center as Part of SNR: Water Center staff have been and are well integrated into SNR since its initial merger, for example: (a) several staff members have served or continue to serve on SNR standing committees, (b) the WSL director is currently co-leader of the SNR water faculty group, and (c) the Water Center director served as interim then acting director for nearly two years, overseeing the second merger which included the Water Center and CSD. Six of the WRRI water faculty new hires have full or partial appointment in SNR as well, who also serve to integrate SNR with other water-related units across campus. As other water-related units on campus come into being (e.g., the Global Water Institute), the role of the Water Center both in SNR and at UNL in general will undoubtedly evolve. Nevertheless, given that the water institutes nationwide continue to be reauthorized and appropriated by the US Congress, they will also continue to have a national role to play.

Linkages of the Water Center* 

Water Sciences Laboratory Core Facility: A complete report of WSL-related activities, which was recently prepared as part of a campus-wide external review of NRI core facilities, has been prepared.

*additional information available on Water Center web site: http://watercenter.unl.edu/
Nebraska Cooperative Fish and Wildlife Research Unit
School of Natural Resources
University of Nebraska–Lincoln
http://snr.unl.edu/necoopunit/

Leader: Dr. Craig R. Allen

Vision and Mission
The national Cooperative Research Units Program is a unique collaborative relationship between the federal government, universities, states, and a nonprofit organization. The mission of the Cooperative Fish and Wildlife Research Unit Program is to:

1. train graduate students for professional careers in natural resource research and management,
2. conduct research that will create new information useful for management of natural resources,
3. provide technical assistance to cooperators.

Background
The USGS Cooperative Research Units Program has been in existence for more than 70 years. In 2004, the NE Cooperative Fish and Wildlife Research Unit became the newest unit through a cooperative agreement signed by the United States Geological Survey, University of Nebraska–Lincoln, Nebraska Game and Parks Commission, United States Fish and Wildlife Service, and Wildlife Management Institute. At that time, the unit was staffed by a unit leader and an administrative assistant. Additional research scientists (assistant unit leaders) were hired in 2005 and 2009, respectively. Graduate students advised by unit scientists have grown to ~16. External funding has grown from zero to $8M. Research projects have increased from two to ~25. Research technicians/assistants will number ~25 during summer 2009. The unit is helping to establish a regional node of expertise in the area of adaptive management.

Faculty and Staff
Faculty:
Kevin L. Pope, assistant leader, Fisheries, 2005–present
Joseph (TJ) Fontaine, assistant leader, Wildlife, 2009–present

Staff:
Valerie Egger, administrative assistant, 2004–present
Caryl Cashmere, staff assistant (.5 FTE), 2009–present
Annabel Major, Invasive Species Project coordinator, 2007–present
Funding
The three unit scientists are federal employees supported by the U.S. Geological Survey. The administrative staff is supported by UNL IANR. The project coordinator is supported by a Nebraska Environmental Trust grant. The Nebraska Game and Parks Commission provides base funding for operating expenses. The unit has a “center” account. All research is externally supported. The unit covers its operating costs without adding to the SNR financial burden. These costs include office equipment/supplies, phones, fax, postage/FedEx, most copying and printing, computers, some furniture, etc. The RWO process simplifies the transfer of federal research funding to faculty partners. The unit provides job opportunities for >25 technicians/year.

Recent Grants (2004–present, selected only; >$8 million in external funds since 2004)
Angler Behavior in Response to Management Actions on Nebraska Reservoirs, NE Game and Parks, $3,147,776, 2009–14. (K.L. Pope)
Assessing Local and Regional Variability in Productivity and Fidelity of Grassland Birds on National Park Service Units in the Great Plains, National Park Service, $221,792, 2007–10. (L. Powell, C.R. Allen)
Understanding Invasions and Extinctions, USGS, $23,000, 2005–08. (C. R. Allen)
Spatial Risk Analyses: Risk to Native Declining Species from Invasive Species, USGS/NE Game and Parks, $74,000, 2005–08. (C.R. Allen)
Assessment of the Landowner Incentive Program for Species at Risk, USGS/NE Game and Parks (PI), $77,000, 2004–07. (C.R. Allen)
Habitat Use by Otters, NE Game and Parks, $68,000, 2006–10. (C.R. Allen, S. Wilson)

Major/Recent Publications (2004 – present, selected only; N = 56 publications since 2004)


**Unit Future**
Continuing growth is expected. Full staffing as of 2009 should provide for continued and improving productivity. Graduate students will increase to >20 in 2009. The unit advises/supports a relatively large portion of SNR graduate students. The unit provides undergraduate opportunities through employment as research technicians and by participation in the UCARE Program.

**Partnerships**
The unit actively and formally partners with the Nebraska Game and Parks Commission, USGS, USFWS, other national and regional units, and the Resilience Alliance (international). The unit is actively establishing partnerships with other units in the Great Plains, and is coordinating a collaboration retreat in 2009.
Major Faculty Collaborations & Linkages
(note: this list is a partial list)

Allen, Craig
- Research Collaboration, Sheri Fritz, Geosciences
- Research Collaboration, Ashok Samal, Computing Sciences
- Research Collaboration, Alan Tomkins, Policy Center
- IGERT Grant, Steven Goddard, UNL, Computer Sciences and Engineering, spatial decision support systems; Gary Lynne, UNL, Agricultural Economics, ecological economics, behavioral economics; Sarah Michaels, UNL, Political Sciences, environmental policy, knowledge transfer; Brigitte Tenhumberg, UNL, Biological Sciences, population modeling; J. Allen Williams, Jr., UNL, Sociology, environmental sociology, social change, social inequality; Sandra Zellmer, UNL, College of Law, environmental policy, law; Vitaly Zlotnik, UNL, Geosciences, hydrogeology, hydrological modeling.

Awada, Tala
- Walter Schacht, Agronomy and Horticulture, research, co-advising graduate students, Amalia Yiannaka, Agricultural Economics, research.
- Scott Josiah, NE Forest Service, research
- David Dunigan, Pathology, research
- Derrell Martin, BSE, research
- Tom Clemente, Agronomy and Horticulture, Beadle center, research, co-advising.
- Julie Stone, Biochemistry, Beadle Center, research, co-advising

Baasch, David
- Collaborating on a research grant (Sampson Range and Pasture Endowment) with Walter Schacht (UNL Dept. of Agronomy) and Jerry Volesky (UNL-WCREC) studying the effects of grazing management systems on distribution of grazing by cattle at the Platte Valley Whooping Crane Maintenance Trust. Impacts of this study could result in improved range-management practices that optimize diversity of habitats for wildlife and livestock.

Bathke, Deborah
- 3 courses in Geosciences and 2 in SNR. My official split is 41% Geosciences and 59% SNR.

Benson, Lorrie
- UNL Water Web Site: Co-led by Sharon Skipton and me. Sharon is UNL Extension faculty with Southeast Research and Extension Center. Sharon and I are the leadership team for the implementation of the web site. Other collaborators on the web site governance team include: Kyle Hoagland, Ron Yoder (Biological Systems Engineering), Roger Terry (IANR Communications and Information Technology). Other collaborators working on the site include individuals from all UNL departments with an interest in
Appendix I - Major Faculty Collaborations & Linkages

- Conflict Management class development: I was the original proponent of a Conflict Management class for SNR that is being developed by Kelly Phipps, a professor of practice and current PhD student in AgLec. It will be offered fall of 2009 as a cross-listed SNR/AgLec class. Kelly is developing and will teach the class, but I've provided some assistance with the class design, selection of materials, and promotion of the class. The first discussion of the class included Dave Aiken, faculty in Ag Econ, and Jim O'Hanlon, faculty in Education.

- ENVR 189H—Humans, Water and the Environment. I'm creating a freshman honors seminar class for fall 09. The class is being created in response to a request to Dave Gosselin from the UNL Honors Program. I've worked with Karen Lyons, Associate Director of the Honors Program, and (a little bit) with Patrice Berger, the Honors Program Director, on their expectations for the class.

- All of our WRRI/Water Center events by definition involve other departments, so I work extensively with people outside of SNR. The list of departments would be that included is the list above. (We also work within the UN system with people at UNK, UNO, and UNMC.) Events include the Water Law, Policy and Science Conference; Water Colloquium; Spring Water Lecture Seminars; and (planned for this fall) the Platte River Basin Science and Resource Management Symposium.

Brandle, Jim

- I have joint efforts with the organic group which includes research, extension and teaching. The units are Entomology, Haskel Ag Lab, Panhandle Station, Agronomy Horticulture and SNR. We are submitting several new grants this year. The effort also includes Ron Johnson from Clemson. Project goals are to address the issues of transitioning from "conventional ag" to organic ag" Major emphasis on weed control and nutrient balance. Cover crops are a focus.

- John Quinn, Ron and I are focused on developing the healthy farm index to give a relative measure of environmental impact of a farm operation. Emphasis is on birds as pest predators.

- I have had projects with Stat and Entomology and a new one in development.. Again the emphasis is on non-crop habitat, insect populations and predator prey control of crop pests.

- National Agroforestry Center / USDA-NRCS and USDA-Forest Service on biomass of agroforestry practices. This work also involves Dr. Carl Mize retired from ISU and living in Mexico.
Appendix I - Major Faculty Collaborations & Linkages

Burbach, Mark
- Cheryl Bailey, Biochemistry, Research
- Mark Balschweid, AgLEC, Teaching grant
- Mark Bernards, Agronomy & Horticulture, Research
- Dean Eisenhauer, Biological Systems Engineering, Research Collaboration
- Susan Fritz, IANR Vice Chancellors Office, Teaching Grant
- Kem Gambrell, AgLEC, Teaching Grant
- Heath Harding, AgLEC, Teaching Grant
- Robert Hayden, AgLEC, Dissertation Committee
- Stephen Linenberger, AgLEC, Dissertation Committee
- Gary, Lynne, AgEcon, Research Grant
- Gina Matkin, AgLEC, Teaching Grant, Co-teaching
- Maribeth Milner, Ag/Hort, Research Grant
- Kelly Phipps, AgLEC, Dissertation Committee
- Byrav Ramamurthy, CSE, Research Grant
- Joyce Schaben, AgLEC, Dissertation Committee
- Kim Todd, Ag/Hort, Research Collaboration
- Kenneth Weaver, AgLEC, Dissertation Committee
- Damien Westfield, AgLEC, Dissertation Committee

Comfort, Steve
- I advise and co-advise graduate students through the Civil Engineering (Ph.D) or Environmental Engineering (M.S) program.

Dewey, Ken
- My primary collaboration across campuses is the Central Plains Severe Weather Symposium and Family Weatherfest. This is an annual event each spring which involves the Geosciences Department, Geosciences Meteorology majors, the UNL AMS Student Chapter and of course several programs in SNR (NDMC, High Plains Regional Climate Center, IANR and SNR graduate students). It is an educational outreach event.

Diffendal, Bob
- Lincoln County Extension on their "Water Riches" Program. For the last few of these years Extension Educator Brenda Aufdenkamp has been the lead on this program. It is a two-day program for 4th grade kids in Lincoln, Keith, Arthur, and Perkins Counties. Over the two days I lead 8 short field trips and talk to the kids about the Ogallalla and Brule formations exposed at Cedar Point Biological Station and how these formations are related to ground water resources in the area.
- Given a lecture on the geologic development of the Ogallala/High Plains Aquifer System each year in early December to the farmers and ranchers participating in the Nebraska LEAD Program run now by Terry Hejny.
- Lecturer for Chancellor Perlman’s UNL Speakers Bureau.
- Editor of Great Plains Research in the Center for Great Plains Studies (2004-present).
Istanbulluoglu, Erkan
- Wayne Woldt and Suat Irmak in biological systems engineering on hydrological modeling and evapotranspiration respectively.
- David Loope at Geosciences on Sand hills geomorphology.

Freitas, Nathan
- Mel Johnson, School of Natural Resources, Geography Department, Currently teaching Geography 155 lab at Morrill Hall on Wednesdays and Thursdays.
- Jim Merchant, School of Natural Resources, Geography Department, Non thesis research, I am researching and collecting data for Prairie Pines, a property on Adams and 112th.

Gosselin, Dave
- Sherri Stenberg, English, Erin Blankenship, Statistics, and Ted Hamann, TLTE, CEHS, Faculty Leadership in Writing Initiative & Kelly Grant.
- NU Teach NRI Project: Dussault, Lewis, Arts and Sciences; Heng-Moss, Bell, CASNR; McGowan, Doll, Bonnstetters, CEHS, Grandgenett, UNO.
- Toyota Project/NASA: Heng-Moss, Lee, Don, CASNR, Strand EEO, Bonnstetter, Pederson, CEHS.
- POE Science Education: Dussault, A&S, Harnisch, CEHS, Heng-Moss, CASNR.

Harvey, Ed
- Leon Higley, Steve Spooker, Tierney Brosius, Department of Entomology, Salt Creek Tiger Beetle Critical Habitat Project.
- Tim Arkebauer, Agronomy & Horticulture, Nebraska Wetlands ET
- Vitaly Zlotnik, Geosciences, Alkaline Lakes Project
- Darryll Pederson, Geosciences, Hawaii Stream Hydrology
- John Gates, Geosciences, Chloride mass-balance recharge estimations
- Dean Jack Oliva, Hixon Lied College of Fine and Performing Arts, and Mike Farrell NET, Justin Morrill Scholars Vermont Trip Documentary Video
- Dean Jack Oliva, Hixon Lied College of Fine and Performing Arts, Patrice Berger, UNL Honors Program, University Academy Program

Hayes, Mike
- Steve Goddard, Ian Cottingham; Department of Computer Science and Engineering; series of NSF and USDA/RMA grants to develop drought visualization tools for agricultural producers.
- Ashok Samal, Leen-kiat Soh: Department of Computer Science and Engineering; currently putting together a proposal for the NSF Partnerships for International Research and Education program.
- Alan Tompkins, UNL Public Policy Center, currently putting together a proposal for the NSF Partnerships for International Research and Education program.
Appendix I - Major Faculty Collaborations & Linkages - 5

- Ray Supalla, Karina Schoengold; Agricultural Economics; working on a NOAA grant to estimate the economic impacts of drought, and serve together on the thesis committee for a student advised by Karina.
- Charles Wortmann, Agronomy, provide training seminars for international guests (mainly from Africa) hosted by Dr. Wortmann.
- Bob Bolin, UNL Libraries, helped organize and host a guest for a Climate Change conference.
- Terry Hejny, Director of the Nebraska LEAD Program, Regular participant within the Nebraska LEAD Program's November conferences at UNL.
- I serve on the Board of Governors for the Center for Great Plains Studies and chair the Scholarship Committee. This service allows me to interact with a whole host of faculty at UNL, UNK, and UNO.

Herpel, Rachael
- Classroom presentations: Stacey Hawkey, Extension Engineer, Partners in Pollution Prevention (P3) Coordinator, UNL Biosystems Engineering - Presented Groundwater Guardian Green Site information, Zhenghong Tang, Assistant Professor, UNL Community and Regional Planning, Presented information about source water assessment and protection to CRP, Sandy Sattler-Weber, Lecturer, UNL Ag Leadership and Communication - Served as a panelist for a session of AECN/ALEC 388. Ethics in Agriculture and Natural Resources course
- NU Water-related Research Database (http://watercenter.unl.edu/ResearchDB/ResearchDB.asp): an interactive database that provides up-to-date information to Nebraska’s water-related decision-makers and others about the water-related research being conducted by UNL faculty. Met face-to-face with UNL faculty members (outside of SNR) to solicit their feedback and suggestions for the research database. The database was modified in response to these suggestions; individuals were notified about how and when their suggestions were used.
- Briefing Booklet (http://watercenter.unl.edu/WRRI/WRRIWaterResearchPapers.asp): David Aiken, UNL Agricultural Economics – to update and add a Water Management in Nebraska diagram to the booklet
- Sustainability, Sandy Scofield, University of Nebraska Rural Initiative – participated in a series of meetings focused on university programming for “Sustainable Communities” in Nebraska, Cecil Steward, UNL Architecture (professor emeritus) - Served as a consultant to the Nebraska Sustainability Leadership Workshop in Lincoln.
- Water Resources Advisory Panel (WRAP) – organized by UNL Water Center in coordination with UNL Biological Systems Engineering and IANR Administration
- Member of NU Rural Initiative Staff.

Hu, Steve
- Prof. Gary Lynne, Dept of Ag Economics, two NOAA Grants on Human Dimensions in Global Change, studying farmer decision behavior related to use of climate information.
- Dr. Lisa PytlikZillg, Dept Educational Psychology, Center for Instructional Innovation, two NOAA Grants on Human Dimensions in Global Change, studying decision behavior of farmers in use of climate and weather forecasts.
Appendix I - Major Faculty Collaborations & Linkages - 6

- Prof. Roger Bruning, Dept Educational Psychology, Center for Instructional Innovation, a NOAA Grants on Human Dimensions in Global Change.
- Prof. Alan Tomkins, Dept Psychology, Public Policy Center, a NOAA grant on decision making related to using climate information.
- Prof. Terry Mader, Dept of Animal Science, collaborated on two DOE NIGEC grants studying climate change effects on grass growth and animal production and reproduction in the Great Plains.
- Prof. Gary Hein, Dept of Entomology, collaborating on a USDA grant to study climate role in spread of a wheat curl mite in western Nebraska.
- Profs. Clint Rowe and Mark Anderson, Dept of Geosciences, Collaborating on a NOAA Grant on developing a modeling system for storm predictions in the Great Plains.
- Prof. Luis Peon-Casanova, News-Editorial/Broadcasting/Advertising, College of Journalism, working on a manuscript on TV documentary.

Hubbard, Ken

- The modernization of ET services
  - Steve Melvin, West Central Research and Extension Center (Frontier Co.)
  - Steve Goddard, Computer Science and Engineering
  - Gary Zoubek, Southeast Research and Extension Center (York Co.)
- Modern Soybean irrigation scheduling tool
  - James Specht, Agronomy & Horticulture
  - Kenneth Cassman, Center for Energy Sciences
- Carbon Sequestration Project
  - Kenneth Cassman, Agronomy & Horticulture
  - Daniel Walters, Agronomy & Horticulture
  - Johannes Knops, Biological Sciences
  - Timothy Arkebauer, Agronomy & Horticulture

Huddle, Julie

- Monitoring evapotranspiration and growth of ponderosa pine and eastern red cedar stands in Halsey with Drs. Tala Awada Physiological Plant Ecology (SNR) and Dave Wedin Plant and Ecosystem Ecology (SNR).
- Water Use by Native and Invasive Woody Species Along the Republican River with Drs. Derrel Martin, Irrigation and Water Resources Engineering (BSE), Tala Awada Physiological Plant Ecology (SNR) and Xinhua Zhou, Forest Meteorology and Ecology (SNR).
Hygnstrom, Scott
- Teaching, Alan Doster, VBMS, Co-teach a course in wildlife diseases, NRES 496/896
- Teaching & Extension, Alan Doster, Scott McVey, Bruce Boderson, and Mike Carlson, VBMS. Presented a 1-day workshop on wildlife diseases.
- Research & Teaching, Gwen Bachman, SBS, Serve on a PhD Graduate Committee
- Extension, Robert Wright, Entomology, Nebraska Integrated Pest Management Program (IPM)
- Extension, Tom Hunt, Gary Hein, Keith Glewen, Mark Bernards, Agronomy, Nebraska IPM in Agronomic Crops Program
- Extension, Shripat Kamble, Entomology, Nebraska IPM in Housing Program and the Urban Pest Management Conference (UPMC)
- Extension, Clyde Ogg and Erin Bauer, Agronomy, Nebraska IPM in Schools Program
- Extension, Roch Gaussoin, Anne Streich, Agronomy, and Fred Baxendale, Entomology, Nebraska Commercial Horticulture IPM Program
- Extension, Shripat Kamble and Barb Ogg, Entomology, Clyde Ogg and Erin Bauer, Agronomy, Shirley Neimeyer, Consumer Science, Special Session on Public Health at the UPMC

Jess, Mike
- NRES 915 is a Graduate level seminar undertaken in collaboration with the Department of Civil Engineer (CIVE 915) and the College of Law (LAW 774). Each fall the interdisciplinary seminar is offered to Third-year Law School students and to Graduate students. Typically, Grad students come from the SNR, Engineering, Agron-Hort, Regional & Community Planning, Ag Econ, Geosciences, etc. Prof. Anthony Schutz (Law School) and I are co-instructors for the course.

Joeckel, Matt
- Chris Fielding, Geosciences, research collaboration
- Teach Geosciences Courses
- 2008 Schramm Field Trip in Geosciences (England)
- Serve on Geosciences graduate committee
- Advisor/Committee Member Geosciences PhD & MS students

Josiah, Scott (The Nebraska Forest Service)
- annually co-teaches and provides financial support for a Wildfire Suppression Red Card Certification course with Dave Wedin.
- serves on the Nebraska Invasive Species Council, of which SNR employee Annabel Major is Coordinator.
- provides forestry extension and outreach services to the public and natural resource professionals.
- provides financial support for Gregg Hutchison to provide computer support services to the NFS
- provides multiple facilities (Horning Farm State Demonstration Forest, Cedar Canyon State Demonstration Forest) to SNR faculty for forestry and soils education purposes (Jim Brandle)
Appendix I - Major Faculty Collaborations & Linkages - 8

- works with Kyle Hoagland and Tala Awada on research and outreach activities regarding tree and forest use of water.
- engage SNR faculty in teaching the Nebraska Forestry Shortcourse every other year to natural resource professionals (in the past Dave Wedin, Ron Johnson, Dave Lewis, Bill Zanner, etc. assisted). The course has been revived and will be taught in either 2009 or 2010.
- will be collaborating with SNR Climate Change Initiative in terms of tree/forest C sequestration and offsets, and via the production of energy via woody biomass.

**Lenters, John**
- Vitaly Zlotnik (Geosciences) - research project on water balance of Sandhills lakes.
- Erkan Istanbulluoglu (SNR) - research projects on riparian ET and land surface water balance of Nebraska watersheds.
- Jun Wang (Geosciences) - research project on trends in cloud cover, lake temperature, and evaporation.
- Faculty members with whom I serve on thesis committees: Bob Oglesby (Geosciences / SNR), Sheri Fritz (Geosciences), Ken Dewey (SNR), Mike Hayes (SNR), Vitaly Zlotnik (Geosciences), Jun Wang (Geosciences), Erkan Istanbulluoglu (SNR), Ayse Irmak (SNR / Civil Engineering), Mark Anderson (Geosciences)

**Major, Annabel**
- Collaboration on Nebraska Invasive Species Posters, developed by Biological Invaders Undergraduate class, Dr. Tom Powers, Dept of Plant Pathology.

**Merchant, Jim**
- Jim Stubbendieck (Agronomy and Center for Great Plains Studies) - student committees and conference planning
- Charles Wortmann (Agronomy) - student committee/research
- Ashok Samal (Computer Science and Engineering) – research
- Bruce Dvorak (Civil Engineering) - student committee, search committee, research
- David Marx (Biometry/Statistics) - student committees and research
- Rodrigo Canterero (Community and Regional Planning) - student committees
- Steve Reichenbach (Computer Science and Engineering) - student committees and research
- Adonna Fleming (Libraries) - GIS extension
- Note that many of my collaborators (e.g., in Geography and Geosciences) have now moved into SNR or have partial appointments in SNR. An example of the former is Erkan, and the latter includes Bob Oglesby.
- I have also developing collaborations with two new faculty members who I have nominated for courtesy appointments in SNR: Ge Lin (University of Nebraska Medical Center) & Zhenghong Tang (Community and Regional Planning)

**Oglesby, Robert**
- Research Collaboration, Clint Rowe, Mark Anderson, Jun Wang and Dave Loope in Geosciences
Appendix I - Major Faculty Collaborations & Linkages

- Research Collaboration, Byrav Ramamurthy in Computer Science and Engineering
- Research Collaboration, Dave Swanson, Research Computational Facility

Pabian, Roger
- Service - answer occasional requests in the areas of invertebrate fossils, minerals, and gemstones for CSD clientele and have maintained webpages on Nebraska's invertebrate fossils and gemstones.
- Service - curate the invertebrate fossil collections for the University of Nebraska State Museum, and these duties include processing incoming and outgoing loans of fossil specimens and working with visiting scholars who come here to examine specimens in the collections. Visiting scholars have included Tomasz Baumiller, University of Michigan, Ronald Lewis, Auburn University, and Peter Holterhoff, Texas Technical University.
- Service - referee papers that have been submitted to several professional journals on invertebrate fossils and have continued to write on my own in this area. My own research area includes Late Pennsylvanian and Early Permian crinoids, paleoecology, and biostratigraphy.

Pegg, Mark
- CASNR International Studies Task Force
- PEARL Review Panel Member (Mostly CASNR, but some activities on the other campus as well)
- Teaching collaboration with Dr. Cal Borden (BIOS postdoc)
- Teaching collaboration (primarily guest lectures with Dr. Tom Powers)
- Research collaboration with Dr. Alan Kolok (UNO - if that counts as he is part of the Water Center)

Powell, Larkin
- Walter Schacht, Agronomy and Horticulture--research collaboration (grassland birds/Sandhills grazing systems), teaching collaboration (Puerto Rico field course)
- David Logan, Math, Research for Undergraduates in Theoretical Ecology (undergrad teaching/research collaboration)
- Adaptive Management IGEERT proposal--several departments (Craig Allen has complete list) including Law School

Quinn, John
- We submitted a EPA P3 grant represent 3 different programs at UNL. The programs are SNR (John Quinn, Mark Burbach, Katja Koehler-Cole), AgLEC (Courtney Quinn, Gina Matkin), and Agronomy (Chuck Francis, Justin VanWart). The grant title is - Development of an Urban Food Leadership Coop in Support of a Local Food System P3 Awards: A National Student Design Competition for Sustainability Focusing on People, Prosperity and the Planet $9945.00 2008 – Pending
- In addition our McPhee outreach program has partnered with multiple departments across campus.
Appendix I - Major Faculty Collaborations & Linkages - 10

Rundquist, Donald
- Paul Read, Agronomy – Grant with NE Dept of Ag
- Suat Irmak, BSE – Environmental Trust Grant and dissertation committee
- Gary Hein. Entomology – dissertation committee and research
- David Admiraal, CE – research and Grant NE Energy
- Tim Arkebauer, Agronomy – research
- Walt Schacht, Agronomy – grant Sampson fund and research
- Brad Barker, 4H – workshops in summer
- Richard Fergusson, Agronomy – dissertation committees
- Dennis Alexander, EE – research over the years, past grants

Ryu, Jae
- Ken Cassman, IANR, Agronomy, Research collaboration and proposal development -- Preparation

Shea, Pat
- Mark Bernards and Maribeth Milner (Agronomy and Horticulture) - Research (USDA grant project)
- Gary Lynne (Agricultural Economics) - Research (USDA grant project)
- Marjorie Langell (Chemistry) - Research (publication from previous Nebraska Research Initiative project)
- Tian Zhang and John Stansbury (Civil Engineering), Yan Xia (Child, Youth and Family Studies) - Research (WRRI grant project)
- Blair Siegfried (Entomology) - Teaching (PhD student committee)
- Roy Spalding (Agronomy and Horticulture) - Teaching (PhD student committee)
- James Takacs (Chemistry) - Teaching (PhD student committee)
- David Berkowitz (Chemistry) - Teaching (PhD student committee)
- David Hage (Chemistry) - Teaching (PhD student committee)
- John Bender (Journalism and Mass Communications) - Teaching (MS student committee)
- Mark Bernards (Agronomy and Horticulture), others - Extension (annual publication, other extension support as requested)
- Charles Wortmann (Agronomy and Horticulture), others - Extension (two special publications, Heartland Regional Water Coordination Initiative)
- Kimberly Barrett (UNL Wellness Coordinator), others - Service (Chancellor's Committee on Wellness)
- Senate Presidents Kathleen Prochaska-Cue (Child, Youth and Family Studies) and John Fech (Southeast Research and Extension Center), others - Service (Faculty Senate; currently Executive Committee member)
- Dana Boden (Libraries), others - Service (Academic Rights and Responsibilities Committee)
- John Lindquist (Agronomy and Horticulture), others - Service (Research Misconduct Policy and Procedures development)
Sibray, Steve

- Gave a talk [What Nebraskan's Need to Know About Ground Water] at "Women in Agriculture", a regional Extension program held in Sidney Nebraska.
- Demonstrated the interconnection of ground water and surface water with a physical model at the "Western Nebraska Groundwater Festival" and the Panhandle Research and Extension Center's "Field Day."

Snow, Dan

- Charles Wortmann, Agronomy and Horticulture, Co-PI emerging contaminants research proposal
- Martha Mamo, Agronomy and Horticulture, Method development soil microbiology
- Charles Shapiro, Agronomy and Horticulture, Co-PI EPA research project/proposal
- Roy Spalding, Agronomy and Horticulture, Co-PI USDA pesticides fate and transport, co-author
- Galen Erickson, Animal Sciences, Co-PI research proposals/student research support
- Phil Miller, Animal Sciences, Co-PI emerging contaminants research proposal
- Terry Mader, Animal Sciences, Co-PI EPA research project/proposal
- Tom Franti, Biological Systems Engineering, Co-PI USDA pesticide fate project
- Dean Eisenhauer, Biological Systems Engineering, Co-PI USDA pesticide fate project
- Bill Kranz, Biological Systems Engineering, Co-PI EPA research project/proposal
- David Shelton, Biological Systems Engineering, Co-PI EPA research project/proposal
- James Carr, Chemistry Department, Method development metals analysis
- David Hage, Chemistry Department, Co-PI emerging contaminants proposals/graduate student support
- Bruce Dvorak, Civil Engineering, Co-PI emerging contaminants proposals/graduate student co-advisor
- Shannon Bartelt-Hunt, Civil Engineering, Co-PI emerging contaminants proposal/student research/co-author
- Tian Zhang, Civil Engineering, Co-PI EPA research project/multiple proposals
- Xu Li, Civil Engineering, Proposal and methods development
- Sheri Fritz, Department of Geosciences, Metals analysis/student research support
- Blair Siegfried, Entomology, Pesticide analysis/method development/student research
- Susan Cuppett, Food Sciences, Method development volatile organics
- Vicki Schlegel, Food Sciences, Quality assurance/control
- Vitaly Zlotnik, Geosciences, Stable isotope analysis/water quality
- Tracy Frank, Geosciences, Stable isotope analysis carbonates/student research
- Karrie Webber, Geosciences/Biology, Co-PI research proposal/student research support
- Ming Kang, Plant Pathology Department, Metals analysis
- Michael Carlson, Veterinary Sciences, Laboratory support/toxins analysis/science teacher workshop

Spalding, Mary

- Research Grant. USDA-CSREES Conservation Effects Assessment Program, Roy Spalding, UNL Agronomy & Horticulture, Richard Ferguson, UNL Agronomy &
Appendix I - Major Faculty Collaborations & Linkages - 12

Horticulture, David Marx, UNL, Dept of Statistics, Peter Nowak, University of Wisconsin-Madison, Dept of Rural Sociology
- Scholarly Service. Nebraska Department of Environmental Quality & Nebraska Department of Agriculture funded project. Ground water data management through the statewide clearinghouse, Roy Spalding, UNL Agronomy & Horticulture
- Member of SNR Ph.D. committee, Student: F. Wen
- Member of Geosciences. M.S. committee, Student: Sarah Foster

Szilagyi, Joe
- Vitaly Zlotnik from the Earth Sciences Dept on City Campus on Sand Hills lake evaporation.

Tyre, Drew
- Leon Higley, Entomology, Thesis committee
- Brigitte Tenhumberg, Biological Sciences, Transient dynamics and uncertainty in populations
- Richard Rebarber, Mathematics, dissertation committee and Transient dynamics and uncertainty in populations
- Sarah Michaels, Political Science, Uncertainty at the science-policy interface

Verma, Shashi
- Carbon Sequestration Project: I lead this interdisciplinary research project and collaborate with the following faculty outside SNR. Tim Arkebauer, Ken Cassman and Dan Walters, Department of Agronomy and Horticulture, Johannes Knops, School of Biological Sciences, M. Soundararajan, Department of Biochemistry
- Evapotranspiration Studies: I closely collaborate with the following faculty outside SNR. Darrell Martin and Suat Irmak, Biological Systems Engineering.
- Understanding Climate, Water, Carbon and Land Cover Dynamics in the Great Plains: An Integrated Strategy: Recently I collaborated on a research proposal with the following faculty outside UNL. Clint Rowe, Department of Geosciences, Byrav Ramamurthy, Department of Computer Science and Engineering

Walter-Shea, Betty
- Paul Reed, Agronomy and Horticulture, Student M.S. Thesis.
- Tim Arkebauer, Agronomy and Horticulture, Research – scaling from leaf to landscape level gas exchange.
- Deborah Bathke, Geosciences, Teaching – NRES 208

Wedin, Dave
- Dave Loope, Vitaly Zlotnik, Cling Rowe, Geosciences, Sandhills research
- Shea, Oglesby, Geosciences, research grant proposals
Appendix I - Major Faculty Collaborations & Linkages - 13

- Johannes Knops, Biosciences, teaching, research
- Walter Schacht, Jerry Volesky, Rhae Drijber, Agronomy / Horticulture, Sandhills research
- Tom Powers, Plant Path, Sandhills research
- Richard Sutton, Agronomy / Horticulture, Nine Mile Prairie management

Woudenberg, Donna

- Margaret Jacobs, Director, Women’s & Gender Studies, W&GS will cross-list “Gender & Cultural Perspectives on the Environment”; I will co-teach “Women, Gender & Science” for W&GS in fall 2009; & I have been invited to become a W&GS faculty member
- Mary Anne Holmes, Geosciences; Director, ADVANCE-Nebraska, Part of my time has been bought out in year three of ADVANCE-Nebraska ($3.8 million NSF grant to help UNL recruit, promote and retain female faculty in STEM fields) when it will be implemented on East Campus
- Sandra Scofield, University of Nebraska Rural Initiative, On a committee to develop a framework meet the goals of the Rural Initiative
- Brooke Levey, Tadd Barrow, & Beth Birnstihl, Cooperative Extension, Developing the following children’s educational publications: “Discover the Waters of Nebraska” KIDs Activity booklet and “Discover Climate” KIDs Activity booklet (Project WET)
- Wayne Drummond, Dean, Architecture (Chair, Chancellor’s Commission on Sustainability); Chuck Francis, Agronomy; Stacey Hawkey, Biological Systems Engineering; David Henderson, Philosophy (Chancellor’s Commission on Sustainability); Gary Lynne, Agricultural Economics; Crystal Powers, Biological Systems Engineering; Sandra Scofield, NE Rural Initiative; W. Cecil Steward, Dean Emeritus, Architecture & President and CEO, Joslyn Institute for Sustainability; Ted Weidner, Facilities Management, Worked with the above, SNR faculty/staff, and community representatives to plan and facilitate the first sustainability forum held February 6, 2009; this will be a continuing collaborative effort – gatherings will occur at SNR at least once a year if not twice a year
# International Collaborations/Project/Activities by Person/Center Name

<table>
<thead>
<tr>
<th>Person/Center Name</th>
<th>Project Name</th>
<th>Project Description</th>
<th>Collaborating Organizations</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tala Awada</td>
<td>Water balance in a Mediterranean pine forest and potential impacts of projected climate change on these forests</td>
<td>We are assessing and using several techniques to measure ET and its components (micrometeorological, gas exchange, sap flow, and physiological). Measurements are conducted from needle (gas exchange, isotopes, water status) to tree (sap flow) and stand (eddy covariance) levels. We received a grant from EU (program: cooperation between Greek and US institutions) to support this research.</td>
<td>Forest Research Institute of Thermis, Greece (K. Radoglou, M. Fotelli, PIs) Aristotle University of Thessaloniki, Greece (E. Constantinidou, PI)</td>
<td>2006-Present</td>
</tr>
<tr>
<td>Tala Awada</td>
<td>Ice nucleation in naval oranges and physiological responses during winter</td>
<td>We determined the effects of the use of wind machines and copper sprays (used to control INA bacteria) on cold hardiness and winter physiological performance of citrus trees.</td>
<td>Forest Research Institute of Thermis, Greece (K. Radoglou, M. Fotelli, PIs) Aristotle University of Thessaloniki, Greece (E. Constantinidou, PI)</td>
<td>2006-2009</td>
</tr>
<tr>
<td>Tala Awada</td>
<td>Rose productivity in soil-less cultures</td>
<td>Physiology, growth, and production of roses were evaluated under various soil-less greenhouse cultures.</td>
<td>Forest Research Institute of Thermis, Greece (K. Radoglou, M. Fotelli, PIs) Aristotle University of Thessaloniki, Greece (E. Constantinidou, PI)</td>
<td>published in 2005</td>
</tr>
<tr>
<td>Tala Awada</td>
<td>The use of dendrochronological techniques to study the hydrology of riparian zone</td>
<td>We will be using dendrochronological techniques, and tree rings C, D, and O isotopes to study the hydrology of riparian zone along the Republican River in Nebraska, and to determine the impacts of tree expansion on the function of this ecosystem.</td>
<td>Swiss Federal Institute WSL, Zürich, Switzerland (Dr. Cherubini)</td>
<td>Started 2009</td>
</tr>
<tr>
<td>Tala Awada</td>
<td>Teach a graduate level week-long course (Plant Stress Physiology, 15hrs)</td>
<td>Teach a graduate level week-long course (Plant Stress Physiology, 15hrs) at the Mediterranean Agronomic Institute of Chania-Greece.</td>
<td></td>
<td>Annually, since 2004</td>
</tr>
</tbody>
</table>
| Tala Awada         |                                                                                | I presented seminars at three institutions last year:  
- Aristotle University of Thessaloniki, Greece  
- Forest Research Institute, Thermis, Thessaloniki, Greece  
- University of Wageningen, The Netherlands.                                                                 |                                                                                               | 2008 Sabbatical  |
<p>| Xun-Hong Chen, Wenke Wang, SNR; and others, Chang’an University, Xi’an, China | Mining of groundwater and protection of the environment in arid and semi-arid areas | This project can support Chinese scientists from Chang’an University to visit UNL for short-term research. One of the objectives is to create a center of international groundwater and environmental modeling in arid and semi-arid areas. Funding agency: Ministry of Education, China (Chang Jiang Scholars Innovation Team Project), ¥ 3,000,000 (Chinese RMB) | Chang’an University, China | 1/1/2009-12/31/2011 |
| Co-PI: Xun-Hong Chen, University of Zhejiang | Effect of the nutrients transported by submarine | Funding agency: China Natural Science Foundation, ¥ 400,000 (Chinese RMB)                                                                                                                                     | Zhejiang University, Hangzhou, China                                                      | 1/2006-12/2008   |</p>
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<td>Nebraska-Lincoln; PIs: Weng Huanxin and R. X. Tian, Zhejiang University, Hangzhou, China</td>
<td>groundwater discharge on coastal ecoenvironment; project number 40572175</td>
<td>A workshop was conducted at UNL in October 2007 and a delegation of five scientists from Hohai University attended this workshop. The second workshop was held at Hohai in April, 2008 and a delegation of 10 UNL faculty (including SNR director Don Wilhite) and graduate students attended this workshop. Top officials from Ministry of Water Resources, China also attended the workshop in China. UNL delegation members came from SNR, Computer Science and Engineering, Public Policy Center, and Department of Politics. Funding agencies: US National Science Foundation, $49,716 and China Natural Science Foundation, ¥50,000 (Chinese RMB)</td>
<td>Hohai University, China; Ministry of Water Resources, China;</td>
<td>8/1/2007-7/31/2008</td>
</tr>
<tr>
<td>X. H. Chen, Coordinator for the US and China teams</td>
<td>US-China workshop on hydroinformatics</td>
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<tr>
<td>Xun-Hong Chen</td>
<td>MODFLOW</td>
<td>I provided series lectures and mini-workshop on MODFLOW, geostatistics and stream-aquifer interactions in 2006, 2007, and 2008. The objective was to increase UNL visibility and recruit graduate students (for those supported by China Scholarship Council).</td>
<td>Beijing Normal University, China</td>
<td>2006-2008</td>
</tr>
<tr>
<td>Xun-Hong Chen</td>
<td>Supervise a visiting Ph.D. student Mr. Tao Sun for his research on water quality modeling. Mr. Tao’s visitation to SNR is supported by China Scholarship Council. After completion, he will return to Tianjin University to get Ph.D. degree.</td>
<td></td>
<td>Tianjin University, China</td>
<td>August 2008-February 2010</td>
</tr>
<tr>
<td>Xun-Hong Chen</td>
<td>Supervise a visiting Ph.D. student Mr. Chengpeng Lu for his research on geostatistics/stream-aquifer interactions. Mr. Lu’s visitation to SNR is supported by China Scholarship Council. After completion, he returns to Hohai University to get Ph.D. degree.</td>
<td></td>
<td>Hohai University, China</td>
<td>September 2009-August 2010</td>
</tr>
<tr>
<td>Xun-Hong Chen</td>
<td>Arrange the visit of Professor Jinlin Kong and conduct collaborative research on evaluation of groundwater contamination risk. Dr. Kong’s visitation to SNR is supported by China Scholarship Council. Dr. Kong is associate Dean, College of Earth Science and National Land Resources, Chang’an University.</td>
<td></td>
<td>Chang’an University, China</td>
<td>August 2009-August 2010</td>
</tr>
<tr>
<td>Xun-Hong Chen - Wenke Wang</td>
<td>Arrange the visit of Professor Wenke Wang and conduct collaborative research on</td>
<td></td>
<td>Chang’an University, China;</td>
<td>October 2008-October 2009</td>
</tr>
<tr>
<td>Person/Center Name</td>
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<td>groundwater-surface water interactions. Dr. Wang’s visitation to SNR is supported by China Scholarship Council. We developed the long-term collaboration plans. Currently, we are organizing a groundwater forum in Xi’an, China that will be held on July 1-3, 2009.</td>
<td>China Scholarship Council</td>
<td>1998-Present</td>
<td></td>
</tr>
<tr>
<td>Xun-Hong Chen</td>
<td>Arranged the visit of Professor Huanxin Weng and his wife to UNL and Lincoln in October, 2007. Their support was partially supported by a grant of China Natural Science Foundation in which I was a Co-PI. My collaboration with Professor Weng and other faculty members at Zhejiang University started in 1998 and it has continued for more than 10 years.</td>
<td>Zhejiang University, China</td>
<td>1998-Present</td>
<td></td>
</tr>
<tr>
<td>Xun-Hong Chen</td>
<td>I invited Dr. Jinxi Song from this university as a visiting scholar for 18 months (from 2006-2008). He participated in my research for characterization of stream-aquifer interaction in the Blue River Basin, the Platte River, and the Elkhorn River Basin. Dr. Song returned to China in 2008 but our collaboration continues for publishing research results.</td>
<td>Northwest University, Xi’an, China</td>
<td>2006-Present</td>
<td></td>
</tr>
<tr>
<td>Xun-Hong Chen</td>
<td>Collaboration with Dr. Xi Chen (chief scientist, State Key Lab of Water Resources-Hydrology and Hydraulic Engineering) and Dr. Longcang Shu (Associate Dean, College of Hydrology and Water Resources) has continued for about 10 years. Both were visiting scholars at UNL in 2000-2002. In recent years, my main contribution has been to provide advice to the research of their graduate students. My last visit to Hohai was in December, 2008.</td>
<td>Hohai University, China</td>
<td>2000-Present</td>
<td></td>
</tr>
<tr>
<td>Xun-Hong Chen</td>
<td>Pending project—The evolution and management of the hydrologic cycle affected by human activities in the Ordos Basin, China. China Ministry of Science and Technology, the Basic Research Program, ¥ 38 million (Chinese RMB). This project has 67 PI and Co-PIs from 6 universities and research institutions in China (Chang’an University, Hohai University, Northwest University, Jilin University, Nanjing Institute of Water Resources, and Xi’an Institute of Geology and Mineral Resources). I am the only international researcher in this group.</td>
<td>Chang’an University, Hohai University, Northwest University, Jilin University, Nanjing Institute of Water Resources, and Xi’an Institute of Geology and Mineral Resources</td>
<td>2010-2014</td>
<td></td>
</tr>
<tr>
<td>Xun-Hong Chen</td>
<td>Associate editor for international journal, Journal of Hydrology. The role of an associate editor is to invite reviewers, review reviewers’ evaluation and make recommendation to the editor-in-chief.</td>
<td>2008-Present</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qi “Steve” Hu</td>
<td>Climate and Ecosystems in the Arid and Semiarid Regions in Central Asia</td>
<td>Xinjiang Institute of Geography and Ecological Sciences, Chinese Academy of Sciences</td>
<td>2008-2012</td>
<td></td>
</tr>
<tr>
<td>Person/Center Name</td>
<td>Project Name</td>
<td>Project Description</td>
<td>Collaborating Organizations</td>
<td>Dates</td>
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<tr>
<td>Qi “Steve” Hu</td>
<td>Water Resources in the Yangtze River Basin under the Changing Climate</td>
<td></td>
<td>Nanjing Institute of Geography and Limnology, Chinese Academy of Sciences</td>
<td>2004-2009</td>
</tr>
<tr>
<td>Scott Hygnstrom</td>
<td>Management of Foreign Animal Diseases</td>
<td>Objectives: increase awareness and knowledge of emerging FADs, develop surveillance and monitoring programs, establish collaborations among international agencies and organizations, conduct research on the epidemiology and management of FADs. Accomplishments: We have hosted meetings with scientists from Bahrain, Israel, Nigeria, Yemen and others. We have hosted two professional meetings and one workshop on FADs, One World OneHealth, and diseases diagnostics, respectively. I have trained 5 graduate students in the area of disease ecology and epidemiology in preparation for the future emergence of FADs.</td>
<td>The Wildlife Society, Wildlife Damage Management Working Group; USDA-APHIS-WS-Wildlife Disease Surveillance and Monitoring Program; USDA-APHIS-WS-National Wildlife Research Center; World Health Organization</td>
<td>2006-Present Program is still in the process of being developed.</td>
</tr>
<tr>
<td>National Drought Mitigation Center (NDMC) - Cody Knutson</td>
<td>FAO Near East Drought Planning Manual</td>
<td>Cody Knutson made an assessment of FAO's drought-related activities within the Near East region. This assessment has led to recommendations for action for countries in the region, and a guide or manual on drought risk management applicable to the region will be prepared.</td>
<td>United Nations Food and Agriculture Organization (FAO), Egypt</td>
<td>2007-2008</td>
</tr>
<tr>
<td>NDMC - Don Wilhite</td>
<td>National Drought Mitigation Strategy and Framework for Jordan</td>
<td>Don Wilhite served as the International Team Leader for this project and prepared a national drought mitigation strategy and framework for implementation by the Ministry of Agriculture. He also participated in two workshops and met with many governmental and non-governmental agencies/organizations in the preparatory work that preceded development of the drought mitigation framework. The NDMC hosted 4 Jordanians for training on drought monitoring, mitigation, planning, and policy in November 2006.</td>
<td>United Nations Food and Agriculture Organization (FAO)</td>
<td>2006-2007</td>
</tr>
<tr>
<td>Person/Center Name</td>
<td>Project Name</td>
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</tr>
<tr>
<td>NDMC Don Wilhite</td>
<td>Drought Management Center for Southeast Europe (DMCSEE), based in Slovenia</td>
<td>Don Wilhite served as consultant for the World Meteorological Organization and the U.N. Convention to Combat Desertification in the preparation of a project proposal to initiate formation and implementation of a Drought Management Center for Southeast Europe (DMCSEE). Eleven countries are included in this center, which will be hosted by Slovenia. The NDMC is continuing to serve as a technical and planning resource for the DMCSEE. For 3 weeks in 2007, the Center hosted a visiting scientist from Slovenia with the focus on drought monitoring and early warning strategies.</td>
<td>World Meteorological Organization (WMO)</td>
<td>2007-2009</td>
</tr>
<tr>
<td>NDMC</td>
<td>Morocco National Drought Observatory</td>
<td>The NDMC has participated in several assessments of drought management activities in Morocco, leading to a report outlining the next steps in the country’s efforts for proactive drought risk management.</td>
<td>USAID</td>
<td>2000-2008</td>
</tr>
<tr>
<td>NDMC - Don Wilhite</td>
<td>MEDROPLAN</td>
<td>Don Wilhite served as external advisor to the MEDROPLAN project funded by the European Commission. The purpose of this project was to develop drought preparedness guidelines for the countries in the Mediterranean region, including southern Europe and North Africa. Participating countries included Morocco, Tunisia, Italy, Spain, Greece, and Cyprus. These guidelines will now be transferred to all countries in the region.</td>
<td>European Commission</td>
<td>2003-2007</td>
</tr>
<tr>
<td>NDMC</td>
<td>North American Drought Monitor</td>
<td>The NDMC is participating with Canada, Mexico, and U.S. partner agencies to produce the monthly NADM map.</td>
<td>USDA, NOAA, Agriculture and AgriFood Canada, Environment Canada, Mexico’s National Commission on Water, Mexico’s National Meteorological Service</td>
<td>2003-2009</td>
</tr>
<tr>
<td>NDMC - Cody Knutson</td>
<td>Mahazat as-Sayd Wildlife Protected Area Drought Management Plan</td>
<td>Cody Knutson worked with local wildlife experts to develop a drought mitigation strategy of the Mahazat as-Sayd Wildlife Protected Area located near Taif, Saudi Arabia.</td>
<td></td>
<td>2008</td>
</tr>
<tr>
<td>NDMC - Cody Knutson</td>
<td>Indian Centre for Climate and Societal Impacts Research</td>
<td>Cody Knutson has served on the Scientific Advisory Committee for the development of the Indian Centre for Climate and Societal Impacts Research located in Ahmedabad, India.</td>
<td>Center for Research on the Changing Earth System</td>
<td>2008-2009</td>
</tr>
<tr>
<td>NDMC - Mark Svoboda - Cody Knutson</td>
<td>Drought Management Considerations for Climate Change Adaptation</td>
<td>Mark Svoboda and Cody Knutson provided technical guidance on the project, which focused on the Mekong Region of Vietnam and Cambodia.</td>
<td></td>
<td>2007</td>
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<tr>
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<tr>
<td>NDMC</td>
<td>Toshihiro Sakamoto</td>
<td>The NDMC is hosting a visiting scientist from the National Institute for Agro-Environmental Sciences in Japan. Dr. Sakamoto’s interests involve remote sensing and climate change issues.</td>
<td>National Institute for Agro-Environmental Sciences</td>
<td>2008-2010</td>
</tr>
<tr>
<td>NDMC</td>
<td>Jinsong Wang</td>
<td>The NDMC is hosting a visiting scientist from the Institute of Arid Meteorology in Lanzhou, China. Dr. Wang’s interests involve drought monitoring and impact issues.</td>
<td>Institute of Arid Meteorology</td>
<td>2009</td>
</tr>
<tr>
<td>NDMC - Jae Ryu - Mike Hayes</td>
<td>Development of a Pilot Drought Information System for National Drought Disaster Reduction</td>
<td>Jae Ryu and Mike Hayes are involved in a project to improve drought risk management activities for South Korea.</td>
<td>Kongju National University, Korea</td>
<td>2008-2010</td>
</tr>
<tr>
<td>NDMC</td>
<td>Standardized Precipitation Index</td>
<td>The NDMC has distributed the Standardized Precipitation Index to more than 150 scientists in 60 countries around the world, and SPI training is one of the most requested topics when the NDMC participates in international workshops.</td>
<td></td>
<td>1995-2009</td>
</tr>
<tr>
<td>NDMC</td>
<td>Impacts of Climate Change and Variability on European Agriculture</td>
<td>The NDMC has signed an agreement for the NDMC to participate within the European Union's Cooperation in the Field of Scientific and Technical Research program (COST 734) to help determine the impacts of climate change and variability on European agriculture.</td>
<td>European Union</td>
<td>2008-2010</td>
</tr>
<tr>
<td>NDMC - Mark Svoboda - Mike Hayes</td>
<td>Drought, Climate Change and Variability</td>
<td>Mark Svoboda and Mike Hayes continue to collaborate closely with a group of scientists in the Czech Republic and Austria. This interaction looks at a variety of issues including soil climates, drought, climate change, and climate variability.</td>
<td>Institute of Atmospheric Physics ASCR, Prague, Czech Republic and Institute for Agrosystems and Bioclimatology, Mendel University of Agriculture and Forestry, Brno, Czech Republic.</td>
<td>2004-2009</td>
</tr>
<tr>
<td>NDMC Staff</td>
<td>UNCCD Science and Technology Working Groups</td>
<td>Six staff from the NDMC will be serving on working groups for a project with the United Nations Convention to Combat Desertification (UNCCD).</td>
<td>United Nations Convention to Combat Desertification, USDA’s Natural Resources Conservation Service.</td>
<td>2009-2010</td>
</tr>
<tr>
<td>Don Rundquist</td>
<td>Remote Sensing of Inland and Coastal Waters</td>
<td>Spectral reflectance is widely used for qualitative and quantitative assessment of constituents in water bodies, and scientists have explored a variety of techniques for collecting data by means of field radiometers. However, poor understanding of data-collection assumptions, techniques and limitations may lead to errors in the resulting data. The project is intended to demonstrate quantitatively the differences in results from various ways in which spectral reflectances are collected in/on surface waters</td>
<td>CALMIT and Kochi University of Technology, Kochi, Japan</td>
<td>2007-Present</td>
</tr>
<tr>
<td>Pat Shea</td>
<td>Remediation of PCB, pesticide, and</td>
<td>This research involves the use of activated carbon materials and select plant species to</td>
<td>Institute of Physicochemical and</td>
<td>2002-Present</td>
</tr>
<tr>
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<tr>
<td>munitions-contaminated soils</td>
<td>promote detoxification of PCB-, pesticide, and munitions-contaminated soils by reducing bioavailability and enhancing degradation. My role to date includes assistance in data interpretation, assessment in relation to previously published research, preparation of English language manuscripts, and assistance in the publication process. Ongoing; primarily supported by Russian agencies.</td>
<td>Biological Problems in Soil Science, Russian Academy of Sciences (Dr. Galina Vasilyeva and associates)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pat Shea</td>
<td>Enhanced phytoremediation using metal resistant and 1-aminocyclopropane-1-carboxylate deaminase from <em>Bacillus</em> species</td>
<td>This research involves isolating metal-resistant <em>Bacillus</em> species with ACC deaminase activity from heavy metal-contaminated soils. Multi-metal resistance allows proliferation of the bacteria in the rhizosphere and their ACC deaminase activity controls the ethylene level of plant cells, leading to enhanced phytoremediation. The initial research was conducted in Korea; a full collaborative project with our laboratory is planned. Under development; initial work funded by Korean agencies and additional funding is being sought.</td>
<td>College of Environmental and Bioresource Sciences, Chonbuk National University, Republic of Korea (Dr. Byung-Taek Oh and associates)</td>
<td>2009</td>
</tr>
<tr>
<td>Joe Szilagyi</td>
<td>CLAVIER (Climate Change and Variability: Impact on Central and Eastern Europe)</td>
<td>At the Budapest University of Technology and Economics I am taking part in a 3-year project (ending August 2009) called CLAVIER (Climate Change and Variability: Impact on Central and Eastern Europe). In the framework of CLAVIER, ongoing and future climate changes are analyzed based on existing data and climate projections with very high detail to fulfill the need of local and regional impact assessment. Researchers from 6 countries and different disciplines investigate linkages between climate change and its impact on weather patterns, air pollution, extreme events, and on water resources. Furthermore, an evaluation of the economic impact on agriculture, tourism, energy supply and the public sector is conducted. The CLAVIER project is supported by the European Commission's 6th Framework Programme (contract number 037013) as a 3-year Specific Targeted Research Project from 2006 to 2009 under the Thematic Sub-Priority &quot;Global Change and Ecosystems&quot;. Our task was to find out how evaporation rates from Hungary's great shallow lakes would be affected in the coming 40-50 years. Luckily no major increase in evaporation could be detected, so they will not dry out, thus millions of tourists can continue to come to their shores.</td>
<td>Budapest University of Technology and Economics</td>
<td>2006-2009</td>
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<tr>
<td>Steven A. Thomas</td>
<td>FIBR: From genes to ecosystems: How do ecological and evolutionary processes interact in nature?</td>
<td>Using a model organism in evolutionary biology, the guppy (<em>Poecilia reticulata</em>), this project investigates feedbacks between ecosystem-scale, ecological functions and evolutionary processes in streams of Trinidad and Tobago. Guppy translocations and riparian canopy treatments are being used to examine how changes in stream primary production influence nutrient cycling, foodweb structure, and guppy life history evolution. Ecological surveys of streams that vary in nutrient levels, light availability, and predation risk are also being characterized to identify links between phenotypic variation and ecological variables. Currently 1 PhD student (Tom Heatherly) and 2 MS students (David Owens and Tyler Kohler) are supported by this project and conducting research in Trinidad. In 2009-2010, a UCARE undergraduate student (Rachel Paseka) will work on this project and travel to Trinidad.</td>
<td>David Reznick (PI, UC-Riverside), Joseph Travis (Florida State Univ.), Cathy Pringle (Univ. of Georgia), Douglas Fraser (Sienna College), Regis Ferriere (Univ. of Arizona), Michael Kinnison (Univ. of Maine), Alex Flecker (Cornell Univ.), Cameron Ghalambor (Colorado State Univ.), Jim Gilliam (North Carolina State Univ.), Andrew Hendry (McGill Univ.), Paul Bentzen (Dalhousie Univ.), Don deAngelis (SP, USGS). In cooperation with: Mary Alkins-Koo and Dawn Phillip, Department of Biology, University of the West Indies at St. Augustine, Trinidad and Tobago Funding by: National Science Foundation, Division of Environmental Biology, Frontiers in Integrative Biological Research, $5,000,000.</td>
<td>2006-2011</td>
</tr>
<tr>
<td>Steven A. Thomas</td>
<td>Collaborative Research: Nutrient Processing and Retention in Streams (NPARS2) – A Stoichiometric Approach to Coupled N and P Cycling</td>
<td>In 2008, Thomas received proof of concept funding from NSF to develop the use of $^{18}$O-PO$_4^{3-}$ as a tracer of phosphorus dynamics in stream ecosystems. Thomas has been collaborating with a Spanish colleague, Eugenia Marti, to refine analytical procedures involved in $^{18}$O-PO$_4^{3-}$ analysis and examining natural abundance patterns across a landuse gradient. In February, 2009, Thomas traveled to Blanes, Spain to work on method development and collect initial natural abundance samples. Currently 1 PhD student (Tom Heatherly) and 1 MS student (Tyler Kohler) have received partial support from this project and participated in research activities.</td>
<td>H. Maurice Valett (Virginia Tech) and Eugenia Marti (Centre d'Estudis Avangats de Blanes, Spain) Funding by: National Science Foundation, Division of Environmental Biology, Ecosystems. $120,000.</td>
<td>2008-2009</td>
</tr>
<tr>
<td>Drew Tyre</td>
<td>Dam Uncertainty: Robust Water Management with Limited Ecological Information</td>
<td>Prudent water management of dammed rivers is critical to survival of many species. Yet considerable uncertainty surrounds both the ecological response to possible management strategies, and the future runoff regimes in the face of climate change. We examine the trade-off between human water</td>
<td>University of Melbourne, RMIT University, University of Montana, University of Nebraska-Lincoln</td>
<td>2006-Present</td>
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<tr>
<td>Don Wilhite</td>
<td>Member, Editorial Board</td>
<td>Book series, Advances in Natural and Technological Hazards Research, Book Series</td>
<td>Springer Publishers</td>
<td>2000-Present</td>
</tr>
<tr>
<td>Don Wilhite</td>
<td>Book Series Editor</td>
<td>Drought and Water Crises</td>
<td>Taylor and Francis Publishers</td>
<td>2009-Present</td>
</tr>
<tr>
<td>Don Wilhite</td>
<td>Forum on Socio-economic Benefits of Weather, Climate and Water Services</td>
<td>Chair of international group of scientists</td>
<td>World Meteorological Organization</td>
<td>2005-Present</td>
</tr>
<tr>
<td>Don Wilhite</td>
<td>Member, Editorial Board</td>
<td>Disaster Prevention and Management: An International Journal</td>
<td>Emerald Group Publishing, Ltd.</td>
<td>2001-Present</td>
</tr>
<tr>
<td>Don Wilhite</td>
<td>Conference planning committee</td>
<td>Serving as member of the planning team for an international conference on water scarcity and drought.</td>
<td>Spanish Ministry of Environment and Rural and Marine Affairs</td>
<td>2009-Present</td>
</tr>
<tr>
<td>Don Wilhite</td>
<td>Member, Scientific Advisory Committee</td>
<td>Planning for an international conference on food security and climate change.</td>
<td>Kingdom of Jordan, ICARDA</td>
<td>2009-Present</td>
</tr>
<tr>
<td>Don Wilhite</td>
<td>Drought Mitigation Training Workshops</td>
<td>Conduct of drought mitigation workshops in the Mediterranean Region.</td>
<td>Mediterranean Institute for Agronomic Research</td>
<td>2002-2008</td>
</tr>
<tr>
<td>Don Wilhite</td>
<td>Coping with Drought Risk in Agriculture and Water Supply Systems</td>
<td>Co-editor of a book with others editors from Spain and Italy on drought management and policy development in the Mediterranean region.</td>
<td>Polytechnic University of Madrid; University of Cantania; Canel de Isabel II, Madrid; and Springer Publishers</td>
<td>2007-2009</td>
</tr>
<tr>
<td>Don Wilhite</td>
<td>Member, Task Force on Assessment of Natural Disaster Impacts on Agriculture (ANADIA)</td>
<td>Develop a project proposal for ANADIA for submission to funding organizations and governments.</td>
<td>World Meteorological Organization</td>
<td>2006-2007</td>
</tr>
<tr>
<td>Don Wilhite</td>
<td>Agricultural Risk Management Project</td>
<td>To develop a project proposal on agricultural risk management and produce a book.</td>
<td>World Meteorological Organization</td>
<td>2006-2007</td>
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</tbody>
</table>
### International Travel (by date)

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>Date Leaving</th>
<th>Reason for Travel</th>
<th>Destination</th>
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</thead>
<tbody>
<tr>
<td>Gitelson</td>
<td>Anatoly</td>
<td>12/24/2006</td>
<td>Workshop- Monitoring productive inland water quality</td>
<td>TelAviv, Israel</td>
</tr>
<tr>
<td>Wilhite</td>
<td>Donald</td>
<td>1/5/2007</td>
<td>Prepare a proposal for establishment of a drought monitoring center for SE Europe</td>
<td>Ljubljana, Slovenia, Switzerland</td>
</tr>
<tr>
<td>Thomas</td>
<td>Steve</td>
<td>1/9/2007</td>
<td>Research Trip to initiate our NSF-FIBR work</td>
<td>Arimo, Trinidad &amp; Tobago</td>
</tr>
<tr>
<td>Knutson</td>
<td>Cody</td>
<td>2/2/2007</td>
<td>Present a lecture at the workshop on Monsoon Climate</td>
<td>India</td>
</tr>
<tr>
<td>Thomas</td>
<td>Steve</td>
<td>2/10/2007</td>
<td>Research Trip to initiate our NSF-FIBR work</td>
<td>Arimo, Trinidad &amp; Tobago</td>
</tr>
<tr>
<td>Reinhard</td>
<td>Karl</td>
<td>2/17/2007</td>
<td>Mummy Congress in Spain, Fulbright conference in Panama &amp; teach in Peru</td>
<td>Peru</td>
</tr>
<tr>
<td>Wilhite</td>
<td>Don</td>
<td>2/26/2007</td>
<td>To review book contents for publication and plan workshop</td>
<td>Madrid Spain</td>
</tr>
<tr>
<td>Wedin</td>
<td>Dave</td>
<td>3/8/2007</td>
<td>Presenter at seminar</td>
<td>Winnipeg</td>
</tr>
<tr>
<td>Steele</td>
<td>Mark</td>
<td>3/9/2007</td>
<td>Field course Data collection campaign</td>
<td>Sapelo Island</td>
</tr>
<tr>
<td>Powell</td>
<td>Larkin</td>
<td>3/9/2007</td>
<td>Travel to teaching research sites in Puerto Rico</td>
<td>San Juan, Pr</td>
</tr>
<tr>
<td>Wilhite</td>
<td>Don</td>
<td>3/16/2007</td>
<td>Attend WMO Conference</td>
<td>Amman, Jordan</td>
</tr>
<tr>
<td>Wilhite</td>
<td>Don</td>
<td>4/14/2007</td>
<td>Establishment of a drought monitoring center</td>
<td>Ljubljana, Slovenia</td>
</tr>
<tr>
<td>Hu</td>
<td>Steve</td>
<td>5/1/2007</td>
<td>Invited speaker @ East China Uni of Policy &amp; Law</td>
<td>Shanghai, PRC</td>
</tr>
<tr>
<td>Pegg</td>
<td>Mark</td>
<td>5/6/2007</td>
<td>Lead NRES 315 course to Namibia for teaching &amp; research</td>
<td>Windhoek, Namibia</td>
</tr>
<tr>
<td>Wilhite</td>
<td>Don</td>
<td>5/11/2007</td>
<td>Attend MEDROPLAN workshop</td>
<td>Marrakech, Morocco</td>
</tr>
<tr>
<td>Knutson</td>
<td>Cody</td>
<td>5/22/2007</td>
<td>Present lectures at the Canada National Drought Strategy</td>
<td>Kelowna,BC, Canada</td>
</tr>
<tr>
<td>Zhou</td>
<td>Xinhua</td>
<td>5/28/2007</td>
<td>International Project</td>
<td>Greece</td>
</tr>
<tr>
<td>Gitelson</td>
<td>Anatoly</td>
<td>5/30/2007</td>
<td>Visit experimental sites</td>
<td>Toronto, Montreal &amp; Quebec</td>
</tr>
<tr>
<td>Knutson</td>
<td>Cody</td>
<td>6/2/2007</td>
<td>Present a Lecture</td>
<td>Geneva Switzerland</td>
</tr>
<tr>
<td>Sudmeyer</td>
<td>Robert</td>
<td>6/7/2007</td>
<td>Attend North Am Agroforestry Conference</td>
<td>Quebec</td>
</tr>
<tr>
<td>Thomas</td>
<td>Steve</td>
<td>6/12/2007</td>
<td>Research in Trinidad</td>
<td>Port of Spain, Trinidad</td>
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</table>
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</thead>
<tbody>
<tr>
<td>Wilhite</td>
<td>Don</td>
<td>6/15/2007</td>
<td>Presentation at the International Forum on Drought</td>
<td>Sevilla, Spain</td>
</tr>
<tr>
<td>Knutson</td>
<td>Cody</td>
<td>6/18/2007</td>
<td>Conduct a review of UN-FAO</td>
<td>Cairo, Egypt</td>
</tr>
<tr>
<td>Reinhard</td>
<td>Karl</td>
<td>6/18/2007</td>
<td>Lead a Symposium at the North American Conference</td>
<td>Merida Mexico</td>
</tr>
<tr>
<td>Chen</td>
<td>Hong</td>
<td>6/19/2007</td>
<td>Continue existing collaboration research with three University</td>
<td>Beijing</td>
</tr>
<tr>
<td>Hu</td>
<td>Steve</td>
<td>6/25/2007</td>
<td>Collaborate with Chinese Meteorological Bureau on Dust storms in China</td>
<td>Beijing, China</td>
</tr>
<tr>
<td>Allen</td>
<td>Craig</td>
<td>7/5/2007</td>
<td>Research collaboration with Graham Cumming at the Univ of Capetown</td>
<td>Capetown, So Africa</td>
</tr>
<tr>
<td>Thomas</td>
<td>Steve</td>
<td>7/6/2007</td>
<td>Attend the Society of European Freshwater Science Meeting</td>
<td>Palermo, Sicily</td>
</tr>
<tr>
<td>Wilhite</td>
<td>Don</td>
<td>7/7/2007</td>
<td>Chair WMO Task force and a Congressional Briefing</td>
<td>Switzerland &amp; DC</td>
</tr>
<tr>
<td>Awada</td>
<td>Tala</td>
<td>7/15/2007</td>
<td>Forest Research</td>
<td>Athens, Greece</td>
</tr>
<tr>
<td>Verma</td>
<td>Shashi</td>
<td>7/23/2007</td>
<td>Invited Lecture at the AsiaFlux Workshop</td>
<td>Seoul, Korea</td>
</tr>
<tr>
<td>Lenters</td>
<td>John</td>
<td>8/12/2007</td>
<td>Participate in the 30th Congress of the International Assoc of Theoretical and Applied</td>
<td>Montreal, QC</td>
</tr>
<tr>
<td>Lotz</td>
<td>Aaron</td>
<td>8/20/2007</td>
<td>Attend fall semester at Catholic Univ of Chile doing research</td>
<td>Santiago, Chile</td>
</tr>
<tr>
<td>Svooboda</td>
<td>Mark</td>
<td>8/20/2007</td>
<td>To make an assessment for USAID of the drought management activities in Morocco</td>
<td>Rabat, Morocco</td>
</tr>
<tr>
<td>Hayes</td>
<td>Mike</td>
<td>8/20/2007</td>
<td>To make an assessment for USAID of the drought management activities in Morocco</td>
<td>Rabat, Morocco</td>
</tr>
<tr>
<td>Gitelson</td>
<td>Anatoly</td>
<td>8/24/2007</td>
<td>Don River watershed</td>
<td>Moscow Russia</td>
</tr>
<tr>
<td>Thomas</td>
<td>Steve</td>
<td>9/13/2007</td>
<td>Research</td>
<td>Trinidad</td>
</tr>
<tr>
<td>Allen</td>
<td>Craig</td>
<td>9/23/2007</td>
<td>Attend science mtg &amp; annual board mtg, Craig is on the Board of Directors</td>
<td>Corsica France</td>
</tr>
<tr>
<td>Hoagland</td>
<td>Kyle</td>
<td>9/23/2007</td>
<td>Science Meeting</td>
<td>Corsica, France</td>
</tr>
<tr>
<td>Hu</td>
<td>Steve</td>
<td>9/29/2007</td>
<td>Symposium on Asian Larger River</td>
<td>Nanjing PRC</td>
</tr>
<tr>
<td>Gitelson</td>
<td>Anatoly</td>
<td>10/8/2007</td>
<td>Work on current NASA funded project in Ukraine</td>
<td>Tel-Aviv Simferopol</td>
</tr>
<tr>
<td>Reinhard</td>
<td>Karl</td>
<td>10/9/2007</td>
<td>Represent UNL at So Am Paleopathology mtg</td>
<td>Rio de Janeiro, Brazil</td>
</tr>
<tr>
<td>Comfort</td>
<td>Steve</td>
<td>10/14/2007</td>
<td>Present invited seminar</td>
<td>Chaozhon, China</td>
</tr>
<tr>
<td>Weiss</td>
<td>Albert</td>
<td>10/17/2007</td>
<td>Symposium on Intelligent Information Technology</td>
<td>Nanjing PRC</td>
</tr>
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</table>
# International Travel (by date)

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>Date Leaving</th>
<th>Reason for Travel</th>
<th>Destination</th>
</tr>
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<tbody>
<tr>
<td>Knutson</td>
<td>Cody</td>
<td>10/19/2007</td>
<td>Visit the United Nations Food &amp; Ag Org and develop a drought planning guide</td>
<td>Cairo, Egypt</td>
</tr>
<tr>
<td>Reinhard</td>
<td>Karl</td>
<td>11/9/2007</td>
<td></td>
<td>Santiago, Chile</td>
</tr>
<tr>
<td>Tsegaye</td>
<td>Tadesse</td>
<td>11/11/2007</td>
<td>Attend Int'l drought workshop</td>
<td>Bauchi, Nigeria</td>
</tr>
<tr>
<td>Svoboda</td>
<td>Mark</td>
<td>11/14/2007</td>
<td>Invited speaker for Int'l Conference on Drought Mgt</td>
<td>Lisbon, Portugal</td>
</tr>
<tr>
<td>Gitelson</td>
<td>Anatoly</td>
<td>11/21/2007</td>
<td>Attend International symposium</td>
<td>Hanover, Germany, Berlin, Germany</td>
</tr>
<tr>
<td>Hu</td>
<td>Steve</td>
<td>11/24/2007</td>
<td>Attend Workshop</td>
<td>Geneva Switzerland</td>
</tr>
<tr>
<td>Wilhite</td>
<td>Don</td>
<td>11/28/2007</td>
<td>Attend WMO Public Weather Symposium</td>
<td>Chania Greece</td>
</tr>
<tr>
<td>Bihindine</td>
<td>Saadia</td>
<td>12/1/2007</td>
<td>Research at the lab of Ag Biotechnology at the Agronomy institute</td>
<td>Athens, Greece</td>
</tr>
<tr>
<td>Awada</td>
<td>Tala</td>
<td>12/1/2007</td>
<td>Teach at the Institute of Chania</td>
<td>Rabat Morocco</td>
</tr>
<tr>
<td>Hayes</td>
<td>Mike</td>
<td>12/1/2007</td>
<td>Make assessment for USAID of the drought management activities</td>
<td>Rabat Morocco</td>
</tr>
<tr>
<td>Svoboda</td>
<td>Mark</td>
<td>12/1/2007</td>
<td>Make assessment for USAID of the drought management activities</td>
<td>Rabat Morocco</td>
</tr>
<tr>
<td>Freeman</td>
<td>Pat</td>
<td>12/15/2007</td>
<td>Bat Research at the William Beebe Research station</td>
<td>Port of Spain, Spain</td>
</tr>
<tr>
<td>Hu</td>
<td>Steve</td>
<td>12/20/2007</td>
<td>Speaker at National Climate Centre of China</td>
<td>Beijing PRC</td>
</tr>
<tr>
<td>Geluso</td>
<td>Keith</td>
<td>12/20/2007</td>
<td>Research</td>
<td>Trinidad</td>
</tr>
<tr>
<td>Lewis</td>
<td>Chris</td>
<td>1/2/2008</td>
<td>Canadian Conference for Fisheries Research</td>
<td>Halifax, Nova Scotia, Canada</td>
</tr>
<tr>
<td>Thomas</td>
<td>Steve</td>
<td>1/9/2008</td>
<td>Research associated with our NSF-FIBR grant</td>
<td>Trinidad</td>
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<tr>
<td>Kohler</td>
<td>Tyler</td>
<td>1/12/2008</td>
<td>Stream Ecology Research FIBR program</td>
<td>Trinidad, Port of Spain</td>
</tr>
<tr>
<td>Owens</td>
<td>David</td>
<td>1/12/2008</td>
<td>Stream Ecology Research FIBR program</td>
<td>Trinidad, Port of Spain</td>
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<tr>
<td>Wilhite</td>
<td>Don</td>
<td>2/2/2008</td>
<td>Lecture for Drought Mitigation</td>
<td>Zaragoza, Spain</td>
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<tr>
<td>Moses</td>
<td>Wesley</td>
<td>3/7/2008</td>
<td>Field Data Collection On Lake Kinneret</td>
<td>Tel-Aviv, Israel</td>
</tr>
<tr>
<td>Leavitt</td>
<td>Bryan</td>
<td>3/7/2008</td>
<td>Research algae blooms in the Sea of Galilee</td>
<td>Degania Bet, Israel</td>
</tr>
<tr>
<td>Hu</td>
<td>Steve</td>
<td>3/13/2008</td>
<td>Speaker @ Water Science Form in Beijing</td>
<td>Beijing, PRC</td>
</tr>
<tr>
<td>Powell</td>
<td>Larkin</td>
<td>3/13/2008</td>
<td>Lead Puerto Rico field course</td>
<td>San Juan, PR</td>
</tr>
<tr>
<td>Winn</td>
<td>Sara</td>
<td>3/13/2008</td>
<td>Lead Puerto Rico field course</td>
<td>San Juan, PR</td>
</tr>
<tr>
<td>Awada</td>
<td>Tala</td>
<td>3/21/2008</td>
<td>Conduct forestry related research, present talks &amp; work with forestry graduate students</td>
<td>Greece, Denmark</td>
</tr>
<tr>
<td>Chen</td>
<td>Hong</td>
<td>3/24/2008</td>
<td>To run a NSF-workshop at Hohai University</td>
<td>China</td>
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<tr>
<td>Wilhite</td>
<td>Don</td>
<td>4/10/2008</td>
<td>Participate in a workshop on Hydroinformatics &amp; Water Policy</td>
<td>Nanjing, China</td>
</tr>
<tr>
<td>Holz</td>
<td>John</td>
<td>4/10/2008</td>
<td>Meet with faculty at HoHai University</td>
<td>Nanjing, China</td>
</tr>
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</table>
## International Travel (by date)

<table>
<thead>
<tr>
<th>Last Name</th>
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<th>Date Leaving</th>
<th>Reason for Travel</th>
<th>Destination</th>
</tr>
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<tbody>
<tr>
<td>Allen</td>
<td>Craig</td>
<td>4/12/2008</td>
<td>Attend the Resilience 2008 Conference</td>
<td>Stockholm, Sweden</td>
</tr>
<tr>
<td>Thomas</td>
<td>Steve</td>
<td>4/14/2008</td>
<td>Stream Ecology Research FIBR program</td>
<td>Trinidad, Port of</td>
</tr>
<tr>
<td>Weiss</td>
<td>Albert</td>
<td>4/16/2008</td>
<td>Present paper at the International Symposium on Crop Modeling</td>
<td>Nanjing, PRC</td>
</tr>
<tr>
<td>Schoengold</td>
<td>Karina</td>
<td>4/20/2008</td>
<td>Participate in data collection on a project</td>
<td>Merida, Mexico</td>
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<tr>
<td>Freeman</td>
<td>Pat</td>
<td>5/12/2008</td>
<td>Research on the bats of Tobago</td>
<td>Trinidad, Port of</td>
</tr>
<tr>
<td>Istanbulluoglu</td>
<td>Erkan</td>
<td>5/28/2008</td>
<td>Conference</td>
<td>Gewatt, Switzerland</td>
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<tr>
<td>Swinehart</td>
<td>Jim</td>
<td>6/4/2008</td>
<td>Sample &amp; describe sand dunes and loess in the Mu Us Dunefield of Inner Mongolia</td>
<td>China</td>
</tr>
<tr>
<td>Schoengold</td>
<td>Karina</td>
<td>6/9/2008</td>
<td>Present an invited paper and attend conference</td>
<td>Alicante, Spain</td>
</tr>
<tr>
<td>Wilhite</td>
<td>Don</td>
<td>6/10/2008</td>
<td>Present a paper at the International Conf on Drought Management</td>
<td>Zaragoza, Spain</td>
</tr>
<tr>
<td>Hu</td>
<td>Steve</td>
<td>6/10/2008</td>
<td>Invited Speaker at the National Climate Center</td>
<td>Beijing, PRC</td>
</tr>
<tr>
<td>Kohler</td>
<td>Tyler</td>
<td>6/19/2008</td>
<td>Stream Ecology Research FIBR program</td>
<td>Port of Spain,</td>
</tr>
<tr>
<td>Owens</td>
<td>David</td>
<td>6/19/2008</td>
<td>Stream Ecology Research FIBR program</td>
<td>Port of Spain,</td>
</tr>
<tr>
<td>Thomas</td>
<td>Steve</td>
<td>7/1/2008</td>
<td>Research</td>
<td>Arima, Trinidad</td>
</tr>
<tr>
<td>Holz</td>
<td>Aris</td>
<td>7/6/2008</td>
<td>Attend Aquatic Virus Meeting</td>
<td>Vancouver, BC</td>
</tr>
<tr>
<td>Chen</td>
<td>Hong</td>
<td>7/16/2008</td>
<td>Remediation of Soil and Groundwater Contamination</td>
<td>Xi An, China</td>
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<tr>
<td>Wilhite</td>
<td>Don</td>
<td>7/22/2008</td>
<td>Make presentation at the seminar on drought planning</td>
<td>Zaragoza, Spain</td>
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<tr>
<td>Knutson</td>
<td>Cody</td>
<td>7/26/2008</td>
<td>Drought Planning workshop</td>
<td>Spain &amp; Saudi</td>
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<tr>
<td>Gitelson</td>
<td>Anatoly</td>
<td>8/6/2008</td>
<td>Work on MERIS satellite and experiments</td>
<td>Frankfurt, Germany</td>
</tr>
<tr>
<td>Keydan</td>
<td>Galina</td>
<td>8/6/2008</td>
<td>Work on MERIS satellite and experiments</td>
<td>Frankfurt, Germany</td>
</tr>
<tr>
<td>Svoboda</td>
<td>Mark</td>
<td>8/8/2008</td>
<td>Attend the American Meteorological Society's</td>
<td>Vancouver, BC</td>
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<tr>
<td>Bathke</td>
<td>Deborah</td>
<td>8/10/2008</td>
<td>Applied Climatology Conference</td>
<td>Whistler, Canada</td>
</tr>
<tr>
<td>Pope</td>
<td>Kevin</td>
<td>8/15/2008</td>
<td>Attend the Am Fisheries Society meeting</td>
<td>Ottawa, Canada</td>
</tr>
<tr>
<td>Martin</td>
<td>Dustin</td>
<td>8/15/2008</td>
<td>Attend annual American Fisheries Society</td>
<td>Ottawa Canada</td>
</tr>
<tr>
<td>Barada</td>
<td>Tony</td>
<td>8/15/2008</td>
<td>Attend and present at the Am fisheries Society</td>
<td>Ottawa, Canada</td>
</tr>
<tr>
<td>Hu</td>
<td>Steve</td>
<td>8/20/2008</td>
<td>Work with faculty at Urumqi University</td>
<td>Urumqi, China</td>
</tr>
<tr>
<td>Thomas</td>
<td>Steve</td>
<td>9/10/2008</td>
<td>Research Activities</td>
<td>Iariama, Trinidad</td>
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<tr>
<td>Gitelson</td>
<td>Anatoly</td>
<td>9/12/2008</td>
<td>Workshop</td>
<td>Wageningen,</td>
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<tr>
<td>Gitelson</td>
<td>Anatoly</td>
<td>10/9/2008</td>
<td>Remote sensing in agriculture workshop</td>
<td>Astana, Kazakhstan</td>
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<tr>
<td>Hu</td>
<td>Steve</td>
<td>10/9/2008</td>
<td>Invited speaker for National Climate Centre</td>
<td>Beijing, China</td>
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</tbody>
</table>
## International Travel (by date)

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>Date Leaving</th>
<th>Reason for Travel</th>
<th>Destination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilhite</td>
<td>Don</td>
<td>10/11/2008</td>
<td>Participate in a conference at Xi'an Jiaotong University</td>
<td>Xi'an China</td>
</tr>
<tr>
<td>Fuchs</td>
<td>Brian</td>
<td>10/14/2008</td>
<td>North American Drought Monitor Forum</td>
<td>Ottawa, Canada</td>
</tr>
<tr>
<td>Wardlow</td>
<td>Brian</td>
<td>10/14/2008</td>
<td>North American Drought Monitor Forum</td>
<td>Ottawa, Canada</td>
</tr>
<tr>
<td>Svoboda</td>
<td>Mark</td>
<td>10/14/2008</td>
<td>North American Drought Monitor Forum</td>
<td>Ottawa, Canada</td>
</tr>
<tr>
<td>Heatherly</td>
<td>Tom</td>
<td>11/11/2008</td>
<td>Research</td>
<td>Port of Spain,</td>
</tr>
<tr>
<td>Svoboda</td>
<td>Mark</td>
<td>11/13/2008</td>
<td>Attend a Drought Policy, Planning and Mitigation Workshop</td>
<td>Sydney, Australia</td>
</tr>
<tr>
<td>Hayes</td>
<td>Mike</td>
<td>11/13/2008</td>
<td>Attend a Drought Policy, Planning and Mitigation Workshop</td>
<td>Sydney, Australia</td>
</tr>
<tr>
<td>Wilhite</td>
<td>Don</td>
<td>11/13/2008</td>
<td>Attend a Drought Policy, Planning and Mitigation Workshop</td>
<td>Canberra, Australia</td>
</tr>
<tr>
<td>Hu</td>
<td>Steve</td>
<td>11/13/2008</td>
<td>International Symposium</td>
<td>Xinjiang, China</td>
</tr>
<tr>
<td>Allen</td>
<td>Craig</td>
<td>11/15/2008</td>
<td>Present Workshop</td>
<td>Luxemburg, Austria</td>
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<tr>
<td>Hiller</td>
<td>Tim</td>
<td>11/19/2008</td>
<td>Presentation at Australia’s Wildlife Management Conference</td>
<td>Perth Australia</td>
</tr>
<tr>
<td>Major</td>
<td>Annabel</td>
<td>11/21/2008</td>
<td>Workshop in Discontinuities in complex systems</td>
<td>Vienna, Austria</td>
</tr>
<tr>
<td>Alai</td>
<td>Aaron</td>
<td>11/21/2008</td>
<td>Workshop in Discontinuities in complex systems</td>
<td>Vienna, Austria</td>
</tr>
<tr>
<td>Knutson</td>
<td>Cody</td>
<td>11/22/2008</td>
<td>Present a lecture at the Water Scarcity and Management Conference</td>
<td>Girona, Spain</td>
</tr>
<tr>
<td>Awada</td>
<td>Tala</td>
<td>11/28/2008</td>
<td>Teach at the Mediterranean Agronomic Institute of Chania</td>
<td>Athens Greece</td>
</tr>
<tr>
<td>Chen</td>
<td>Hong</td>
<td>12/9/2008</td>
<td>Present a research proposal to the Ministry of Education</td>
<td>Beijing, Xian China</td>
</tr>
<tr>
<td>Thomas</td>
<td>Steve</td>
<td>12/23/2008</td>
<td>Research</td>
<td>Arima, Trinidad</td>
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<tr>
<td>Powell</td>
<td>Larkin</td>
<td>12/29/2008</td>
<td>Fulbright Program</td>
<td>Windhoek, Namibia,</td>
</tr>
<tr>
<td>Thomas</td>
<td>Steve</td>
<td>1/3/2009</td>
<td>Writing retreat</td>
<td>Itasca, Mn</td>
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<tr>
<td>Heatherly</td>
<td>Tom</td>
<td>1/15/2009</td>
<td>Research</td>
<td>Trinidad</td>
</tr>
<tr>
<td>Kohler</td>
<td>Tyler</td>
<td>1/15/2009</td>
<td>Research</td>
<td>Trinidad</td>
</tr>
<tr>
<td>Woudenberg</td>
<td>Donna</td>
<td>1/21/2009</td>
<td>Speak at Red River of the North Basin Conference</td>
<td>Winnipeg Canada</td>
</tr>
<tr>
<td>Thomas</td>
<td>Steve</td>
<td>1/23/2009</td>
<td>Am Society of Limnology</td>
<td>France and Spain</td>
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<tr>
<td>Svoboda</td>
<td>Mark</td>
<td>1/25/2009</td>
<td>Canadian Annual Drought Conference</td>
<td>Canada</td>
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<tr>
<td>Narumalani</td>
<td>Sunil</td>
<td>1/25/2009</td>
<td>Keynote address for GITNDM</td>
<td>Bangkok, Thailand</td>
</tr>
<tr>
<td>Hu</td>
<td>Steve</td>
<td>2/5/2009</td>
<td>Invited presenter and research</td>
<td>Beijing, China</td>
</tr>
</tbody>
</table>
## International Travel (by date)

<table>
<thead>
<tr>
<th>Last Name</th>
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<th>Date Leaving</th>
<th>Reason for Travel</th>
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<tbody>
<tr>
<td>Thomas</td>
<td>Steve</td>
<td>2/23/2009</td>
<td>Research</td>
<td>Arima, Trinidad</td>
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<tr>
<td>Svoboda</td>
<td>Mark</td>
<td>3/4/2009</td>
<td>Invited presenter at Workshop</td>
<td>Mexico City, Mx</td>
</tr>
<tr>
<td>Gitelson</td>
<td>Anatoly</td>
<td>3/7/2009</td>
<td>Remote sensing conference</td>
<td>Israel</td>
</tr>
<tr>
<td>Hanson</td>
<td>Paul</td>
<td>3/13/2009</td>
<td>Assist with teaching the 492 Class</td>
<td>San Juan, Puerto</td>
</tr>
<tr>
<td>Hower</td>
<td>Rebecca</td>
<td>3/13/2009</td>
<td>Assist with teaching the 492 Class</td>
<td>San Juan, Puerto</td>
</tr>
<tr>
<td>Wilhite</td>
<td>Don</td>
<td>3/13/2009</td>
<td>Participate in the World Water forum</td>
<td>Istanbul, Turkey</td>
</tr>
<tr>
<td>Reinhard</td>
<td>Karl</td>
<td>3/17/2009</td>
<td>Present Paper at International meeting</td>
<td>Bolzano, Italy</td>
</tr>
<tr>
<td>Owens</td>
<td>David</td>
<td>3/19/2009</td>
<td>Research and field work</td>
<td>Arima, Trinidad</td>
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<tr>
<td>Pegg</td>
<td>Mark</td>
<td>5/10/2009</td>
<td>Lead NRES 492 Study abroad course</td>
<td>Windhoek, Namibia</td>
</tr>
<tr>
<td>Yendra</td>
<td>Sara</td>
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### School of Natural Resources Staff by Faculty Area
(FY 2008-09 Adjusted Budget)

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## Appendix K – Staff FTE by Faculty Area - 4

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*Codes for Acronyms Used:

SNR = School of Natural Resources  
CIT = Communication and Information Technology  
ES = Environmental Studies

NOTE: FTE was split between Teaching, Research, Extension/Outreach, Administrative Services based on job title and description.
## School of Natural Resources Faculty by Faculty Area
(FY2008-09 Adjusted Budget)

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## Appendix L - Faculty FTE by Faculty Area

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*Effort is focused on grant management and course development.

*Codes for Acronyms Used:
- **SNR** = School of Natural Resources
- **HPRCC** = High Plains Regional Climate Center
- **CALMIT** = Center for Advanced Land Management Information Technologies
- **NFS** = Nebraska Forest Service
- **CE** = Civil Engineering
- **SREC** = Southeast Research and Extension Center
- **SBS** = School of Biological Sciences
- **GSOS** = Geosciences
- **UNMC** = University of Nebraska Medical Center
- **GPRC** = Great Plains Regional Center for Global Environmental Change
### 2008-09 Faculty Teaching FTE and Course Assignments

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1 includes .250 FTE as Environmental Studies Program Director
2 excludes Cindy Larson-Miller whose time is focused on grant management and course development
X = online
The Conservation and Survey Division (CSD) was constituted by the Nebraska State Legislature in 1921 (Section 85-163) of the Nebraska Statutes. CSD is unique among state geological surveys in having very specific state statutes related to its mission, which demonstrates the importance the Legislature attached both to defining the organization and designating it as a unit within the University of Nebraska. CSD is mentioned in 24 sections of the Revised Statutes of Nebraska, but three of these sections are especially important. Sections 85-164 and 85-165 passed in 1921; and Section 85-1.104 passed in 1973. Section 85-163 pertains to the creation and duties of the CSD.

Section 85-163 pertains to the creation and duties of the Conservation and Survey Division:

*There is hereby created the Conservation and Survey Division of the University of Nebraska, which shall include the following state surveys: Soil, geological, water and water power, forest, road materials, and industrial. The Conservation and Survey Division shall perform the duties hereinafter defined:*

1. Survey and describe the natural resources of the state, including soil, water, water power, potash, forests, road materials, and cement;
2. Study the climate, physical features, geology, and mineral resources of the state;
3. Study and describe the operations, production, and importance of the leading industries of the state;
4. Investigate and report upon conservation problems of the state;
5. Study the water-bearing formations of the state, and assist the citizens in locating water supplies;
6. Secure and preserve the logs of wells drilled in the state, and preserve specimens from each stratum, member, formation penetrated in said drillings, and inspect such drillings at any time during their progress, and require the person or persons in charge of drilling or prospecting to submit full data in regard to the specimens and logs of the wells;
7. Prepare and show lantern slides or pictures, including motion pictures, of the state's resources, industries, institutions and development, to be used for educational and industrial purposes within the state and for publicity purposes without the state, and secure and distribute other educational films and slides in Nebraska for educational purposes;
8. Compile and record, or publish information with reference to, the state's resources, industries and development, and when called upon to do so by an interested party, investigate and report upon oil, mineral, and gas structures and properties situated outside the state and leases or interests therein or thereon being sold or offered for sale in Nebraska. In cases or propositions wherein said investigations show that mineral, oil, or gas properties are misrepresented, or that fraud is practiced in selling same, their officers or agents shall be notified by the Conservation and Survey Division, and if they continue to so operate the same in Nebraska after said notice is given, the division shall report its findings to the Attorney General for action;
9. Serve the citizens as an information bureau in regard to the resources, industries and development of Nebraska.
Section 85-164 pertains to the powers, director and expenses of the Conservation and Survey Division:
The Conservation and Survey Division is given police power and authority for the purpose of carrying into effect and performing the duties defined in Section 85-163. The Board of Regents shall appoint a chief or director of the division, who shall direct the work of the division, subject to the approval of the regents. All expenses to 85-165 shall subject to the approval of the regents of the University of Nebraska, and paid out of appropriations made from time to time by the Legislature.

Section 85-165 pertains to Conservation and Survey Division agreements with federal departments:
The Conservation and Survey Division may enter into such agreements with federal departments as may be necessary to carry on cooperative surveys and investigations in the state, the agreements to be subject to the approval of the Board of Regents of the University of Nebraska.

Section 85-1.104 pertains to the establishment of the Institute of Agriculture and Natural Resources, of which the division was made a part:
A University of Nebraska Institute of Agriculture and Natural Resources shall be established at the University of Nebraska-Lincoln, which shall embrace, but not be limited to, the following divisions or administrative units:
   (1) College of Agriculture;
   (2) Agricultural Experiment Station;
   (3) Cooperative Extension Service;
   (4) Conservation and Survey Division; and
   (5) Water Resources Research Institute
The University of Nebraska Institute of Agriculture and Natural Resources shall be headed by a vice chancellor, and each division or administrative unit shall have a dean, director, or other chief administrative officer.

In the other 20 sections, numerous division functions are specified to include:
participation in the Nebraska cooperative soil survey program;
membership on the State Water Management Board (no longer in existence);

A. providing of research information and services to various state agencies and governments and agencies; involvement in the certification of well drillers;
B. responsibilities in the management of Nebraska Educational Lands; and cooperation with the Nebraska State Forester.
Faculty withCourtesy Appointments in the School of Natural Resources

J. David Aiken, Professor, Department of Agricultural Economics, University of Nebraska-Lincoln.

Mark R. Anderson, Associate Professor, Department of Geosciences, University of Nebraska-Lincoln.

Timothy J. Arkebauer, Professor, Department of Agronomy and Horticulture, University of Nebraska-Lincoln.

Ezekiel Bahar, Professor, Department of Electrical Engineering, University of Nebraska-Lincoln.

Erin Blankenship, Associate Professor, Department of Statistics, University of Nebraska-Lincoln.

Istvan Bogardi, Professor, Department of Civil Engineering, University of Nebraska-Lincoln.

Ron Bonnstetter, Professor, Department of Teaching, Learning, and Teacher Education, University of Nebraska-Lincoln.

Mary Bomberger Brown (Instructor), Coordinator, Tern and Plover Conservation Partnership, School of Natural Resources, University of Nebraska-Lincoln.

David Carter, Assistant Professor of Forensic Sciences, Department of Entomology, University of Nebraska-Lincoln.

Scott DeWald, Associate Forester, Nebraska Forest Service, University of Nebraska-Lincoln.

Jeremy Dillon, Professor, Department of Geography and Earth Science, University of Nebraska at Kearney.

Dean E. Eisenhauer, Professor, Department of Biological Systems Engineering, University of Nebraska-Lincoln.

Kent M. Eskridge, Professor, Department of Biometry, University of Nebraska-Lincoln.

Charles A. Francis, Professor, Department of Agronomy and Horticulture, University of Nebraska-Lincoln.

Thomas G. Franti, Associate Professor, Department of Biological Systems Engineering, University of Nebraska-Lincoln.

Mark Harrell, Forester, Nebraska Forest Service, University of Nebraska-Lincoln.

Leon Higley, Professor, Forensic Sciences Degree Program, Department of Entomology, University of Nebraska-Lincoln.

Laurie Hodges, Associate Professor, Department of Agronomy and Horticulture, University of Nebraska-Lincoln.

Scott Josiah, Director and Nebraska State Forester, Nebraska Forest Service, University of Nebraska-Lincoln.

Shripat T. Kamble, Professor, Department of Entomology, University of Nebraska-Lincoln.
Appendix O – Courtesy & Adjunct Faculty - 2

Alan C. Kamil, Professor, School of Biological Sciences, University of Nebraska-Lincoln.

Steve Karloff, Associate Forester, Nebraska Forest Service, University of Nebraska-Lincoln.

Dr. Alan S. Kolok, Professor, Department of Biology at University of Nebraska at Omaha; and Department of Environmental Agricultural & Occupational Health, University of Nebraska Medical Center (UNMC).

Merlin P. Lawson, Professor, Department of Geosciences, Dean (Emeritus) of Graduate Studies and Dean (Emeritus) International Affairs, University of Nebraska-Lincoln.

Ge Lin, Associate Professor of GIS and Public Health, Department of Health Services Research and Administration, College of Public Health, University of Nebraska Medical Center (UNMC).

Richard J. Lodes, Forester, Nebraska Forest Service, University of Nebraska-Lincoln.

William R. Lovett, Forester, Nebraska Forest Service, University of Nebraska-Lincoln.

Gary D. Lynne, Professor, Department of Agricultural Economics, University of Nebraska-Lincoln.

Dennis L. McCallister, Professor, Department of Agronomy and Horticulture, University of Nebraska-Lincoln.

John McCarty, Professor, Department of Biology, University of Nebraska at Omaha.

H. Doak Nickerson, Forester, Nebraska Forest Service, Upper Niobrara-White NRD, Chadron, NE.

Guillermo Ortí, Professor, School of Biological Sciences, University of Nebraska-Lincoln.

Darryll Pederson, Professor, Department of Geosciences, University of Nebraska-Lincoln.

Lisa Pennisi, Assistant Professor, Hospitality, Restaurant and Tourism Management Program; Department of Agricultural Leadership, Education and Communication, University of Nebraska-Lincoln.

Thomas O. Powers, Professor, Department of Plant Pathology, University of Nebraska-Lincoln.

Steven D. Rasmussen, Forester, Nebraska Forest Service, Extension Office, Wayne, NE.

Clinton M. Rowe, Professor, Department of Geosciences, University of Nebraska-Lincoln.

Walter H. Schacht, Professor, Department of Agronomy and Horticulture, University of Nebraska-Lincoln.

Steven Shultz, Associate Professor, Department of Economics, University of Nebraska at Omaha.

James Stubbendieck, Director of Center for Great Plains Studies; Professor of Range Ecology, Department of Agronomy and Horticulture, University of Nebraska-Lincoln.

Raymond J. Supalla, Professor, Department of Agricultural Economics, University of Nebraska-Lincoln.

Dale Swartzendruber, Professor (Emeritus), Department of Agronomy and Horticulture, University of Nebraska-Lincoln.
Zhenghong Tang, Assistant Professor, Department of Community and Regional Planning, College of Architecture, University of Nebraska-Lincoln.

Daniel Walters, Professor, Department of Agronomy and Horticulture, University of Nebraska-Lincoln.

Donald Westover, Forester, Nebraska Forest Service, University of Nebraska-Lincoln.

L. LaReesa Wolfenbarger, Associate Professor, Department of Biology, University of Nebraska at Omaha.

Sandra Zellmer, Professor, College of Law, University of Nebraska-Lincoln.

Vitaly Zlotnik, Professor, Department of Geosciences, University of Nebraska-Lincoln.
Faculty with Adjunct Appointments in the School of Natural Resources

Craig Allen, Professor and Leader, NE Fish & Wildlife Research Coop Unit, University of Nebraska-Lincoln

John Allen III, Professor and Director, Western Rural Development Center, Utah State University @ Logan.

Ann S. Bleed, Consultant, CDR Associates, Lincoln, NE.

Georgiy (George) Burba, Senior Applications Scientist, LI-COR Biosciences, Lincoln, NE.

Felipe Chavez-Ramirez, Executive Director, Platte River Whooping Crane Maintenance Trust, Inc., Wood River, NE.

Paolo Cherubini, Senior Research Scientist, Head of Tree Physiology and Deputy Head of Dendro Sciences research groups, Swiss Federal Institute WSL, Zürich, Switzerland.

Barbara J. Clement, Associate Professor of Biology, Division of Natural Sciences, Mathematics and Information Technology, Doane College, Crete, NE.

John W. Doran, USDA-ARS Soil Scientist, USDA-ARS Soil & Water Conservation Research Unit, University of Nebraska-Lincoln.

Michael G. Dosskey, Research Riparian Ecologist, USDA National Agroforestry Center, Lincoln, NE.

William E. Easterling, Dean, College of Earth and Mineral Sciences, Pennsylvania State University, University Park, PA.

Joseph J. Fontaine, Assistant Professor and Assistant Unit Leader, NE Fish & Wildlife Research Coop Unit, University of Nebraska-Lincoln.

Kevin P. Gallo, Physical Scientist, USGS EROS Data Center, NOAA/NESDIS, Sioux Falls, SD.

Lance Gunderson, Associate Professor, Department of Environmental Studies, Emory University, Atlanta, GA.

Mace Hack, State Director of Conservation Programs, Nebraska Chapter, The Nature Conservancy, Omaha, NE.

LeRoy Hahn (Emeritus), Professor, USDA-ARS MARC, Clay Center, NE.

Rick Holland, Assistant Professor, Nebraska Game and Parks Commission, Lincoln, NE.

Keith Koupal, Irrigation Reservoir Specialist, Nebraska Game and Parks Commission, Kearney, NE.

Gary Krapu, Research Biologist, USGS Northern Prairie Wildlife Research Center, Jamestown, ND.

Theodore (Ted) LaGrange, Wetland Program Manager, Wildlife Division, Nebraska Game and Parks Commission, Lincoln, NE.
Wayne Landis, Director and Professor, Institute of Environmental Toxicology, and Chair, Department of Environmental Sciences, Huxley College of the Environment, Western Washington University, Bellingham, WA.

Cliff Lemen, Lecturer, School of Natural Resources, Lincoln, NE.

Jeffrey Lusk, Upland Game Program Manager, Nebraska Game and Parks Commission, Lincoln, NE.

Rezaul Mahmood, Associate Professor, Department of Geography and Geology, Western Kentucky University, Bowling Green, KY.

Pablo Marquet, Professor, Departamento de Ecología, Pontificia Universidad Católica de Chile, Santiago.

Linda O. Mearns, Senior Scientist, National Center for Atmospheric Research, Director of the Institute for the Study of Society and Environment (ISSE), Boulder, CO.

Kevin Pope, Associate Professor and Assistant Unit Leader, NE Fish & Wildlife Research Coop Unit, University of Nebraska-Lincoln.

Gregory A. Ruark, Director/Program Manager, USDA National Agroforestry Center, Normal, Alabama.

Bridget Scanlon, Senior Research Scientist, Bureau of Economic Geology, Jackson School of Geosciences, University of Texas at Austin.

Rick Schneider, Coordinator for Nebraska Natural Heritage Program, Nebraska Game and Parks Commission, Lincoln, NE.

Michele Schoeneberger, Research Program Leader/Soil Scientist, USDA National Agroforestry Center, Lincoln, NE.

Gerry Steinauer, Nebraska Game and Parks Commission, Lincoln, NE.

Scott Stephens, Director of Conservation Planning, Ducks Unlimited, Inc., Great Plains Regional Office, Bismarck, ND.

David E. Stooksbury, State Climatologist/Assistant Professor, Department of Biological and Agricultural Engineering, Driftmier Engineering Center, University of Georgia, Athens, GA.

J. Scott Taylor, Upland Game Program Manager, Nebraska Game and Parks Commission, Lincoln, NE.

Kurt VerCauteren, Research Wildlife Biologist, USDA/APHIS/WS, National Wildlife Research Center, Fort Collins, CO.

Mark P. Vrtiska, Water-fowl Program Manager, Nebraska Game and Parks Commission, Lincoln, NE.

Gary D. Willson, Research Coordinator for Great Plains Cooperative Ecosystem Studies Unit, National Park Service, Lincoln, NE.

Warren Wood, Professor, Integrative Studies, Department of Geological Sciences, Michigan State University, East Lansing.
Shuhai Zheng, Chief, Floodplain Management, Department of Natural Resources, State of Nebraska, Lincoln.
Appendix P – Draft Space Allocation Policy - 1

Policy:

The School of Natural Resources will help facilitate space needs in an effort to provide its faculty and staff the resources needed to be successful in their careers/position.

Procedures:

1. Request for New space (office or storage)
   Faculty member and/or supervisor is to prepare a written request and submit it to the Assistant to the Director and Hardin Hall Facilities Coordinator. The request must include the following:

   Office request
   - Description of intended use
   - Who will be assigned the space, rank of his/her position
   - How often the space will be used
   - How many additional people will need access to the items stored in the room
   - How the use of that space will benefit the School
   - Any special needs/requirements, e.g., proximities to consider

   Storage request
   - Description of the request (e.g., number of cabinets, square footage)
   - Description of intended use
   - Name of project
   - Length of time space will be needed
   - Expected frequency that stored items will be accessed
   - Count/ names/contact information of people who will need access to the stored items
   - How the use of that space will benefit the School
   - Any special needs/requirements, e.g., proximities to consider

2. Retention of existing space assignment (including, but not limited to, office, storage, computer lab, drafting table room)
   Once each year, the department will confirm space use. Any faculty member, center, or work group may be asked by the Director, Associate Director, Assistant to the Director, or Hardin Hall Facilities Coordinator to provide justification for any space they have been authorized to use in Hardin Hall, the CSD Annex, NRR Annex, Poultry Building, Forestry Hall, and other spaces within the University. This justification is to include the following elements, and may play a part in determining if the assignment will continue.

   Office space
   - Description of experienced and intended use
   - Who has been/will be using the space, rank of his/her position
   - Additional people who have been accessing the space (e.g., for items stored in the room), rank of each person’s position
   - Frequency of use
   - How the use of that space has and will benefit the School
   - Any special needs/requirements, e.g., proximities to continue to consider

   Storage space (all other spaces)
   - Inventory of items stored, including number of cabinets, boxes or square footage
   - Description of use
   - Name of project(s), and cost objects if projects are grant-funded
   - Length of time space has been used and will be needed in the future
   - Expected frequency that stored items will be accessed
   - Number of people (with names and contact information) who are expected to access to the stored items
   - How the use of that space has and will benefit the School
   - Any special needs/requirements, e.g., proximities to consider
Second Floor East
Appendix Q – Hardin Hall floor plans - 6

Second Floor West
Seventh Floor
Eighth Floor

Appendix Q – Hardin Hall floor plans - 12
Natural Resources Research Annex

Floor plans:
- Room R199: 1676.83 sq ft
- Room 148x: 204.21 sq ft
- Room 148: 202.14 sq ft
- Room 147: 40.40 sq ft
- Room 146: 41.73 sq ft
- Room 150: 41.73 sq ft
- Room 167: 153.88 sq ft
- Room 167.3: 401.35 sq ft
## SNR Staff by Age and Faculty Area
(FY09 Adjusted Budget)

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<td><strong>Grand Total</strong></td>
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<td>12</td>
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DENNIS M. ADAMS, Forester, 30% Extension/Outreach, 70% Nebraska Forest Service
Areas of Interest: Forest Management, Forest Products Marketing & Utilization, Economic Development
Contact: dadams2@unl.edu, 402/472-5822

EDUCATION
B.S. Forest Management, Iowa State University (1968)
M.S. Horticulture & Forestry, University of Nebraska-Lincoln (1977)

PROFESSIONAL EXPERIENCE
1992-present Rural Forestry Program Leader, Nebraska Forest Service, UNL
1977-1992 District & Extension Forester, Dept. of Forestry, Fisheries, & Wildlife, UNL
1976-1977 Regional Fire & Community Forestry Planner, Dept. of Forestry, Fisheries, & Wildlife, UNL
1974-1976 Forestry Project Planner, Dept. of Forestry, UNL
1973-1974 Forestry Field Manager, Dept. of Forestry, UNL

HONORS AND AWARDS
Award of Merit for “contribution to Nebraska Envirothon”, Nebraska Association of Resources Districts (2008)
Epsilon Sigma Phi Certificate of Achievement (2003)
Tree Planters State Award, Nebraska Statewide Arboretum (1997)
Selected as member of Rotary International Foundation’s Group Study Exchange Program Team to India (1980)

TEACHING
N/A

RESEARCH
N/A

EXTENSION/OUTREACH
My Extension program emphasis is in two areas: 1) Forest Management and 2) Forest Products Marketing & Utilization. Examples of Forest Management activities include serving as Superintendent for 4H State Tree ID Contest, Superintendent for 4H Forestry Exhibits Judging at the Nebraska State Fair, coordinator for the State and Regional Nebraska Envirothon annual competitions, and coordinating annual Forestry Field Days around the state. Examples of marketing & utilization activities include editing the quarterly Nebraska forest industry newsletter entitled “Timber Talk” and serving as a clearinghouse for marketing and utilization inquiries.

SURVEY
N/A

UNIVERSITY SERVICE
Chair, Conservation Forestry Specialist Search Committee, 2008
Member, West Central District Forester Search Committee, 2005
Member, Community Forestry Program Leader Search Committee, 2005
Member, Education & Outreach Specialist Search Committee, 2005
Chair, Conservation Forestry Specialist Search Committee, 2004

SELECTED GRANTS AND CONTRACTS
Spatial Analysis Project, USDA Forest Service, $54,000; Oct 2005 – Dec 2007
Technical Service Provider, USDA Natural Resources Conservation Service, ~$180,000 per year; 2003 – present
Small Diameter Wood Primary Processor Feasibility Study, USDA Forest Service, $26,000; 2002
Demonstration Portable Sawmill, USDA Forest Service, $20,000;

SELECTED PUBLICATIONS

OTHER PROFESSIONAL ACTIVITIES
Member, NARD Native Vegetation & Forestry Subcommittee (1992-present)
Chairman, Nebraska Forest Stewardship Coordinating Committee (1991-present)
Member, Nebraska Envirothon Committee (1992-present)
Member, NRCS State Technical Committee 1995-present)
Member, Carbon Sequestration Advisory Committee
Chair, Conservation Trees Work Group (2008-present)
Member, Society of American Foresters and Great Plains SAF (1973-present)
Member, Nebraska Christmas Tree Growers Association (1983-Present)
Member, Nebraska Nut Growers Association (1975-present)
Honorary Member, Nebraska Arborists Association (1977-present, Chair 1982)
Appendix V – Faculty CVs - 3

SAMI Z. AKASHEH, Research Associate, 100% Research
Areas of Interest: Land-Atmosphere Interaction, Evapotranspiration, Land cover mapping, Remote Sensing and Geographic Information Systems applications
Contact: oakashesh2@unlnotes.edu, 402/472-3497

EDUCATION
B.S. Soil & Irrigation, University of Jordan (1992)
M.S. Soil & Irrigation, University of Jordan (1995)
Ph.D. Irrigation Engineering, Utah State University (2008)

PROFESSIONAL EXPERIENCE
2009–present Post-doctorate Research Associate, School of Natural Resources, University of Nebraska-Lincoln
2008–2009 Post-doctorate Research Scientist, Jackson School of Geosciences, University of Texas at Austin
2008–2008 Visiting Scientist, ARS-USDA-CPRL, Bushland, Texas
2001–2008 Research Assistant, Biological and Irrigation Eng. Dept., Utah State University
1996–2000 Research Assistant, Soil and Irrigation Dept., University of Jordan

HONORS AND AWARDS
First Author Achievement Award, Bureau of Economic Geology, University of Texas at Austin (2008)
Dean’s List, Biological and Irrigation Engineering Department, Utah State University (2001)
Full Scholarship Award, Utah State University (2002-2006)

RESEARCH
Research encompasses evapotranspiration (ET) modeling using remote sensing techniques. I am focusing on river riparian vegetation diversity, distribution and water use. Middle Rio Grande River was my Ph.D. research main focus. By producing a very high resolution map for the Middle Rio Grande River riparian vegetation (0.5m) using Multispectral airborne remote sensing I was able to study the riparian vegetation distribution and pattern along the river. I built a hydrologic model in a GIS environment to establish relationships between water flow, water table fluctuations, evapotranspiration, and water availability to the riparian vegetation by reach in the Rio Grande River Basin based on remotely sensed data. I estimated the riparian evapotranspiration using the Modified Penman-Monteith and Ball-Berry stomatal conductance model with consideration for the advection conditions caused by the adjacent arid region. My research in the last year in UT-Austin focused on modeling ET in the irrigated and dry land areas in the Texas High plains using remote sensing technique and energy balance based-models like SEBAL and METRIC. I applied satellite and airborne remote sensing to evaluate those models and make the proper modification for the advection conditions in Texas high plains. My future research will focus mainly on the subject of Land-Atmosphere interaction and the processes involved in it, like evapotranspiration, heat and gas transfer.

REMOTE SENSING APPLICATIONS PROJECTS
Land Cover Mapping
Riparian Vegetation Mapping, Middle Rio Grande River, New Mexico.
Riparian Vegetation Mapping, Idaho Rivers (Pack, South, Priest and Lighting Creek), Idaho
Evapotranspiration Studies
Rush Valley, Utah
Bosque, New Mexico
Middle Rio Grande River, New Mexico
Texas High Plains
City Planning and Management
Water resources distribution and management, Layton, Utah
Utah State University Thermal Project, Utah
Pre-Emptive Measures
Potato Fields, Idaho
Yellowstone park thermal features monitoring
SELECTED PUBLICATIONS

Peer Review Journals


Abstracts and Presentations


Akasheh, O.Z., and Neale, C.M.U., 2007. Modeling the Water Table in the Middle Rio Grande River Riparian Corridor. *American Geophysical Union*.


Technical reports


Appendix V – Faculty CVs - 5

CRAIG R. ALLEN, Adjunct Professor, 0% Teaching, 0% Research, 0% Extension/Outreach
Areas of Interest: Invasion Biology, Resilience, Adaptive Management, Landscape Ecology
Contact: allencr@unl.edu, 402/472-0229

EDUCATION
B.S.  Biology, University of Wisconsin – Green Bay (1989)
M.S.  Wildlife Science, Texas Tech University (1993)

PROFESSIONAL EXPERIENCE
2004-present  Leader, Nebraska Cooperative Fish and Wildlife Research Unit; Adjunct Professor (2009), School of Natural Resources, University of Nebraska-Lincoln
2002-2004  Leader, South Carolina Cooperative Fish and Wildlife Research Unit; Associate Professor, Department of Biological Sciences and Department of Aquaculture, Fisheries and Wildlife, Clemson University
1998-2002  Assistant Leader, South Carolina Cooperative Fish and Wildlife Research Unit; Assistant Professor, Department of Aquaculture, Fisheries and Wildlife, Clemson University
1998-1998  Assistant-in-Zoology (non-tenure track faculty), Department of Zoology, University of Florida

HONORS AND AWARDS
Superior Performance Award, US Department of Interior (USGS-CRU) (December 2008)
Star Award, USGS (May 2008)
Superior Performance Award, US Department of Interior (USGS-CRU) (December 2007)

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 898  Ecology of Biological Invasions (S06, S08)
NRES 898  Foundations of Resilience (S09)
NRES 898  Foundations of Ecology (S08)
NRES 810  Landscape Ecology (S07)

Masters and Doctoral Students Advised
19 MS Students since 1998 (9 current)
9 Ph.D. Students since 1998 (6 current)

RESEARCH
Current research focuses on resilience of systems of people and nature, and on biological invasions.

UNIVERSITY SERVICE
Most University service is focused on collaborative research efforts, including the USGS – UNL climate change research center, and the UNL NSF-IGERT proposal.

SELECTED GRANTS AND CONTRACTS
Resilience and Adaptive Governance in Stressed Watersheds, National Science Foundation, (Allen, C.R. (PI); with A. Samal, A. Tomkins, S. Fritz and A. Tyre), $2,966,035.00; 2009–2014.
Nebraska Invasive Species Council, Nebraska Game and Parks Commission, Allen, C.R. (PI), 175,000.00; 2009–2014.
Southeast Prairies Biologically Unique Landscape and Sandstone Prairies Biologically Unique Landscape Research, Grant, Nebraska Game and Parks Commission, Helzer, C. and C.R. Allen (Co-PIs), $80,000.00; 2008–2010.
Assessing Local and Regional Variability in Productivity and Fidelity of Grassland Birds on National Park Service Units in the Great Plains, National Park Service, L. Powell and C. R. Allen (Co-PIs), $221,792.00; 2007–2010.

Monitoring, Mapping, Risk and Management of Invasive Species in Nebraska, Nebraska Environmental Trust, C.R. Allen (PI) and J. Merchant, $325,081.00; 2006-2010.


Habitat Use by Otters, NE Game and Parks, C.R. Allen (PI) and S. Wilson, $68,000.00; 2006–2010.


Spatial Risk Analyses: Risk to Native Declining Species from Invasive Species, USGS/NE Game and Parks, C.R. Allen (PI), $74,000.00; 2005-2008.

Assessment of the Landowner Incentive Program for Species at Risk, USGS/NE Game and Parks C. R. Allen (PI), $77,000.00; 2004–2007.


SELECTED PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES

Board of Directors, The Resilience Alliance (http://www.resilience.org/)

Board of Editors, Ecology and Society (http://www.consecol.org/Journal/)

Guest Editor, Southeastern Naturalist. 2008/2009

Ad-hoc Editor, Conservation Biology. 2008/2009

Session Chair, Resilience: Complex systems, resource management and economic development (Stockholm, Sweden), 2008 session

Member, Missouri River Mitigation Herpetofauna Monitoring and Evaluation Subcommittee, 2007–present

Member, SE NE Flagship Initiative, Research and Evaluation Steering Committee. December, 2007–present

Elected, Nebraska Partnership for All-Bird Conservation Steering Committee, October 2006–present

Co-organizer, Third Annual Water Law, Policy and Science Conference “Adaptive Management for Resilient Water Resources”, Nebraska City NE, 2008 session

Fellow, Center for Great Plains Studies, April 2006, Member: Scholarship Committee 2006–2008

Member, Planning Committee, Threats to Nebraska Rivers Conference

Invited Commentary, Proceedings of the National Academy of Sciences, February 2006

Core Team, Invasive Plants State Technical Committee, NRCS 2006–present

Member, Nebraska Midwest Fish and Wildlife Board of Directors, February 2006–present
DOUGLAS M. AMEDEO, Professor, 60% Teaching, 30% Research, 10% University Service
(9-Month, Academic Year Appointment)
Areas of Interest: Environment and Behaviour, Spatial Theory, Research Methods and Design, Planning
Contact: dameseo1@unl.edu, 402/472-1943

EDUCATION
B.S. Economics from Wisconsin State University at Eau Claire, Wisconsin (1962)
M.A. Economic Geography with minor emphasis in Economics from University of Iowa (1965)
Ph.D. Economic Geography with minor emphasis in Economics from University of Iowa (1967)
Post-doctoral in Regional Science from Graduate School of Design, Harvard, Cambridge, MA. (1968-69)

PROFESSIONAL EXPERIENCE
2008-present  Professor, School of Natural Resources and Arts and Sciences, University of Nebraska
1992-2007  Professor Department of Geography (and also Anthropology), University of Nebraska
1993-1996  Chair and Professor Department of Geography, University of Nebraska,
1992-1993  Interim Chair and Professor, Department of Geography, University of Nebraska
1974-1991  Associate Professor, Department of Geography, University of Nebraska
1967-1972  Assistant Professor, Formal Models Cluster, School of Social Sciences, University of California-Irvine, Irvine, California

TEACHING
Courses Taught (Fall and Spring)
#283  Space, the Environment and You
#406/806  Spatial and Environmental Influences in Social Systems
#483/883  Cognitive Processes in Map Comprehension and Use
#983  Behavioral Processes in Person-Environment Relations
#940  Seminar in Human Geography: Proposal Construction and Research Design

Doctoral Students Advised
Greg Fetterman (PhD Geography) (Chair; current)
Cynthia Williams (PhD Geography) (Chair; current)
Molly Boeka Cannon (PhD Geography) (Chair; current)
Mary Hallin (Ph.D. Geography and Anthropology) (Member; current)
Ray Hubbard, (An Analysis of Consumer Spatial Behavior in an Urban Area …) (Dissertation)
Tom Doring, (Modeling Travel by Recreationists and Tourists in a Pass-Through Region…) (Dissertation)
John Roy, (The Simulation of Dry Spell Frequencies …)
Michael Hill, (Spatial Structure and Decision-Making Aspects of Pedestrian Route Selection…) (Dissertation)
Aria Tazzgi, (The Viability of the Eritrean Economy) (Dissertation)
Steve Devere, (A Relational Analysis of the Interpersonal Communication of New Product Influence) (Dissertation)
Peter Longo, (Water Policy-Making by the Courts in Nebraska), (Ph.D. Dissertation)
Stan Madsen, (Conflict Awareness on Interspousal Decision Making In Highly Involving Purchases) (Dissertation)
David Chin, (Exploratory Shopping Behavior…Emotional Response, Shopping Orientation…) (Dissertation)
Ken Engelbrecht, (American Residential Structure: Testing the Adams Model in Omaha, Nebraska) (Dissertation)
Ruth York, (Examining Responses to Environments for Evidence of Environmental Prototypes) (Dissertation)
Deborah Woodcock, (Use of Wood-Anatomical Variables of Burr Oak … Reconstruction of Climate) (Dissertation)

RESEARCH
My research during this period is almost entirely interdisciplinary and consists of manuscripts and an upper-level research oriented book. In general, the research deals mainly with behavioral and experiential situations involving, and dependent upon, person-environment-behavior relationships. The environments focused on are usually built places, settings, or surroundings; and the questions investigated about social and behavioral situations occurring in them are heavily spatial and cognitive in nature. All research topics entertained in my research are from the perspective of humans transacting with, and/or responding to, environments. Research is usually published in planning, and/or environment, and behavior outlets.
UNIVERSITY SERVICE
Professional Conduct Committee, September, 1991 to September 1992, an Academic Senate Representative.
Appointed member of Academic Freedom and Tenure Committee, through 1993 +.
Appointed member of Academic Rights and Responsibilities Committee, 1999; and on the Special Committee of ARRC.
Member of the Judicial Committee from 2003 and continuing.
Elected to the Academic Rights and Responsibilities Panel for a 3-year term beginning 2007-08 to end of 2010.

SELECTED PUBLICATIONS

OTHER PROFESSIONAL ACTIVITIES
Numerous research papers presented at EDRA, AAG, IAPS, and Planning Conferences.
J. CLARK ARCHER, Professor, 60% Teaching, 30% Research, 10% Service
(9-Month, Academic Year Appointment)
Areas of Interest: Political Geography, Population Geography, Settlement Geography, Geographic Information Systems (GIS), Cartography, Spatial Analysis
Contact: jarcher1@unl.edu, 402/472-1945

EDUCATION
B.A. Political Science, Indiana University (1964)
M.A. Geography, Indiana University (1968)
Ph.D. Geography, University of Iowa (1974)

PROFESSIONAL EXPERIENCE
2008-present Professor, Geography Program, School of Natural Resources, University of Nebraska-Lincoln
2001-2008 Professor, Department of Geography, School of Arts & Sciences, University of Nebraska-Lincoln
1989-2001 Associate Professor, Department of Geography, School of Arts & Sciences, University of Nebraska-Lincoln
1985-1989 Assistant Professor, Department of Geography, School of Arts & Sciences, University of Nebraska-Lincoln
1982-1985 Visiting Assistant Professor, Department of Geography, University of Oklahoma
1975-1982 Assistant Professor, Department of Geography, Dartmouth College
1974-1975 Assistant Professor, Department of Economics and Geography, University of Missouri-St. Louis

HONORS AND AWARDS
Journal of Geography Best Content Article Award for 1999, National Council for Geographic Education
Andrew McNally Award for Best Article in American Cartographe, American Cartographic Association, 1985

TEACHING
Courses Taught (Fall, Spring)
GEOG 140 Introductory Human Geography (F04, F05, F06)
GEOG 272 Geography of World Regions (S04, S05, S06, F07, S08, F08, S09, F09)
GEOG 361 Urban Geography (S05, S06, S07, S08, S09)
GEOG 414/814 Quantitative Methods in Geography (S04, S06, S08)
GEOG 444/844 Geodemographics and GIS (S07, F09)
GEOG 447/847 Political Geography (F04, F05, F06, F07, F08)

Doctoral Students Advised
Katherine Nashleanas (Ph.D. Geography, 2005) Thesis title “Metageographic Communities: Structuring the Non-Place Place”

UNIVERSITY SERVICE
I served on the Academic Rights and Responsibilities Committee Member (2004, the Academic Rights and Responsibilities Special Grievance Committee Member (2009), Academic Senate Department of Anthropology & Geography Representative (2004-2007), Arts & Sciences College Assessment Committee Member (2004), Center for Great Plains Studies Finance & Personnel Committee Member (2005-2006), Center for Great Plains Studies Board of Governors Member (2007-2010) and the University Commencement Marshals Corp (2004-2007).
SELECTED PUBLICATIONS


OTHER PROFESSIONAL SERVICE


Reviewer for several journals including:

- *Annals Association of American Geographers*
- *Cartography and Geographic Information Science*
- *Great Plains Research*
- *Journal of Geography*
- *Journal of Rural Studies*
- *National Geographic*
- *Political Geography*
- *Professional Geographer*
- *Urban Geography*
TALA AWADA, Associate Professor, 25% Teaching, 68% Research, 5% Scholarly Service, 2% University Service (9-Month, Academic Year Appointment)


Contact: tawada2@unl.edu, 402/472-8483

EDUCATION
B.S. Agricultural Engineering, Lebanese University, Lebanon (1992)
M.S. Environmental and Renewable Resources, Mediterranean Agronomic Institute of Chania, Greece (1995)
Ph.D. Department of Plant Sciences, University of Saskatchewan, Canada (2000)

PROFESSIONAL EXPERIENCE
2007-present Associate Professor, School of Natural Resources, University of Nebraska-Lincoln
2008 Visiting Professor, Aristotle University of Thessaloniki-Greece, and Forest Research Institute, Thermis-Greece.
2001-2007 Assistant Professor, School of Natural Resources, University of Nebraska-Lincoln
Maternity Leaves: October through December 2002; June through September 2005
1999-2001 Research Assistant Professor (0.5 FTE), Department of Agronomy and Horticulture, University of Nebraska-Lincoln

HONORS AND AWARDS
Dinsdale Family Faculty Award for Outstanding Teaching, Research and Outreach, IANR, UNL (2006)
Member of the Board of Governors, Center for Great Plains Studies (2004-2007)
Fellow, Center for Great Plains Studies (2003)

TEACHING
Courses taught (Fall, Spring, Summer)
NRES 310 Introduction to Forest Management (F04, F05, F06, F07, F08)
NRES 406/806 Plant Ecophysiology: Theory and Practice (F04, F06, F08)
NRES 404 Forestry, Fisheries and Wildlife Seminar (S04, S05, S07)
NRES 896 Advanced Topics: Plant Ecophysiology (F04)
NRES 399 Independent Studies (S04, F07)

International
Plant Stress Physiology short course (15hrs.), Mediterranean Agronomic Institute of Chania-Crete, Greece (November-December 04, 05, 06, 07, 08)

Master and Doctoral Students Advised
Saadia Bihmidine (Ph.D. Natural Resource Sciences, expected 2010) Thesis topic “Physiological and Molecular Effects of Abiotic Stresses (Salt, drought & cold) -Responsive Transgenes in Economically Important Crops”

RESEARCH
The main focus of my current research has been on determining the ecological impacts of woody species expansion into semi-arid grasslands and riparian areas in the Great Plains. I have been conducting studies on the functional characteristics of grasses, trees and shrubs in the region. A number of my graduate students have also been focusing on the development of broad-spectrum stress-tolerant plants. I have also been collaborating with researchers in Greece to determine the impacts of climate change on Mediterranean pine forests.

UNIVERSITY SERVICE
I have served as the Graduate Committee Chair, SNR (2006-2009), Member of the UNL Research Council (2008-2011), Member of the Agricultural Research Division Faculty Advisory Council (2004-2007), Faculty Advisor to
the CASNR Student Advisory Council (2005-2007), Member of the Board of Governors, Center for Great Plains Studies (2004-2007) and as a Member on numerous Faculty Search Committees at UNL.

SELECTED GRANTS AND CONTRACTS
Effects of eastern redcedar invasion on the hydrology of cottonwood stands in the republican river basin (with J. Huddle, D. Martin, and X. Zhou), Burlington Northern Endowment, $20,000; 2008-2010.
Trees in the Great Plains: water and carbon uses, grasslands health and economic ramifications, McIntire Stennis Funds, $120,000; 2007-2011.
Application and evaluation of advanced technologies for assessing the water balance of a forest ecosystem in Greece (with K. Radoglou, Greece), Scientific and technological cooperation between RTD organizations in Greece and RTD organizations in the US, €60,000 (~$70,000); 2006-2008.

SELECTED PUBLICATIONS

OTHER PROFESSIONAL ACTIVITIES
Professional Development Leave in Greece, Denmark, and the Netherlands, 2008.
DAVID M. BAASCH, Post-doctoral Research Associate, 100% Research
Areas of Interest: Applied Ecology, Wildlife Management
Contact: dbaasch2@unl.edu, 402/472-0508

EDUCATION
B.S. Biological Sciences, University of Nebraska-Kearney (1996)
M.S. Biological Sciences, University of Nebraska-Kearney (2003)
Ph.D. Natural Resource Sciences, University of Nebraska-Lincoln (2008)

PROFESSIONAL EXPERIENCE
2008-present Post-doctoral Research Assistant, School of Natural Resources, University of Nebraska-Lincoln
2006-2008 Graduate Student, School of Natural Resources, University of Nebraska-Lincoln
2002-2006 Research Technician II, West Central Research and Extension Center, University of Nebraska

RESEARCH
The past several years I have studied habitat or resource selection by white-tailed deer, mule deer, and elk in Nebraska. Specifically, I examined the effects of converting cropland to cool- or warm-season grasslands on white-tailed deer; studied the relationship between mule deer and white-tailed deer and the role this relationship may have on the distribution and spread of CWD in an endemic area of Nebraska; identified important landscape characteristics for elk in Nebraska and provided a course of action to minimize elk-human conflicts in Northwestern Nebraska. I have also studied the effects of many grazing-management systems on Nebraska rangelands. I managed GPS-collar tracking aspects of many studies and evaluated livestock movements and plant responses to management practices on upland range and sub irrigated meadow vegetation types. I have also conducted research on the effects of grazing and irrigation on alternative forages that could be incorporated into grazing-management systems.

EXTENSION/OUTREACH
I developed and implemented range and forage management programming for both youth and adult clientele. I presented information at the GSL Youth Field Day and Open House; designed, presented materials, and provided technical assistance at the Nebraska Ranch Practicum; assisted with regional and state Range Judging Contests; developed appropriate educational materials for youth range camp and range workshops; and consulted with area producers and other government agencies about various range related issues.

SELECTED GRANTS AND CONTRACTS
Resource Selection by Cattle in the Central Platte River Valley of Nebraska, Sampson Range and Pasture Endowment, $20,000; July, 2007–June, 2009

SELECTED PUBLICATIONS
Baasch, D.M. 2008. Resource selection by white-tailed deer, mule deer, and elk in Nebraska. Dissertation, University of Nebraska, Lincoln, USA.

**RESEARCH PRESENTATIONS**

**OTHER PROFESSIONAL ACTIVITIES**
Safe-Capture – Chemical Immobilization of Animals
University of Nebraska–Lincoln, Institutional Animal Care and Use Committee
Workshop: New Approaches to Studies of Home Range, Habitat Selection, and Space Use
Workshop: Demystifying Geospatial Data: Applications for Agronomic Outreach and Research
*Member*, The Wildlife Society
*Certification Committee*, Nebraska Chapter of The Wildlife Society
EEO/AA and ADA training and served on search committees, UNL-WCREC
*Farm & Beef Operations Committee*, UNL-WCREC
*Professional Improvement Planning Committee*, UNL-WCREC
TADD M. BARROW, Extension Educator, 98% Extension/Outreach, 2% University Service
Areas of Interest: Aquatic Ecology, Surface Water Quality, Toxic Algae
Contact: tbarrow2@unl.edu, 402/472-7783

EDUCATION
B.S.  Forestry, Fisheries and Wildlife, University of Nebraska (1996)
M.S.  Natural Resources, University of Nebraska (1998)

PROFESSIONAL EXPERIENCE
2005-present  Assistant Extension Educator, University of Nebraska-Lincoln
1999-2005  Water Resources Specialist, School of Natural Resources, University of Nebraska-Lincoln

HONORS AND AWARDS
Environmental Council of the States Program Innovation Award in recognition of the accomplishments of the Community Lake Enhancement and Restoration (CLEAR) Program (2001)
Outstanding 100 Rural Development Initiatives. Nebraska Rural Development Commission. In Recognition of the CLEAR program (2001)

RESEARCH
In an effort to reduce toxic algae and remove Fremont State Lake #20 from the EPA’s Impaired Waters 303 (d) list, I led collaborative efforts as part of UNL’s water quality program with state agencies (NGPC & NDEQ) to adopt suggested lake restoration techniques and long term management practices to restore and maintain water quality in Fremont Lake #20. Several entities contributed staff time and/or cash to complete this project including NGPC, UNL, NDEQ, NETF and USEPA. I managed and assisted personnel with field data collection and subsequent laboratory analysis on over 350 individual samples. Results of the project are as follows: an 85% decline in Total Phosphorus concentration, a 92% reduction in Chlorophyll a (algae abundance), an increase in average water clarity by 2.46 meters (8 feet), the algae toxin (microcystis) that led to beach closings was eliminated to below detection limits. By mid-Summer of 2008 word on the improvements at Fremont Lake #20 had reached the public and lake use on a typical non-holiday Friday-Sunday time period was back to pre toxic algae numbers of 5000-9000 users. By July 2008, overall park permit sales had met 2007 permit sales.

EXTENSION/OUTREACH
As the primary contact for Nebraska’s lake water quality issues, I annually assist over 2500 citizens with water quality improvement through the development of a volunteer monitoring program and sampling kit, conducting personal on-site lake visits to address water quality, assessing water quality problems and make useful recommendations on these issues. Invited keynote speaker at numerous lake association meetings. Survey results from program participants revealed: ‘Water quality is “very important” to an overwhelming majority of lake owners (93%). 70% of the audience were “definitely willing” to begin making changes around their lake to improve water quality. Over half of those in attendance (52%) felt their knowledge of water quality was impacted “considerably” or greater, thanks to the Extension presentations. Since the inception of CLEAR over $4.97 million from the Nebraska Environmental Trust, the Environmental Protection Agency, USEPA and local community partners has been applied. Improving water quality and increasing recreational opportunities for 23 communities across Nebraska impacting nearly 400,000 residents of those communities. Water quality results are as follows: Total Phosphorus decreased 62%, Total Nitrogen decreased 65%, Chlorophyll a (algae) decreased 17%, Turbidity decreased 42%, Water clarity increased 515%.

UNIVERSITY SERVICE
I was Co-Leader for University Nebraska-Lincoln Community and Residential Environment Team, elected to a 2-year term position, 2007-2009. I am also a member of School of Natural Resources Outreach committee, elected 3 year position, 2007-2010.

SELECTED GRANTS AND CONTRACTS
Water Quality Extension and Outreach (w/J. Holz), Nebraska Department of Environmental Quality, $54,560; July 1, 2008-June 30, 2009.
Algae Monitoring and Assessment (w/J. Holz), Nebraska Department of Environmental Quality, $29,744; July 1, 2008-June 30, 2009.
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**Alum Treatment Evaluation** (w/J. Holz), Nebraska Department of Environmental Quality, $201,700; January 1, 2007-June 30, 2009.

**Water and Environment-based Education for Nebraska’s Educators, Youth and Families.** $183,170; on October 1, 2008, I assumed the role as Principal Investigator for this grant.

**Toxic Algae Extension and Outreach** (w/J. Holz), Nebraska Department of Environmental Quality, $29,744; July 1, 2007-June 30, 2008.

**Blue-green algae control at Fremont State Lake #20** (w/J. Holz), Nebraska Environmental Trust Fund, $82,055; July 1, 2006-June 30, 2007.

**SELECTED PUBLICATIONS**


Barrow, T.M. 2008. *Pond Management Tool: Surface Area and Volume Calculators*, Webpage development, University of Nebraska-Lincoln. [http://water.unl.edu](http://water.unl.edu)


**OTHER PROFESSIONAL ACTIVITIES**

*Member* of team charged with developing website housing "All things water at UNL" , [http://water.unl.edu](http://water.unl.edu)

*Team Leader* for content development and maintenance on "Lakes, Ponds, Streams Protection” page within the site.

*Member*, North American Lake Management Society (NALMS) since 1999, attendance at annual conference and occasional presentations
DEBORAH J. BATHKE, Assistant Professor of Practice, 24% Teaching, 35% Research, 41% Department of Geosciences (Teaching)
Areas of Interest: drought planning and mitigation, drought monitoring, and climate decision support
Contact: dbathke2@unl.edu, 402/472-6199

EDUCATION
B.S.  Meteorology/Climatology, University of Nebraska – Lincoln (1995)
M.S.  Geosciences, University of Nebraska – Lincoln (1998)
Ph.D. Atmospheric Science, The Ohio State University (2004)

PROFESSIONAL EXPERIENCE
2008-present  Assistant Professor of Practice, School of Natural Resources/National Drought Mitigation Center/Department of Geosciences, University of Nebraska-Lincoln
2005-2008  Assistant Professor/Assistant State Climatologist, Department of Plant and Environmental Sciences, New Mexico State University
2005  Program Specialist, Nebraska Department of Environmental Quality
1998-2004  Graduate Research Fellow/Graduate Teaching Assistant, Department of Geography/Byrd Polar Research Center/ The Ohio State University

HONORS AND AWARDS
NASA Earth System Science Fellowship Recipient, NASA Training Grant to support doctoral research

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 898  Graduate Research Forum, enrollment 11 (S09)
METR140  Severe and Hazardous Weather, enrollment 100-125 per section (S09 x 2 sections, F08))
NRES 208  Applied Climate Science, enrollment 16 (F08)

RESEARCH
Research topics include investigating climate science and drought monitoring to improve decision support for stakeholders.

EXTENSION/OUTREACH
Outreach activities include presenting and interpreting climate information to a variety of stakeholder groups including growers and producers, golf course superintendents, flood plain managers, water planners, the media, university researchers, state and federal government agencies and K-12 students. Additional outreach efforts have focused specifically on drought planning and monitoring. I have chaired, or co-chaired, several state level climate/drought/water related committees in New Mexico and serve on the Implementation Team for the National Integrated Drought Information System (NIDIS).

UNIVERSITY SERVICE
At New Mexico State University, I served as a reviewer for internal grant proposals and technical/research reports.

SELECTED GRANTS AND CONTRACTS
Integrating Climate Science for Decision-Support, Mitigating Risk and Promoting Resilience, NOAA RISA Program, co-PI with J. Overpeck and collaborators from University of Arizona, funded at approximately $1.2 million per year; 2007–2012.
Tree-ring Reconstructions of Hydroclimatic Variability in the Rio Grande Basin, NOAA Commerce Coping with Drought Program, co-PI with C. Woodhouse and others from the University of Arizona and the University of Colorado, funded at $59,845 for 1 year; 2007-2008.
Drought Index Tools to Improve Drought Monitoring and Preparedness, NOAA Commerce Coping with Drought Program, co-PI with K. Dow and others from the University of South Carolina and the University of Arizona, funded at $149,359 for 1 year; 2007-2008.
Reducing New Mexico’s Agricultural Drought Vulnerability through Stakeholder Assessment, co-PI with C. Fraisse and others from the University of Florida, the University of Georgia, and the University of Arizona, funded at $153,777 for 1 year; 2007-2008.

Development of a Fine-Scale GIS System for Modeling Monsoon Season Flash Flood Events in the Lower Rio Grande of New Mexico, New Mexico Student Water Research Program, New Mexico Water Resources Research Institute, funded at $5,000 for approximately 1 year; 2007-2008.

Support for climate monitoring and education, New Mexico Flood Plain Manager’s Association, $2500. Travel funds, New Mexico Water Task Force, $5000 per year; 2006-2007.

Instrumentation support, New Mexico Water Task Force, $24,000; 2006.

SELECTED PUBLICATIONS


New Mexico Drought Monitoring Work Group, Monthly Drought Status Reports, available (http://www.nmdrought.state.nm.us/).

OTHER PROFESSIONAL ACTIVITIES
Member, “Engaging the Preparedness Community” workgroup for the National Integrated Drought Information System (NIDIS) Implementation team (2006-present)
Chair, Drought Monitoring Workgroup of the Governor’s Drought Task Force (member since 2005, chair from 2006-present)
State Coordinator, New Mexico Community Collaborative Rain, Hail, and Snow Network (2005-present)
Co-Chair, Workgroup on Hydrometeorological Data for the Governor’s Coordinated Resource Management Initiative (2005-2006)
PATRICIA R. BOEHNER, Lecturer, 15% Teaching
Areas of Interest: Environmental science education, global sustainable agriculture and development
Contact: pboehner3@unl.edu, 402/467-1957

EDUCATION
B.S. Range Resources Management, Oregon State University (1983)
M.S. Forestry, Fisheries and Wildlife, University of Nebraska-Lincoln (1986)
Agricultural Intern The Land Institute (private educational and research program on sustainable agriculture and sustainable society), Salina, KS (1987)
Ph.D. Agronomy, University of Nebraska-Lincoln (2001)

PROFESSIONAL EXPERIENCE
1994-present Lecturer, School of Natural Resources, University of Nebraska-Lincoln
1990-1993 Assistant Instructor, Agronomy, University of Nebraska-Lincoln

HONORS AND AWARDS
Irvin A. and Agnes E. Nelson Fellowship (1994)
Teaching Award, Parent’s Recognition (1995)

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 103 Food, Agriculture and Natural Resource Systems, Lecture (F04, F05, F06, F07, F08)
NRES 103 Food, Agriculture and Natural Resource Systems, Recitations (F04, S 04, S05, S06, S07, S08)
NRES 498/898 Gender and Cultural Perspectives on the Environment (F07, S08, S09)

UNIVERSITY SERVICE
I was the State Contest Director for the Agricultural Issues Section 2004-2009 for the Future Farmers of America. I was on the Natural Resources Undergraduate Curriculum Committee from 2007-2009.

OTHER PROFESSIONAL ACTIVITIES
Fellow, Great Plains Studies, University of Nebraska-Lincoln, 2007-2009
JAMES R. BRANDLE, Professor, 28% Teaching, 70% Research, 2% University Service
Area of interest: The role of woody plants in sustainable agricultural systems, specifically the mechanisms associated with windbreak technology, agroforestry and biological control, and the economic benefits of woody plants in our agricultural landscapes
Contact: jbrandle@unl.edu 402/472-6626

EDUCATION
B.S. Botany (minor – mathematics), University of Tennessee, Knoxville, 1966
M.S. Forest Biology, University of Missouri, Columbia, 1970
Ph.D. Tree Physiology, University of Missouri, Columbia, 1974

PROFESSIONAL EXPERIENCE
1997 - Present Professor, School of Natural Resources, UNL
1981 - 1997 Associate Professor, Dept. Forestry, Fisheries and Wildlife, UNL
1975 - 1981 Assistant Professor, Dept. Forestry, Fisheries and Wildlife, UNL
1974 - 1975 Post-doctoral Fellow, Range Science, Utah State University

HONORS AND AWARDS
College Distinguished Teaching Award, CASNR, UNL (2009)
Gold Star Award for service to Lincoln Public Schools Foundation, Lincoln Public Schools (2009)
Holling Family Senior Faculty Teaching Excellence Award, CASNR, IANR (2009)
Entomology Educational Project Award for the Extension Publication: Lady Beetles of Nebraska; A.P. Cunningham, J.R. Brandle, S.D. Danielson, and T.E. Hunt (2008)

TEACHING
Courses Taught (Fall, Spring, Summer)
AGRIC/NRES 103 Introduction to Agriculture and Natural Resource Systems, Recitation, F07, F08, F09
AGRIC/NRES 103 Introduction to Agriculture and Natural Resource Systems, Lecture, F09
NRES 310 Introduction to Forest Management with T. Awada, F07, F08
NRES 417/817 Agroforestry Systems in Sustainable Agriculture, S08, S09
NRES 849 (Hort 849) Woody Plant Growth and Development with E. Paparozzi, F08
NRES 891 Seminar in Natural Resources, with P. Shea, S08, S09
NRES 896 Outreach: Elementary School Classroom Experience, F07, S07, F08, S08, F09, S09

Masters and Doctoral Students Advised or Co-Advised
Ariana Jones (M.S. in Natural Resources, current student), Topic: Leaf Tatters in Hackberry.
John Quinn (Ph.D. Natural Resources with Ron Johnson, current student) Topic: Development of a healthy farm index as part of our research program in organic agriculture.
Katja Kohler-Cole (M.S. Natural Resources, May, 2008; current Ph.D. student) Topic: Attitudes toward agricultural greenspace of rural and urban Lancaster County residents.
Kerry Malone (M.S. non-thesis option, December, 2007)
Heidi Puckett (M.S. Natural Resources with R. Johnson, December, 2006). Topic: Windbreaks and Wildlife. (currently a Ph.D. student at Mississippi State)
Alex Cunningham (M.S. Entomology with S. Dannielson, May, 2006) Synchronizing habitat enhancement practices with predator mobility for control of alfalfa insect pests.
Peter Skelton, (Ph.D. Natural Resources, 2004 , with S. Josiah) Towards cleaner water: understanding riparian forest buffer adoption in Nebraska. (currently faculty member at New Mexico State)
Jeremy Hiller (M.S. Natural Resource Sciences, 2004) Woody species succession in field windbreaks in East Central Nebraska. (currently a research technician at UNL)
RESEARCH
Our current research efforts have moved toward interdisciplinary efforts with a focus on the ecology of shelterbelts at the landscape scale. Working with colleagues in the Departments of Animal Science, Agronomy and Horticulture and Entomology, we have a number of cooperative efforts to define and evaluate the role of woody plants in biological control of pests, diversification of production systems, carbon sequestration in woody species, the reduction of carbon dioxide emissions from agriculture and the enhancement of wildlife habitat, all as a part of an integrated agricultural system.

UNIVERSITY SERVICE
I serve on the UNL Academic Rights and Responsibilities Committee, the IANR Committee on Policy for Promotion and Tenure, the ARD Advisory Committee, the ARDC Advisory Committee, the SNR Promotion and Tenure Committee, and the SNR Undergraduate Curriculum Committee.

SELECTED GRANTS AND CONTRACTS
Improving organic farming systems across Nebraska’s agroecoregions, USDA-CSREES-NRI [with C. Shapiro (Agronomy) and colleagues from UNL], $762,949; 2005-10.
Biomass equations for shrubs, USDA National Agroforestry Center. $5,000; 2008-09.
Biomass equations for Montana, University of Montana (with X. Zhou), $19,000; 2004-05.
Synchronizing habitat enhancement practice with predator mobility for control of Alfalfa insect pests, [with S. Danielson (Entomology) and E. Blankenship (Statistics)], Agriculture Research Division Interdisciplinary grant, $39,000; 2003-05.

SELECTED PUBLICATIONS
MARK E. BURBACH, Associate Geoscientist, 35% Teaching, 27% Research, 35% Scholarly Service, 3% University Service
Areas of Interest: Human Dimensions, Environmental Planning, Geographic Information Systems
Contact: mburbach@unl.edu, 402/472-8210

EDUCATION
B.S. Natural Resources, University of Nebraska-Lincoln (1985)
M.C.R.P. Community & Regional Planning, University of Nebraska-Lincoln (1988)
Ph.D. Community & Human Resources (Leadership Studies), University of Nebraska-Lincoln (2004)

PROFESSIONAL EXPERIENCE
2008-present Associate Geoscientist, School of Natural Resources, University of Nebraska-Lincoln
2003-2008 Assistant Geoscientist, School of Natural Resources, University of Nebraska-Lincoln
1989-2003 Project Coordinator, Water Center, University of Nebraska-Lincoln

HONORS AND AWARDS
Bessey Award for best natural science article, Great Plains Research (2007)
Fellow, Center for Great Plains Studies (2005)
Certificate of Recognition for Contributions to Students, University of Nebraska-Lincoln Parents Association (2002)

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 428/828 Leadership in Public Organizations (S08, S09)
NRES 896 Independent Study (F07, S08, S08, F08, S09)
NRES 388 Employment Seminar (S06)
ALEC 102 Interpersonal Skills for Leadership (F99, S00, F00, S01, F02)
ALEC 904 Seminar in Leadership (S08, S09)
NRES 399 Independent Research (F08)
NRES 323 Natural Res. Policy (F04, S05, F05)

Masters and Doctoral Students Advised
Courtney E. Quinn (M.S. Natural Resource Sciences 2009) Thesis title: Personal Characteristics Preceding Pro-Environmental Behaviors that Improve Surface Water Quality

RESEARCH
I have conducted research and published in the area of personal characteristics associated with conservation practices. Conducted research and published in the area of groundwater-level trends in Nebraska. Over $1,000,000 in funding.

EXTENSION/OUTREACH
I have developed leadership development programs for natural resource organizations. Completed extension programming, media interviews, and press releases on groundwater-level issues in Nebraska.

SURVEY
I have produced over 50 maps on groundwater-level conditions in Nebraska.

UNIVERSITY SERVICE
I have served on the Graduate Committee, from 2008 to present, the Survey Committee, from 2007 to present, the Social Committee, from 1999 to present, all in the School of Natural Resources; and the Publications Committee from 2006 to present, for the Center for Great Plains Studies.
SELECTED GRANTS AND CONTRACTS

**Ensuring Student Success: Increasing Faculty Capacity to Teach Team Building and Critical Thinking Skills.** U.S. Department of Agriculture, $139,067; September 2007-August 2010.


**Targeting Watershed Vulnerability and Behaviors to Adoption of Conservation Management Practices.** U.S. Department of Agriculture, $570,000; October 2006-September 2009.

Max McGraw Foundation Teaching Grant. Max McGraw Foundation, $1,400; January 2008–June 2008,


**Aquifer Vertical Anisotropy & Streambed Conductance in Eastern Part of Central Nebraska, Part II.** Upper Big Blue NRD, $16,000; July 2006-June 2007.

**Aquifer Vertical Anisotropy & Streambed Conductance in Eastern Part of Central Nebraska, Part I.** Funded by Upper Big Blue NRD, $14,760; September 2005-June 2006.

**Vadose Zone Sampling within the Tri-Basin NRD.** Tri-Basin NRD, $3,941; February 2005-December 2006.

**Preliminary Hydrologic Investigation of the Groundwater Flow Regime in the Crescent Lake Wildlife Refuge.** UNL Nebraska Research Initiative, $12,000; May 2004-June 2005.

**Soil Coring in the Nebraska Sand Hills,** UNL Sponsored Programs, $4,000; June 2004-May 2005.

**Vadose Zone Sampling within the Upper Niobrara-White NRD.** Upper Niobrara White NRD, $5,295; April 2003-December 2003.

SELECTED PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES

*Director,* Human Dimensions Program, School of Natural Resources (2008-present)

*Reviewer,* Center for Great Plains Studies Book Award (2008-Present)


*Advisor,* Little Blue NRD, Bruning Area Hydrogeologic Investigation (2008)


*Reviewer,* Journal of the Academy of Business Education (2004-present)

**Consultant,** Wann Basin Ground Water Level Monitoring Network (2003–present)

*Advisor,* Technical Advisory Committee, Nebr. Dept. of Environmental Quality (2005-present)

*Advisor,* Nebraska Ground Water Monitoring Advisory Committee, NGWMAC (2003-present)

*Judge,* Nebraska Junior Science Academy (2006-present)


*Session Chair & Discussant,* Institute of Behavioral and Applied Management, (2003–06)
MARVIN P. CARLSON, Professor-Research Geologist, 25% Research, 73% Scholarly Service, 2% University Service

Areas of Interest: Stratigraphy and tectonic framework of the Precambrian and Lower-Middle Paleozoic, provide natural resource data and impacts of development for decision-makers and general public

Contact: mcarlson1@unl.edu, 402/472-7549

EDUCATION
B.S. Geology, University of Nebraska (1957)
M.S. Geology, University of Nebraska (1963)
Ph.D. Geology, University of Nebraska-Lincoln (1969)

PROFESSIONAL EXPERIENCE
Registered Geologist State of Nebraska.

2004-present Professor, School of Natural Resources, University of Nebraska-Lincoln
1976-2004 Professor/Research Geologist, Conservation and Survey Division, UN-L
1970-1986 Assistant Director, Conservation and Survey Division, UN-L
1963-1984 Principal Geologist, CSD, UN-L
1958-1963 Stratigrapher, CSD, UN-L

HONORS AND AWARDS
Presidents Award for outstanding contributions to the Division of Environmental Geosciences, American Association of Petroleum Geologists (2008)
Robey H. Clark Award for Continuing Service to the Profession, American Association of Petroleum Geologists (2005)
Honorary Membership Division of Environmental Geosciences, AAPG (2004)
Senior Fellow Geological Society of America

RESEARCH
I have been involved in basic research, publications, and presentations related to Paleozoic lithostratigraphy, Precambrian tectonics, and mineral resources of northern Midcontinent. I have also been involved in a major publication on plate tectonic processes for growth of North America in the Nebraska region and the rejuvenation of this framework during the Phanerozoic and compilations and presentations on the potential for petroleum exploration and the potential for deeper groundwater reservoirs.

SURVEY
I have given presentations and workshops on aspects of earth science for teachers, elementary-college classes, councils, and general public groups. I have had significant activity in advising on policy for state and local regulatory and management agencies and participated in numerous committees/groups interested in resource development, environmental impacts, waste disposal, stress on natural resource systems - public perceptions of earth science.

UNIVERSITY SERVICE
I have served on the SNR Safety and Facility Committee. I maintain the SNR Library and maintain, interpret and integrate over 20,000 records of deep wells drilled in Nebraska as mandated by Statute.

SELECTED PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES

President, Nebraska Geological Society (2004-2006)
Associate Editor, Geological Society of America (2005-2007)
Chair, Preservation of Geologic Data Committee, American Association of Petroleum Geologists (2002-2005)
Nebraska Technical Representative, Interstate Oil and Gas Commission (1971-)
Member Advisory Board, Division of Environmental Geosciences American Association of Petroleum Geologists (1999-2007)
XUN-HONG CHEN, Professor, 74% Research, 24% Scholarly Service, 2% University Service
Areas of Interest: Hydrogeology, Stream-aquifer Interactions, Regional groundwater model development
Contact: xchen2@unl.edu, 402/472-0772

EDUCATION
B.S. Geology, Zhejiang University, China (1982)
M.S. Geology, California State University-Northridge (1988)
Ph.D. Hydrogeology, Department of Geology and Geophysics, University of Wyoming (1994)

PROFESSIONAL EXPERIENCE
2005-present Professor, School of Natural Resources, University of Nebraska-Lincoln
1998-2005 Associate Professor, School of Natural Resources, University of Nebraska-Lincoln
1994-1998 Assistant Professor, School of Natural Resources, University of Nebraska-Lincoln
1992-1994 TriHydro Corporation. (Environmental consulting company), Laramie, Wyoming
1982-1985 Instructor, Department of Geology, Zhejiang University, China

HONORS AND AWARDS
Chang Jiang Scholars Professor, Ministry of Education, People’s Republic of China (2007)
Outstanding World Visiting Professor, Zhejiang University, China (2004)

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 918 Applied Groundwater Modeling (F07)
NRES 825 Geostatistics (F05, F08)

Masters and Doctoral Students Advised
Gengxin Ou (Ph.D. started Spring 2009); Tao Sun, a visiting Ph.D. student from China.

RESEARCH
I developed field techniques for determination of streambed hydraulic conductivities and applied these methods to three river basins of Nebraska, constructed a regional groundwater flow model in the eastern Platte River valley for the analysis of the impact of groundwater irrigation on stream flow, developed a finite element numerical model (with computer source codes) to analyze the interactions of stream-aquifer-riparian zone vegetation in South-Central Platte River Valley and established international collaborative research programs with four Chinese universities.

EXTENSION/OUTREACH
I provided assistance to Nebraska Department of Natural Resources (NDNR) and eight Nebraska’s Natural Resources (NRD) Districts for the analysis of stream-aquifer interactions induced by groundwater irrigation and for development of integrated management plans of surface and groundwater resources. NDNR and eight NRDs provided research grants to my research. I also co-organized groundwater modeling workshops for NRD staffs.

SURVEY
I conducted streambed tests in the Blue River Basin, the Elkhorn River Basin, and the Platte River (Kearney to Ashland) to characterize the hydrologic connectedness between streams and the High Plains Aquifer with a total length of channel of 700 km. I also conducted four pumping tests (including construction of observation wells at each test site) to determine the hydraulic properties of the High Plains Aquifer.
UNIVERSITY SERVICE
I am a member of SNR’s Promotion and Tenure Committee (2006-2009), and have been a member of several search committees for hydrology-related positions

SELECTED GRANTS AND CONTRACTS
Building knowledge discovery and information fusion tools for collaborative systems to adaptively manage uncertain hydrological resources, National Science Foundation (with Ashok Samal, L. Soh, A. Tomkins, and S. Zellmer), $552,100; 8/1/2006-7/31/2009.

Streambed tests for the Elkhorn River Basin, The Upper and Lower Elkhorn NRDs and the Nebraska Department of Natural Resources (with Sue Lackey), $84,666; 7/2007-7/2009.
Mining and exploration of groundwater and protection of the environment in arid areas (collaborative research with a Chinese University), Ministry of Education, China, 3 million Chinese dollars; 1/2009-12/2012.

SELECTED PUBLICATIONS

OTHER PROFESSIONAL ACTIVITIES
Associate Editor, *Journal of Hydrology*, 2008-present.
Member of Organizing Committee, 4th Cross-strait (Taiwan-mainland China) Symposium on Soil and Groundwater Contamination and Remediation, Xi’an, China, August 2-6, 2008.
Invited speaker: China’s Beijing Normal University, Zhejiang University, Hohai University, Chang’an University, and Nanjing Institute of Geography and Limnology of China Academy of Sciences, Beijing Institute of Atmospheric Physics of China Academy of Sciences, 2006-2008.
Member of Organizing Committee, Hydrological Sciences for Managing Water Resources in the Asian Developing World, Guangzhou, China, June 8-10, 2006.
STEVE D. COMFORT, Professor, 20% Teaching, 53% Research, 15% Extension/Outreach, 10% Scholarly Service, 2% University Service
Areas of Interest: Soil and Water Chemistry, Remediation of contaminated soil and water
Contact: scomfort@unl.edu, 402/472-1502

EDUCATION
M.S. Soil Science, University of Minnesota (1984)
Ph.D. Soil Science, University of Wisconsin-Madison (1988)

PROFESSIONAL EXPERIENCE
2004-present Professor, School of Natural Resources, University of Nebraska-Lincoln
1997-2004 Associate Professor, School of Natural Resources, University of Nebraska-Lincoln
1992-1997 Assistant Professor, Department of Agronomy, University of Nebraska-Lincoln
1989-1992 Postdoctoral Research Associate, Montana State University
1988-1989 Postdoctoral Research Associate, Oregon State University

HONORS AND AWARDS
Recognition of Junior Faculty for Excellence in Research Award, University of Nebraska (1996)
Editor Citation for Excellence in Manuscript Review, Journal of Environmental Quality (1996)
Honorary Faculty Member. Hanshan Normal University. Chaozhou, China (2007)

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 361 Soils, Environment and Water Quality (S05, S06, S07, S08, S09)
NRES 451/851 Soil Environmental Chemistry (S07)

Masters and Doctoral Students Advised
Jeffery Albano (M.S. Natural Resources Sciences, 2009). In Situ Chemical Oxidation of RDX-Contaminated Groundwater with Permanganate at the Nebraska Ordnance Plant
Chanat Chokejaroenrat (M.S. Environmental Engineering, 2008). Laboratory and Pilot-Scale Investigations of RDX Treatment by Permanganate.
Martin, J.L (M.S., 1995). Metabolism of 2,4,6-Trinitrotoluene (TNT) by Pseudomonas savastanoi.

RESEARCH
My interests are in understanding the fate and transport of organic chemicals in the environment and devising remediation strategies for contaminated soil and water, accidental spills and discharges of farm chemicals and industrial solvents take place each year. When these events occur, normally beneficial chemicals become sources of contamination for ground and surface water. Although the soil-water environment has an enormous potential to
naturally attenuate (adsorb, degrade) these foreign substances, this capacity can be exceeded when chemicals are deliberately or inadvertently released to localized areas. To combat these point sources of contamination, our research attempts to devise treatments that can remove these contaminants or alter their chemical structure so that natural attenuation can proceed. Examples of our work include both field-scale treatment of pesticide-contaminated soils and the use of chemical oxidants to treat contaminated groundwater. Our recent efforts are focusing on developing techniques to remove volatile organic compounds from low permeable zones in aquifers.

EXTENSION/OUTREACH
I provide in-depth training on the fate of chemicals in soils and groundwater to individuals associated with pesticide application or installation of septic systems in the state of Nebraska.

UNIVERSITY SERVICE
I coordinate Undergraduate Degree in Environmental Restoration Science at UNL.

SELECTED GRANTS AND CONTRACTS
A Solute Transport System for Systematically Evaluating Remedial Technologies for Chlorinated Solvent-Contaminated Groundwater (with Y. Li), USGS 104(b), $11,000; March 2009-March 2010.
Bench testing for in situ ozone oxidation of high explosives. BWXT Pantex, LLC, $44,739; 2004.
Enhancement of in situ bioremediation of energetic compounds by couple abiotic/biotic processes (with S.Comfort plus others), SERDP (Strategic Environment Research and Development Program), $845,000 ($186,457 to UNL); 2004.

SELECTED PUBLICATIONS
KENNETH F. DEWEY, Professor, 15% Teaching, 83% Extension/Outreach, 2% University Service (9-Month, Academic Year Appointment)

Areas of Interest: Regional Climatology, climate variation, severe storms climatology, severe weather education and preparedness

Contact: kdewey1@unl.edu, 402/472-2908

EDUCATION
B.S. Geography, Elmhurst College, Elmhurst, IL (1969)
M.S. Geography-Meteorology, Northern Illinois University, DeKalb, IL (1970)
Ph.D. Geography-Climatology, University of Toronto, Toronto, ON (1973)

PROFESSIONAL EXPERIENCE
1999-present Professor, School of Natural Resources, University of Nebraska-Lincoln
1988-1998 Professor, Department of Geography, University of Nebraska-Lincoln
1980-1987 Associate Professor, Department of Geography, University of Nebraska-Lincoln
1978-1980 Assistant Professor, Department of Geography, University of Nebraska-Lincoln
1973-1976 Assistant Professor, Department of Geography, University of Nebraska-Lincoln

TEACHING (last five years)
Courses Taught (Fall, Spring, Summer)
METR 351 Applied Climatology (F04, F05, F06, F07)
NRES 351 Applied Climatology (F08)
NRES 299 Climate in Crisis (S09)

Masters and Doctoral Students Advised
Jeremy Bower (M.S. SNR, Summer 2009) Thesis title “The potential Impact of a Major Tornado Passing through Lincoln, NE”.

RESEARCH
I do not have a research appointment.

EXTENSION/OUTREACH
The annual Central Plains Severe Weather Symposium and Family Weatherfest has over 3,500 people of all ages attend each spring. This event is the largest attended non-athletic event at UNL and there is also extensive media coverage of this event. The websites that I maintain and create content for have been used extensively by the local media and have also been featured on ABC National News, “Good Morning America” and The Weather Channel. The outreach focus on severe weather preparedness in SNR has created important partnerships with the National Weather Service, various Emergency Management Agencies and the media. Having been appointed to the UNL Chancellor’s Speaker’s Bureau gives me the opportunity to showcase UNL and bring climate education to the general public.

UNIVERSITY SERVICE
As advisor to the, Environmental Studies, Applied Climate Sciences major I have recruited new students to IANR and SNR. As a Member of the UNL-CASNR Teaching and Learning Council. I have worked to improve the teaching community in IANR. As the UNL representative at the annual University Corporation for Atmospheric Research meeting, I have represented the Chancellor’s office and helped bring national attention to UNL. As a member of the SNR Outreach Committee, there has been a greatly increased emphasis on the important role of outreach to the community.
SELECTED PUBLICATIONS

OTHER PROFESSIONAL ACTIVITIES
Chair, American Meteorological Society, National Board, Local Chapters Committee, 2007-2009
Member, American Meteorological Society, National Board, Local Chapters Committee, 2004-2009
Planning Committee, Annual Meeting of the American Meteorological Society, 2007-2009
Chair, Planning Committee, Central Plains Severe Weather Symposium and Family Weatherfest, 2001-2009
Advisor, Environmental Studies, Applied Climate Sciences, 2007-2009
Member, UNL-CASNR Teaching and Learning Council, 2005-2008
Academic Senate Representative for SNR/IANR, 2003-2009
UNL representative at the annual University Corporation for Atmospheric Research meeting 1997-2009
Member, SNR Outreach Committee, 2005-2009
Chancellor’s Speakers Bureau, UNL, 2008-2009
Webmaster “Lincoln Weather and Climate”, “Nebraska Weather Photos”, “Nebraska Weather and Climate”
Member Storm safety preparedness workshops given to numerous regional agencies and businesses
Member Storm Spotter Training workshops offered annually in Southeast Nebraska
Invited Keynote speaker Rivers and Wildlife Celebration, Kearney, NE, March 21, 2009
Invited Keynote speaker, Focus the Nation Climate Change Symposium, January 30, 2008.
Invited Keynote speaker, Lincoln “One City One Book” Community Series., Lincoln, NE, October 28, 2007
Invited Keynote speaker, Annual REASON Forum, Omaha, NE, September 17, 2007
Invited Keynote speaker, “Grassland Days” festival, Milligan, NE, March 7. 2006
Invited Keynote speaker, National Severe Storms Workshop, Oklahoma City, OK, March 2-4, 2006.
Invited Keynote speaker, High Plains National Weather Association, North Platte, NE, Oct. 5-7, 2005
YA DING, Post-doctoral Research Associate, 70% Research, 30% Scholarly Service
Areas of Interest: Environmental and Natural Resource Economics, Drought Impact Assessment
Contact: yding2@unl.edu, 402/472-6740

EDUCATION
B.S.  International Trade, Renmin University of China, Beijing, China (1999)
Ph.D.  Agricultural Economics, Kansas State University, Manhattan, Kansas (2005)

PROFESSIONAL EXPERIENCE
2006–present  Postdoctoral Research Associate, School of Natural Resources, University of Nebraska-Lincoln
2005–2006  Postdoctoral Research Associate, Department of Agricultural Economics, Kansas State University
2000–2005  Graduate Research Assistant, Department of Agricultural Economics, Kansas State University

RESEARCH
I have conducted research on the economic impacts of drought to improve both qualitative and quantitative assessment of drought impacts. Develop and update databases in relation to drought economic impacts, drought mitigation strategies, and government policies. Analyze the adaptation of farming practices in response to climate change.

UNIVERSITY SERVICE
I have promoted and disseminated the importance of drought mitigation and preparedness as well as effective mitigation strategies. Introduce National Drought Mitigation Center (NDMC) publications and tools to economic colleagues and the general public.

SELECTED GRANTS AND CONTRACTS


SELECTED PUBLICATIONS


ALLEN L DUTCHER, Associate Geoscientist – State Climatologist, 70% Extension/Outreach, 25% Scholarly Service, 5% University Service

Areas of Interest: Applied Climate Sciences, Water Resources
Contact: adutcher1@unl.edu, 402/472-5206

EDUCATION
B.S.  Meteorology, Iowa State University (1985)
M.S.  Agricultural Climatology, Iowa State University (1989)

PROFESSIONAL EXPERIENCE
2006–present  Associate Geoscientist - State Climatologist, School of Natural Resources, University of Nebraska-Lincoln
1991–2006  State Climatologist, Department of Agricultural Meteorology – School of Natural Resources, University of Nebraska-Lincoln
1989–1991  Research Climatologist, High Plains Regional Climate Center, University of Nebraska-Lincoln

RESEARCH
My current research involves identifying the impacts of station moves and time of observation changes on long term climatic temperature trends across Nebraska. Before quantifying the degree of temperature increase during the past 100 years, it is necessary to correct for these influences have on historical records. A second area of research is centered on identifying the influence of short and long term trends on agricultural and hydrological drought. These triggers will assist the Water Availability Outlook Committee in identifying the drought risk heading into the growing season so that state officials can put contingency plans in place based upon the degree of risk.

EXTENSION/OUTREACH
My current extension/outreach commitments include providing real time climatic analysis and graphics of predefined variables to Nebraska Ag Statistics and CropWatch. In addition, the Nebraska State Climate Office provides climatic data and analysis to an average of 750 users per year. Approximately 250 media interviews are given on topics including seasonal forecasts, drought risk, soil moisture analysis, and climatic tendencies. An average of 15-20 news articles, print news releases, and radio tapings are provided through UNL’s Communications Information Technology department to media outlets to keep them abreast of pressing climate issues. Bi-monthly weather forecasts are provided to Heartland Express, as well as weekly forecasts for Market Journal and the World Wide Agricultural Network.

SURVEY
I am currently upgrading the Nebraska State Climate Office website to conform to UNL standards. When this site is completed, approximately 22,000 graphic and tabular files will be available to public covering topics such as climatic probabilities for selected temperature and precipitation variables, historical temperature and precipitation summaries, daily maps of temperature and precipitation variables at defined time scales, and monthly state climatic summaries using National Weather Service and High Plains Regional Climate Center observational networks.

UNIVERSITY SERVICE
My current activities include serving on the SNR Survey committee and the Applied Climate Sciences monthly faculty meetings. Recent ACS activities include the development of an undergraduate major/minor and a proposed summer institute on Climate Change. I, also, have been the UNL Extension representative to the Nebraska governors Climate Assessment Response Committee which is responsible for analyzing current climate patterns and recommending actions that state agencies should consider based upon recent and expected trends.

SELECTED PUBLICATIONS


**OTHER PROFESSIONAL ACTIVITIES**

*Member*, American Association of State Climatologists (1991-present)

*Member*, Membership Committee, American Association of State Climatologists (2008-present)


*Chairman*, Water Availability and Outlook Committee, sub-committee of Nebraska’s Climate Assessment and Response Committee (2001-present).
SONG FENG, Research Assistant Professor, 100% Research 
(9-Month, Academic Year Appointment)
Area of Interest: Regional and global climate variations; climate modeling; Paleoclimate change
Contact: sfeng2@unl.edu, 402/472-6660

EDUCATION
B.S. Meteorology, Yunnan University, Kunming, China, July 1993
B.S. Economics (minor), Yunnan University, Kunming, China, July 1993
M.S. Meteorology, Lanzhou Institute of Plateau Atmospheric Physics, Chinese Academy of Sciences, China, July 1996
Ph. D. Atmospheric Physics, Lanzhou Institute of Plateau Atmospheric Physics, Chinese Academy of Sciences, China, July 1999

PROFESSIONAL EXPERIENCE
2007-present Climatologist/Research Assistant Professor, School of Natural Resources, University of Nebraska-Lincoln.
2001-2008 Research specialist, School of Natural Resource, University of Nebraska-Lincoln.
1999-2001 Visiting scholar, School of Natural Resource Sciences, University of Nebraska-Lincoln.
1993-1999 Graduate research assistant, Lanzhou Institute of Plateau Atmospheric Physics, Chinese Academy of Sciences.

Graduate students’ advisees/committee
Ryan Ruhge (M.S., Meteorology, current)
Kristen Fox (M.S., Meteorology, current)

RESEARCH
My main research interests involve regional climate change and impacts; regional and global climate modeling, and paleoclimate changes. During the past several years my research has focused on understanding precipitation variations in the central United States and the variability of summer monsoon rainfall in the North America using advanced diagnostic tools and the regional climate models, identifying physical mechanisms causing the inter-annual and longer climate variations in North America, understanding the physical processes that caused the persistent drought (e.g. the medieval megadrought) in the Great Plains using atmospheric models and atmosphere-ocean coupled models, evaluating and understanding land surface-atmosphere interactions on climate prediction on seasonal timescales and meteorological data quality assessment. I’m interested in using global and regional climate models to help understand the physical processes that cause the past and present-day climate changes. I’m also involved in studying the impact of climate changes on regional agriculture and hydrology.

SELECTED GRANTS AND CONTRACTS
Understanding the role of Atlantic sea surface temperatures on persistent drought in the U.S. Great Plains. Office of Research, University of Nebraska-Lincoln, $10,000; June 2009-May, 2010.

SELECTED PUBLICATIONS


**OTHER PROFESSIONAL ACTIVITIES**

*Member*, American Geophysical Union

*Member*, International Association of Hydrological Sciences

DENNIS M. FERRARO, Extension Educator and Herpetologist, 20% Teaching, 80% Extension/Outreach (Southeast Research and Extension Center)
Areas of Interest: National Herpetological Conservation, International Amphibian Decline, Sustaining Herpetofauna Biodiversity
Contact: dferraro1@unl.edu, 402/472-8248

EDUCATION
B.S. Zoology (Wildlife Biology), Iowa State University (1978)
M.S. Graduate Research in Herpetology, Iowa State University (1978)
Associate Certified Entomologist Purdue University Distance Education (1981)
M.S. Biology (Herpetology), University of Nebraska-Omaha (1993)

PROFESSIONAL EXPERIENCE
1990-present Faculty, University of Nebraska-Lincoln
1982-1989 Operations Manager, Atlas Pest Management Incorporated

RESEARCH
I have conducted herpetological surveys and monitoring projects in five states in the past 25 years. I conducted annual Herpetofauna surveys across Nebraska and have collected data on over 3,700 snakes, 3,400 amphibians, 410 turtles and lizards in the past 19 years. I maintain the university's live animal lab of native Herpetofauna for research and educational purposes. I have developed health and medical protocol for their care. I maintain the state's herpetological website, "Reptiles and Amphibians of Nebraska". I am a consultant on Herpetofauna for the Nebraska Game and Parks Commission's Natural Legacy Project. I do radio tracking and telemetry in reptiles, plus surgically implanting transmitters in snakes. I have an ongoing nine-year Prairie Rattlesnake study in the Sand Hills of Nebraska and conduct amphibian disease and malformation tests in Nebraska.

SELECTED PUBLICATIONS
Ferraro, Dennis. 2008. Frog Calls of Nebraska (Developed and created)

OTHER PROFESSIONAL ACTIVITIES
- American Society of Ichthyologists and Herpetologists
- Center for North American Herpetology
- Center of Great Plains Studies
- Conservation Biology Society
- Herpetofauna Conservation Society
- Herpetological League
- Kansas Herpetological Society
- Nebraska Herpetological Society
- Society for the Study of Amphibians and Reptiles
- Wildlife Society
JOSEPH J. "TJ" FONTAINE, Adjunct Assistant Professor, 0% Teaching, 0% Research, 0% Extension/Outreach, 0% University Service
Areas of Interest: Evolutionary Ecology, Life History Theory, Conservation Biology
Contact: jfontaine2@unl.edu, 402/472-0339

EDUCATION
B.S.  Wildlife Biology, The University of Montana (1997)
Ph.D.  Fish and Wildlife Biology, The University of Montana (2006)

PROFESSIONAL EXPERIENCE
2009-present  Assistant Unit Leader, USGS Nebraska Coop. Fish and Wildlife Research Unit
2009-present  Adjunct Assistant Professor, School of Natural Resources, University of Nebraska-Lincoln
2007-2009  Senior Research Specialist, USGS Sonoran Desert Research Station and the School of Natural Resources, University of Arizona

HONORS AND AWARDS
Best Student Presentation, University of Montana Research Conference (2006)
Best Student Presentation, Montana Chapter of the Wildlife Society (2006)
Best Student Presentation, American Ornithological Union (2005)
Student Travel Award, American Ornithological Union (2005)
GK-12 Graduate Fellowship, National Science Foundation (2005)
EPSCOR Graduate Fellowship, National Science Foundation (2004)
EPSCOR Graduate Fellowship, National Science Foundation (2003)
EPSCOR Graduate Fellowship, National Science Foundation (2000)
Student Membership Award, Cooper Ornithological Society (1997)

TEACHING
Courses Taught (Fall, Spring, Summer)
BIOC 623  Biology Update II – Ecology and Evolution (Su 08, University of Arizona)
WBIO 370  Wildlife Habitat Conservation and Management (F06, University of Montana)
BIOL 110  Principles of Biology (Su06, University of Montana)

RESEARCH
Dr. Fontaine’s research focuses on ecological and evolutionary sources of variation in phenotypic expression, particularly as it applies to the conservation and management of species. In particular, his research has addressed questions concerning how changes in ecological signals affect the process and associated costs of habitat decisions in birds. His research is initiated in response to the needs of Cooperators associated with the Nebraska Cooperative Fish and Wildlife Research Unit and are designed to provide information useful in improving the conservation and management of wildlife.

EXTENSION/OUTREACH
Dr. Fontaine has a strong interest in improving natural science education for K-12 students and educators, and has participated extensively in local and regional K-12 science. This has included participating in a National Science Foundation GK-12 program at the University of Montana, leading a National Wildlife Society field exercise for students and teachers from the San Carlos Apache Reservation High School, Arizona, and teaching courses in the Science Teacher Preparation Program at the University of Arizona. Dr. Fontaine has also published several exercises and articles focused on public (USGS Factsheet, In press) and K-12 (Science Activities 45:3-7, Science Teacher 74:38-42) education.

SELECTED GRANTS AND CONTRACTS
Appendix V – Faculty CVs

Flooding and contaminants in the Santa Cruz Watershed (with J. Callegary, C. van Riper, F. Gray, and L. Norman), USGS Border Environmental Health Initiative, $1.1 million; September 2008–September 2013. (Award transferred to C. van Riper upon departure from the University of Arizona).

Desert monitoring program U.S. Marine Corps Air Station Yuma (with C. van Riper and L. Graumlich) Cooperative Ecosystem Studies Agreement US Marine Corps, $70,000; September 2008–January 2010. (Award transferred to C. van Riper upon departure from the University of Arizona).


RELEVANT SCIENTIFIC PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES

Student Award Committee, Cooper Ornithological Society. April 2009–present.

Local Committee Chair, 79th Annual Meeting of the Cooper Ornithological Society, Tucson, AZ, April 17, 2009.

Invited speaker, Symposium on Climate Change: Consequences For Birds, Cooper Ornithological Society Annual Meeting, Tucson, AZ, April 17, 2009.

Invited Speaker, Williams Memorial Lecturer, School of Natural Resources Spring Water Series, University of Nebraska-Lincoln., Lincoln, NE, March 4, 2009.


Invited Speaker, The Percy Fitzpatrick Institute, University of Cape Town. Cape Town, South Africa, October 17, 2002.


Academic press Referee, University of Arizona Press.

PATRICIA “Trish” FREEMAN, Professor, 25% Teaching, 48% Research, 25% Scholarly Service, 2% University Service

Areas of Interest: Mammalian Biology, Functional Morphology, Evolution and Systematics, Vertebrate Zoology

Contact: pfreeman1@unl.edu, 402/472-6606

EDUCATION
A.B. Biology, Randolph-Macon Woman’s College (1969)
Ph.D. Biology, University of New Mexico (1977)

PROFESSIONAL
2003-present Professor, School of Natural Resources, University of Nebraska-Lincoln (UNL)
2000-2002 Associate Director of Research, University of Nebraska State Museum (UNL)
1998-2003 Professor and Curator of Zoology, University of Nebraska State Museum (UNL)
1990-1998 Associate Professor and Curator of Zoology, University of Nebraska State Museum (UNL)
1981-1990 Assistant Professor and Curator of Zoology, University of Nebraska State Museum (UNL)
1977-1981 Assistant Curator and Head, Division of Mammals, Field Museum of Natural History, Chicago, IL

HONORS AND AWARDS
Maude Hammond Fling Award, UNL Research Council (2008)
Gerritt S. Miller Award for Contributions to Bat Biology by North American Symposium on Bat Research (2001)
Phi Beta Kappa, Keynote Speaker, Randolph-Macon Woman’s College, Lynchburg, VA. (1988)
Albert M. and Alma Shadle Fellowship in Mammalogy given by the American Society of Mammalogists (1974)

TEACHING
NRES 492 Field Course, Big Bend National Park (S09)
NRES 404 Senior Seminar (S08)
NRES 476/876, BIOS 476/876 and lab Mammalogy (S07, F08, F09)
BIOS 386, NRES 386 and lab Vertebrate Zoology, (F04, F05, F06, F07, S08, S09)
NRES 211 Introduction to Conservation Biology (F04, F05)

Masters and Doctoral Students Advised
Russell A. Benedict (PhD School of Biological Sciences 1997) Morphological and genetic analyses of hybrid zone between short-tailed shrews (Blarina) in Nebraska.
Scott C. Pedersen (PhD School of Biological Sciences 1993) Ontogenetic basis of head posture in Chiroptera.
Michael Roedel, MS School of Biological Sciences 1991) The increase of woody vegetation and associated expansion of range of Peromyscus leucopus (Rodentia) along the Republican River in southwest Nebraska.

RESEARCH
I am interested in the evolution, biomechanics, and function in the teeth, jaws and skull of small mammals. Particularly I explore the tooth/food interface. I am in the process of gathering experimental data on bite forces in bats. How these forces may affect the kinds of prey captured and eaten will be the critical question. Field work and feeding experiments with insects of different cuticle “toughness” will help me answer how distinct forms are functioning.

SURVEY
Much of my background has been as Curator of Zoology of the University of Nebraska State Museum. I supervise collections of mammals, birds, amphibians, reptiles and fish and oversee a collections manager for those collections. Databases in zoology are captured electronically. Collections continue to grow, between 250 and 300 visitors use the collections each year, and it is a net lender of specimens. Further, I study the distributions of mammals in Nebraska and am contributing to a large project that will update a previous study from the1960’s. My co-authors and I have
found that the distribution of 25% of the species in the state have significantly changed in the past 50 years. Before/after studies such as this are critical in understanding expansion and contractions of distributions and what external forces including climate may be affecting them.

UNIVERSITY SERVICE
I was a member of the University Fulbright Committee in 2008 and a member of the Search Committee for Vertebrate Paleontologist, Geosciences, from 2007 to 2008. I was the Library Book Chair and SNR liaison with the University Library from 2007 to 2012. I was the Chair of the Scholarship Committee, Board of Governors, for the Center for Great Plains Studies. I was a member of the Accreditation Committee for the University of Nebraska Museum in 2005. In 2005 I was elected to the Board of Governors for the Center for Great Plains Studies. I was a member of the Search Committee for the Director, SNR, from 2005 to 2007 and a member of the Museum Grants Committee from 2005 to 2009.

SELECTED GRANTS AND CONTRACTS

*Quantifying the bite forces in live insectivorous bats*, Maude Hammond Fling, UNL, $6,500, January 1, 2007 to March 31, 2008.

SELECTED PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES


Referee for 7 journal articles in Acta Chiropterologica, Journal of Mammalogy Southwestern Naturalist, Prairie Naturalist, Fieldiana; 2 proposals for NSF; and one tenure review for the University of Massachusetts.


ANATOLY GITELSON, Professor, 83% Research, 15% Scholarly Service, 2% University Service
Areas of Interest: Remote Sensing, Water, Applied Climate Sciences
Contact: agitelson2@unl.edu, 402/472-8386

EDUCATION
M.S. Radio Electronics, The Institute of Radio Technology, Taganrog, Russia (1964)
Ph.D. Radio Physics, The Institute of Radio Technology, Taganrog, Russia (1972)

PROFESSIONAL EXPERIENCE
2000-present Professor, School of Natural Resources, University of Nebraska-Lincoln
1996-2000 Chairman, Dept. for Environmental Physics and Energy Research, J. Blaustein Institute for Desert Research, Ben-Gurion University, Israel
1990-1996 Professor, Department of Geological and Environmental Sciences, Ben-Gurion University, Israel
1981-1989 Head, Remote Sensing Lab, Hydrochemical Institute, Environmental Protection Agency, Rostov-on-Don, USSR
1977-1981 Scientist, Institute for Nuclear Research, Academy of Sciences, Moscow, USSR
1973-1977 Scientist, Physical Institute, Rostov-on-Don State University, USSR
1964-1972 Scientist, Institute for Microwave Electronics, Krasnodar, USSR

HONORS AND AWARDS
USSR Academy of Sciences Award for best work of the year in Solid State Physics (1977)
USSR Academy of Sciences Award for best work of the year in Physics of High Energy particles (1981)
Germany Academy of Sciences Fellowship (1996)
State Price “50th Israeli Anniversary” for outstanding contribution to Israeli scientific development (1998)

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 898 Quantitative Remote Sensing (F01 through F09)

Masters and Doctoral Students Advised
Andrés Viña (Ph.D. Natural Resource Sciences, 2004), Remote Estimation of Leaf Area Index and Biomass in Crops.
Giorgio Dall’Olmo (Ph.D. Natural Resource Sciences, 2004), Isolation of optical signatures of phytoplankton pigments in turbid productive waters: remote assessment of chlorophyll-a…………………
Verónica S. Ciganda (Ph.D. Agronomy) Vertical profile of chlorophyll in maize canopy: Technique, quantification and implications for remote sensing.
R. Stark (Ph.D. Geology and Environmental Sciences, 2001), Remote sensing technique for monitoring vegetation fraction, Ben Gurion University, Israel.
Yoav Zur (Ph.D. Geology and Environmental Sciences, 2003), Non-destructive estimation of carotenoid content as indicator of plant stress. Ben Gurion University, Israel.

RESEARCH
My main interest is in remote sensing of water quality and vegetation. Conceptual model for non-destructive estimating pigments in plant leaves and phytoplankton was developed and used for monitoring water quality and plant pigment content. Scientific basis and techniques were developed for remote estimating vegetation biophysical characteristics such as vegetation cover, fraction of absorbed photosynthetically active radiation, leaf area index, biomass, chlorophyll content and gross primary production.

EXTENSION/OUTREACH
The techniques developed were used by Nebraska Department of Environmental Quality for monitoring water quality and presence of toxic blue-green algae in Fremont State Lakes in Nebraska. They have been used also for monitoring phytoplankton distribution in Chesapeake Bay, Delaware Bay, as well as in lakes and reservoirs in Russia, Ukraine and Israel.
UNIVERSITY SERVICE
I am a member of SNR Promotion and Tenure Committee (2008-present) and Research (2005-2008) committees.

SELECTED GRANTS AND CONTRACTS
Responses of coastal waters to terrestrial inputs of elemental CNP in urbanizing coastal regions, NASA (T. Fisher, PI; A. Gitelson, Co-PI), $550,000. UNL share is $275,000; 2005-2009.
A Satellite-Based Quantification of Carbon Exchange of the Dominant Ecosystems (Maize-Soybean) in the NACP Mid-Continent Intensive (MCI) Region, NASA, $496,000; 2008-2011.

SELECTED PUBLICATIONS

OTHER PROFESSIONAL ACTIVITIES
Editor, Remote Sensing of Environment
Associate Editor, Agronomy Journal (2004-2008)
Appendix V – Faculty CVs - 47

JAMES W. GOEKE, Professor, 5% Research, 72% Extension/Outreach, 20% Scholarly Service, 3% University Service

Areas of Interest: Groundwater geology, Sand Hills, Drinking water, Hydrogeology, Irrigation, Water development

Contact: jgoeke1@unl.edu, 308/696-6704

EDUCATION
B.S. 1966, University of Wisconsin, Madison - Geology
M.S. 1970, Colorado State University, Ft. Collins - Groundwater Geology

PROFESSIONAL EXPERIENCE
1996-Present Full Professor
1976-1995 Research Hydrogeologist, Associate Professor and Tenure 1981, UNL Conservation and Survey Division at the West Central Research and Extension Center, North Platte, NE
1970-1976 Research Hydrogeologist, Conservation and Survey Division, Lincoln, NE
1969 Geologic Field Consultant - Cobin-Monroe Mining Company, Fairbanks, Alaska (Summer)
1967-1968 Geologic Field Assistant and Graduate Teaching Assistant, Colorado State University, Ft. Collins, CO

SURVEY, EXTENSION AND OUTREACH
One of my long-term and major scholarly service efforts has been assisting the locally controlled natural resources districts (NRDs) in the west-central part of the state in devising and implementing groundwater management plans. Required by state law, these plans help them determine how they want to manage their groundwater reservoir. In particular, the Upper Republican NRD in far southwestern Nebraska has been challenged by declining water tables and water restrictions, including groundwater metering and a moratorium on well-drilling. Since the late 1970s, I’ve worked closely with this NRD to help them adjust to these stresses. I’ve also assisted the Middle Republican and the Twin Platte NRDs with their groundwater management concerns. Other scholarly service includes being a state Attorney General’s expert witness for the Republican River basin in litigation with Kansas over allocations from that river. I am currently the state representative for the Ogallala Aquifer Institute of Garden City, Kansas, and the UNL liaison to the Nebraska Well Drillers Association, an organization that Conservation and Survey helped found. I work closely with the U.S. Geological Survey on the High Plains Regional Aquifer System Analysis (RASA) and the High Plains National Water Quality Assessment (NAWQA) programs. I also run an acid rain monitoring station as part of the National Atmospheric Deposition Program, and monitor dioxin in the atmosphere in conjunction with the U.S. Environmental Protection Agency. In outreach, I’ve been involved with Lincoln-based Groundwater Foundation’s board and educational events and the High Plains Water Expo and the Water Riches field days, both sponsored by the Lincoln County Extension office. I also often give talks for schools or at community events regarding groundwater geology and Nebraska’s groundwater resource.

RESEARCH
My main research interests have to do with the groundwater of central and southwestern Nebraska, groundwater management, particularly under conditions of scarcity, and the age of the Sand Hills. Some key research projects I’ve been involved with have to do with gathering data for modeling of the unconfined aquifers near the Platte River in the central Platte region and similar stream-aquifer studies in the Republican River valley.

HONORS AND AWARDS
North Platte Public Schools Bulldog Award (1988)
Enersen Friends of the Forest Award ($1000) with Keith Blackledge (1989)
IANR Team Effort Excellence - Cropping Systems Team Member (1990)
IANR Excellence in Team Programming from UN Cooperative Extension for “Water Quality Team from North Central, NE” (1992)
Master Card's Master Planter Award for Nebraska (1993)
State Forester's Award (1995)
Nebraska Statewide Arboretum Tree Planters State Award (1995)
Maurice Kremer Groundwater Achievement Award (2001)
Trustee Nebraska Nature Conservancy (2001)
GRANTS AND CONTRACTS
Aquifer Tests for Defining Aquifer Parameters in Support of Magnetic Resonance Soundings for Groundwater Model Development (collaborator), Nebraska Environmental Trust, $1,500 (5% of total award of $30,000); January 2008-December 2011.

Development of Hydrologic Framework for Selected Areas of the Upper Loup Basin (collaborator with Steven Sibray), Nebraska Department of Natural Resources, $720 (6% of total award of $12,000); January 2008-December 2010.

Elkhorn-Loup Model (ELM) Project, (co-PI with Susan Lackey; faculty partners, non-IANR/CEHS), Lower Loup NRD, $75,000; December 2007-December 2009.

PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES
Member, Conservation and Survey Division Director Advisory Committee, 1998-2001
Member, WCREC Directors Advisory Committee, 1998-2001
Member, IANR Facilities Committee, 1998-2001
Member, UNL Speakers Bureau 1997-1998, 2006-2009
Member, Phi Kappa Phi and Sigma Xi
Member, North Platte Groundwater Guardian Team Facilitator
Member, North Platte LincUP, 1998-2001
Member, North Platte Civil Service Commission, 2003-2009
DAVID C. GOSSELIN, Professor and Director of Environmental Studies, 70% Teaching,  
20% Program Administration, 8% Scholarly Service, 2% University Service
Areas of Interest: Earth Systems Education, Groundwater geochemistry
Contact: dgosselin2@unl.edu, 402/472-8919

EDUCATION
B.S. Geology, University of St. Thomas (1982)
Ph.D. Geology, South Dakota School of Mines and Technology (1987)

PROFESSIONAL EXPERIENCE
2008-Present Director, Environmental Studies, University of Nebraska-Lincoln
2003-Present Professor, School of Natural Resources, University of Nebraska-Lincoln
1993-Present Director, Nebraska Earth Systems Education Network, Institute of Agriculture and Natural 
Resources, University of Nebraska-Lincoln
2004-2007 Associate Director, School of Natural Resources, University of Nebraska-Lincoln
1995-2003 Associate Professor, School of Natural Resource Sciences and Conservation and Survey Division, 
University of Nebraska-Lincoln
1989-1995 Assistant Professor, Conservation and Survey Division, University of Nebraska-Lincoln
1988-1989 Postdoctoral Trainee, Analytical Chemistry Group; Battelle-Pacific Northwest Laboratory and 
Northwest College and University Association for Science, Richland, WA

HONORS AND AWARDS
Lifetime Achievement Award, Nebraska State Soccer Association (2007)
Volunteer of the Year, Youth Sports Branch, YMCA, Lincoln, NE (2005)
Catalyst Award, Nebraska Association of Teachers of Science (1999)
Institute of Agriculture and Natural Resources Team Award: Mid-Nebraska Water Quality Demonstration Project 
(1995)
Nominated for John C. Frye Award, Association of American State Geologists for best paper in environmental 

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 108 Earth’s Natural Resource Systems Laboratory (F04, F05, F07, F08)
NRES 809 Laboratory Earth: Earth and its Systems (Online)
NRES 814 Laboratory Earth: Earth’s Natural Resources Systems (offered at a variety of times yet)
NRES 822 Laboratory Earth: Earth’s Changing Systems (offered at a variety of times yet)
ENVR 289 Sophomore Orientation (F08, F09)
ENVR 489 Senior Seminar (S09)
ENVR 499a Senior Thesis (F08, S09)
ENVR 499b Senior Thesis (F08, S09, Su09)
UHON 385H Water, Society, and the Future (S07, S08, S09)

Masters and Doctoral Students Advised

RESEARCH
The common theme in all my work has been the application of geochemical principles to both basic and applied 
scientific problems. Examples of these activities include assessing the biogeochemical controls on the occurrence of 
arSENic and uranium in public water supplies; local and state-wide groundwater quality; the physical and chemical 
hydrogeology of groundwater resources; and the potential impact of climate and environmental change on lake and 
wetland environments.
SURVEY
I began my career at UNL doing survey work. I have worked with local and state agencies to help them understand their water resources. I have focused increasing K-12 educators understanding of Earth System Science. In 1999, I was honored by the Nebraska Association of Teachers of Science with their Catalyst Award in “Appreciation for Dedication to Science Education” for my contributions to K-12 education through the many professional development activities that I have provided or organized as Director of the Nebraska Earth Science Education Network (NESEN) over the last fifteen years. Whether I am working with teachers or a local natural resource district, I make every effort to highlight the practical applications of scientific information to current environmental issues.

UNIVERSITY SERVICE
I serve on department, college and university committees when needed. These include work on writing, assessment, sustainability curriculum, and online education opportunities.

SELECTED GRANTS AND CONTRACTS
* Earth Science Institute of Elementary Educators (ESIEE), D.C. Gosselin, (P.I) co-P.I R.J. Bonnstetter, and T.F. Slater, NASA, $356,094; 3 years, Start date: 8/14/05 to present.
* Summer Earth Systems Education Institute (SESEI): A Partnership between Educational Service Unit #3 and the University of Nebraska-Lincoln., D.C. Gosselin, (PI.), R.J. Bonnstetter, and S. Person-Pandi, Nebraska Department of Education Math and Science Partnership; $60,916; 2/6/04 – 9/25/05.
* Sand Hills Biocomplexity: Integrating Biogeophysical Processes across Space and Time, D. Wedin, G. Henebry, and D. Loope (PIs); Gosselin - Senior Personnel; Responsibilities include Educational Outreach, National Science Foundation; $1,800,000 (not included in total); 10/1/03 to 9/30/07.
* Integration of Earth System Science Research and Education: Involving Teachers in Scientific Research and Scientists in Inquiry-Based Learning, D.C. Gosselin, (P.I.), co-PI Ron Bonnstetter, UNL Teachers College, $74,204; National Science Foundation, January 2000 to June 2002.

SELECTED PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES
Member of Executive Committee, Council of Environmental Deans and Directors, National Council for Science and the Environment.
Appendix V – Faculty CVs - 51

QINGFENG “Gene” GUAN, Assistant Professor, 50% Teaching, 40% Research, 10% University Service
Areas of Interest: Geographic Information Science, GeoComputation, Geospatial Analysis and Modeling
Contact: qguan2@unl.edu, 402/472-4002

EDUCATION
B.S. Geography, East China Normal University, Shanghai, China (2000)
M.S. Geography, Chinese Academy of Sciences, Beijing, China (2003)
Ph.D. Geography, University of California - Santa Barbara, Santa Barbara, California, USA (2008)

PROFESSIONAL EXPERIENCE
2009-present  Assistant Professor, School of Natural Resources, University of Nebraska-Lincoln
2008-2009  Postdoctoral Research Associate, United States Geological Survey
2003-2008  Ph.D Student, Teaching Associate, Teaching Assistant, Graduate Student Researcher, University of California – Santa Barbara

HONORS AND AWARDS
Resident Research Associateship, National Research Council (2008)
Dangermond Travel Scholarship, Department of Geography, University of California – Santa Barbara (2008)
Dangermond Travel Scholarship, Department of Geography, University of California – Santa Barbara (2006)
UCGIS Assembly Travel Support, University Consortium for Geographic Information Science (2004)

TEACHING
Courses Taught (Fall, Spring, Summer)
GEOG 176A  Introduction to Geographic Information Systems (Su06)
GEOG 128  Analytical and Computer Cartography (S07)

RESEARCH
I am involved in high-performance Geospatial Computing: developing a general-purpose parallel raster-processing programming library (pRPL) and have developed a geographical Cellular Automata model, pSLEUTH, using pRPL; developed a parallel geostatistical areal interpolation system. Regarding Geospatial Analysis and Modeling: I have developed an Artificial-Neural-Network-based and constrained, Cellular Automata model for urban growth simulation.

SELECTED PUBLICATIONS
Adler, P. B., J. HilleRisLambers, P. C. Kyriakidis, Q. Guan, and J. M. Levine. 2006.Climate variability has a stabilizing effect on coexistence of prairie grasses. Proceedings of the National Academy of Sciences, 103(34): 12793-12798

OTHER PROFESSIONAL ACTIVITIES
Member, Association of American Geographers, 2006-present.
Member, International Association of Chinese Professional in Geographic Information Systems, 2006-present
Member, Cartography and Geographic Information Society, 2005-present
PAUL R. HANSON, Assistant Professor, 30% Teaching, 40% Research, 28% Scholarly Service, 2% University Service
Areas of Interest: Geomorphology, Landscape Evolution, Soil Processes
Contact: phanson2@unl.edu, 402/472-7762

EDUCATION
B.A. Anthropology, University of Wisconsin-Milwaukee (1994)
M.S. Geosciences, University of Nebraska (2003)
Ph.D. Geosciences, University of Nebraska (2005)

PROFESSIONAL EXPERIENCE
2005-present Assistant Professor, School of Natural Resources, University of Nebraska-Lincoln

HONORS AND AWARDS
Myerly-Martin Prize for Outstanding Graduate Student, Department of Geosciences, University of Nebraska (2005)

TEACHING
Courses Taught (Fall, Spring, Summer)
GEOG 155 Introduction to Physical Geography (S09)
NRES 492 Boundary Waters Field Trip (Su07, Su08)
NRES 891 Seminar in Natural Resources (F07)

Masters and Doctoral Students Advised

RESEARCH
My research is focused on better understanding the responses of geomorphic systems to climate change and human activity. Recently I’ve studied changes in rivers, dunes, and soil deposits in the past 10,000 years. Much of my work involves using Optically-Stimulated Luminescence (OSL) dating, a recently developed suite of dating techniques, to estimate the frequency at which these geomorphic systems were activated in the recent past.

SURVEY
My survey work is focused on producing surficial geologic maps for selected areas in Nebraska, and publishing reports and other data that address groundwater concerns in eastern Nebraska.

UNIVERSITY SERVICE

SELECTED GRANTS AND CONTRACTS
Collaborative Research: How Important is the Loess Mantle in Midwestern Soil Catena Evolution? (with J.A. Mason and P. Jacobs), National Science Foundation, UN-L share = $27,219; August 2008-August 2010.
Appendix V – Faculty CVs - 54


Eastern Nebraska Water Resources Assessment (with S. Lackey, and R.M. Joeckel), Lower Platte North Natural Resources District, $216,000; December 2006-December 2009.


SELECTED PUBLICATIONS
Hanson, P.R., Joeckel, R.M., Young, A.R., Horn, J. 2009. Late Holocene Dune Activity in the Eastern Platte River Valley, Nebraska, Geomorphology 103, 555-561.
Mason, J.A., Miao, X., Hanson, P.R., Johnson, W.C., Jacobs, P.M., Goble, R.J. 2008. Loess record of the last Glacial-Interglacial transition on the northern and central Great Plains, Quaternary Science Reviews 27, 1772-1783.
Rawling, J.E., III, Hanson, P.R., Young, A.R., Attig, J.W. 2008. Late Pleistocene dune construction in the Central Sand Plain of Wisconsin, USA, Geomorphology 100, 494-505.
Hanson, P.R., Mason, J.A. and Goble, R.J., 2006. The formation of fluvial terraces along Wyoming's Laramie Range as a response to late Pleistocene flooding events. Geomorphology 76, 12-25.

OTHER PROFESSIONAL ACTIVITIES
Invited presentation, University of Iowa Department of Geoscience, Oct, 2006.
Member, Geological Society of America, 1998-present.
F. EDWIN HARVEY, Associate Director & Professor, 50% Administration, 25% Teaching, 13% Research, 7% Scholarly Service, 5% University Service

Areas of Interest: Groundwater, Water Chemistry, Isotope Hydrology, Groundwater Dependent Ecosystems
Contact: feharvey1@unl.edu, 402/472-0232 or 402/472-8237

EDUCATION
B.S. Geology, Olivet Nazarene University (1986)
M.S. Hydrogeochemistry, Purdue University (1990)
Ph.D. Hydrogeology, University of Waterloo (Ontario, Canada) (1996)

PROFESSIONAL EXPERIENCE
2008-present Professor, School of Natural Resources, University of Nebraska-Lincoln
2007-present Associate Director, School of Natural Resources, University of Nebraska-Lincoln
2002-2008 Associate Professor, School of Natural Resources, University of Nebraska-Lincoln
1997-2002 Assistant Professor, School of Natural Resource Sciences & Conservation and Survey Division, University of Nebraska-Lincoln
1996-1997 Assistant Professor, Conservation and Survey Division, University of Nebraska-Lincoln

HONORS AND AWARDS
Distinguished Service Award, Geological Society of America-Hydrogeology Division (2008)
Fellow, Geological Society of America (2006)
Certificate of Recognition for Contributions to Students, UNL Teaching Council/Parents Association (2008)
Darrell W. Nelson Excellence in Graduate Student Advising Award Nominee, UNL (2006)

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 281 Introduction to Water Sciences (F 08)
NRES 917 Environmental Isotope Hydrology (S 09, S 07, S 05)
NRES 105 Justin Morrill Scholars Seminar (F 08, F 07, F 06)
NRES 353/853 Hydrology (S 08, S 07, S 06)
NRES 898 Groundwater Contamination & Remediation (F 06)

Masters and Doctoral Students Advised (Last 5 Years)
Sarah Foster (M.S. Geology, expected 2010) Contamination of Rainwater Basin wetlands.
James Gilbert (M.S. Natural Resources, 2008) Mixing dynamics in saline wetlands of Little Salt Creek watershed.
Carrie Wiese (M.S. Natural Resources, 2008) Hydrogeochemistry of riparian and parafluvial wetlands.
Gordon Coke (M.S. Natural Resources, 2008) Groundwater dynamics within the saline wetland alluvium.
Wyatt Webster (M.S. Natural Resources, 2007) Water balance analysis for a Nebraska Sand Hills wetland
Erica Sorensen (M.S. Natural Resources, 2005) Saline wetlands of eastern Nebraska – Regional groundwater flow.
Kelli Warren (M.S. Natural Resources, 2005) Initial characterization of regional water table dynamics.
Tina Kurtz (M.S. Natural Resources, 2005) Non-thesis Option
Kathleen Eggemeyer (M.S. Natural Resources, 2005) Functional characteristics of Sandhills trees and grasses.

RESEARCH
To understand the role of groundwater in ecosystems and specifically Nebraska’s saline wetland, rainwater basin wetland, and Sandhills fen wetland ecosystems.

EXTENSION/OUTREACH
Supply information to, and answer questions for, the public on Nebraska’s groundwater resources and ground water quality.
SURVEY
Conducting chemical and isotope surveys Nebraska’s precipitation, groundwater and surface water resources.

UNIVERSITY SERVICE
Member of NU Executive Graduate Committee, UNL Academic Planning Committee, IANR Liaison Committee, CASNR Administrative Intern, and was Director of the Justin Morrill Scholars Program and Learning Community.

SELECTED GRANTS AND CONTRACTS
Using Electrical Resistivity Imaging (ERI) to map saline water beneath eastern Nebraska saline wetlands, U.S. Fish and Wildlife Service, $62,500; 2009-2010.
Investigation of the role of rainwater basin wetlands in contributing to the functions of groundwater recharge, water quality improvement, and wildlife habitat, including an assessment of the impact of sediment on these functions (with T. LaGrange, L. Smith, and W. Wood), U.S. Environmental Protection Agency, $257,126; 2006-2009.
Developing a water budget analysis for a Nebraska Sandhills wetland (with K. Hoagland), Nebraska Department of Roads; $31,923; 2006-2007.
Assessing wetland health at Nebraska’s National Guard bases (with S. Narumalani), Nebraska Military Department-Army National Guard, $14,000; 2005-2006.

SELECTED PUBLICATIONS
Stotler, R., Harvey, F.E., and D.C. Gosselin. Chemical and Isotopic Evidence for a Black Hills Origin for Groundwater in the Dakota Aquifer of Northeastern Nebraska, Ground Water (accepted).

OTHER PROFESSIONAL ACTIVITIES
2nd Vice Chair, Geological Society of America Hydrogeology Division (2008-present)
Technical Program Chair, Geological Society of America Hydrogeology Division (2009)
Newsletter Editor & Webmaster, Geological Society of America Hydrogeology Division (2001-2008)
Associate Editor, Ground Water (2000-2008); Hydrogeology Journal (2002-2007)
MICHAEL J. HAYES, Associate Professor and NDMC Director, 10% Teaching, 23% Research, 35% Scholarly Service, 2% University Service, 30% Administration (NDMC Director)

Areas of Interest: Drought mitigation strategies, drought impacts, vulnerability assessments, precipitation indices, and remote sensing applications

Contact: mhayes2@unl.edu, 402/472-4271

EDUCATION
B.S. Meteorology, University of Wisconsin-Madison (1986)
M.S. Atmospheric Science, University of Missouri-Columbia (1989)
Ph.D. Atmospheric Science, University of Missouri-Columbia (1994)

PROFESSIONAL EXPERIENCE
2007-present Associate Professor/Director, School of Natural Resources/NDMC, University of Nebraska-Lincoln
2006-2007 Research Associate Professor/Associate Director, SNR/NDMC, University of Nebraska-Lincoln
2003-2006 Research Associate Professor/Climate Impacts Specialist, SNR/NDMC, UNL
1995-2003 Research Assistant Professor/Climate Impacts Specialist, SNR/NDMC, UNL
1987-1994 Graduate Research Assistant, Department of Atmospheric Science, University of Missouri-Columbia

HONORS AND AWARDS
Fellow, Center for Great Plains Studies (2005)
Board Member, Center for Great Plains Studies Board of Governors (2007-2010)

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 452/852 Climate and Society (S08, S10)

Masters and Doctoral Students Advised
Sandra Jones (M.S. SNR, expected 2009)
Jane Okalebo (Ph.D. SNR, expected 2011)
Crystal Bergman (Ph.D. SNR, expected 2012)

RESEARCH
Research topics include investigating new drought monitoring and impact assessment technologies, including the social, environmental and economic impacts of drought. Research also includes the development of appropriate drought planning and mitigation strategies at the local, regional, tribal, state, and national levels.

OUTREACH
A major component of my outreach program involves providing drought planning guidance for states and Native American tribes, participating in at least 40 drought planning-related workshops around the world since 1996. I have also been invited to give approximately 70 presentations since 2004. I serve a prominent role on the Implementation Team for the National Integrated Drought Information System (NIDIS) and co-chair another Working Group for NIDIS involving drought planners around the country.

SELECTED GRANTS AND CONTRACTS

Transitioning the Drought Impact Reporter into an Operational System (with D. Wilhite, M. Svoboda, C. Knutson, and 2 others), $453,523; NOAA TRACS Program, August 2007-July 2010.


Climate and Soil Risk Information System (with D. Wilhite and 3 others), $1,212,055; USDA/RMA, June 2005-May 2008.

Engaging Agricultural Communities in the Great Plains of the U.S. with the Application and Development of Climate Prediction and Information (with S. Hu and 4 others), $432,916; NOAA, May 2002-July 2006.

Sustainable Adaptation to Drought and Climate Variability in Agricultural Production Systems Across Nebraska (with C. Knutson and 4 others), $107,909; NOAA, July 2004-June 2006.

SELECTED PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES

Member, Nebraska Climate Assessment and Response Committee (2007-present)
Member, National Integrated Drought Information System Implementation Team (NIDIS) (2006-present)
Co-Chair, Engaging the Preparedness Communities Working Group, NIDIS (2006-present)
Member, WGA/NOAA National Integrated Drought Information System Interdisciplinary Team.
TIM L. HILLER, Post-doctoral Research Associate, 100% Research  
Areas of Interest: Wildlife-habitat relationships, population responses to landscape-level changes  
Contact: thiller2@unl.edu, 402/472-8296

EDUCATION  
B.S.  Fisheries and Wildlife Biology, Iowa State University (1995)  

PROFESSIONAL EXPERIENCE  
2008-present  Post-doctoral Research Associate, School of Natural Resources, University of Nebraska-Lincoln  
2004-2007  Graduate Research Assistant, Dept. of Fisheries and Wildlife, Michigan State University  
2001-2004  Graduate Research Assistant, Dept. of Forestry, Oklahoma State University  
1999-2001  Conservation Aide, Story County Conservation Board, Ames, IA

HONORS AND AWARDS  
Charles Dobbins Memorial Scholarship, Fur Takers of America (2007)  
Academic Scholarship, Northern Great Lake Fur Harvesters, Incorporated (2006)  
J. G. Schotthoeffer Memorial Award, Safari Club International (2006)  
Travel Grant Award, MSU Graduate Student Organization (2006)  
Research Enhancement Award, MSU Graduate School ($700) (2005)  
Academic Scholarship, Northern Great Lake Fur Harvesters, Incorporated (2005)  
J. G. Schotthoeffer Memorial Award, Safari Club International (2005)  
Bill Burtness Fellowship, Rocky Mountain Goats Foundation (2005)  
J. G. Schotthoeffer Memorial Award, Safari Club International (2004)  
Student Membership Award, Cooper Ornithological Society (2 yr) (2004)

TEACHING  
Courses Taught (Fall, Spring, Summer)  
FW410  Upland Ecosystem Management (S07)

RESEARCH  
My research has involved primarily game species ecology and management, wildlife-habitat relationships, and population responses to landscape-scale changes, though I delve into other research topics, including wildlife harvest management and damage management. I often work closely with state and federal agencies to address various management issues, including management of high abundance species.

EXTENSION/OUTREACH  
My outreach activities relate primarily to presentations (13) and popular articles (34) on conservation and management issues and topics to a diverse array of audiences.

SELECTED GRANTS AND CONTRACTS  
Selectivity and correlates of capture for winter-trapped white-tailed deer (Hiller, T.L.), Whitetails Unlimited, $800; 2008.  
Advancing ecological knowledge: development of an information guide to the ecology and management of Michigan’s natural resources (with Felix, A.B., H. Campa III, and T. L. Hiller). (50% of $12,000); 2008, in progress.  
Movements and space use of white-tailed deer in an agro-forest ecosystem (with Hiller, T.L. and H. Campa III), Whitetails Unlimited, $1,000; 2006.
SELECTED PUBLICATIONS

OTHER PROFESSIONAL ACTIVITIES
Poster judge Midwest Ecology and Evolution Conference (UNL), field trip transportation, 2009.
District Director (districts 3 and 6), Michigan Trappers Association, 2006–2008.
Lead Editor, Staff Writer, MSU Dept. of Fisheries and Wildlife Spotlight magazine, 2006–2007.
Appendix V – Faculty CVs - 61

**KYLE D. HOAGLAND**, Professor and UNL Water Center Director, 15% Teaching, 35% Research, 50% Administration (Director, UNL Water Center)

Areas of Interest:Limnology, Aquatic Ecology, Ecotoxicology, Lake Restoration, Periphyton Ecology

Contact: khoagland@unl.edu, 402/472-3305

**EDUCATION**

B.S.  Zoology, Michigan State University (1973)
M.S.  Aquatic Biology; Eastern Michigan University (1975)
Ph.D.  Life Sciences (Phycology), University of Nebraska (1981)

**PROFESSIONAL EXPERIENCE**

2000-present  Director, University of Nebraska Water Center (50% administration)
2003-present  Leader, Water Resources Research Initiative, University of Nebraska
1990-present  Professor, School of Natural Resource Sciences, University of Nebraska, Lincoln (75% research/25% teaching appointment; tenured beginning 7/94; Associate Professor 1990-95).
2001-2003  Interim Director, School of Natural Resource Sciences, University of Nebraska
1996-2007  ESCOP/ACOP Leadership Development Program participant
1985-1993  Limnology Instructor, Cedar Point Biological Station, University of Nebraska. Five-week field course, emphasizing field and laboratory techniques
1983-1990  Associate Professor of Biology (Assistant Professor until 1988, tenured and promoted), Department of Biology, Texas Christian University, Fort Worth, TX.

**HONORS AND AWARDS**

*University-wide Student/Parent Advisor Award*

**TEACHING**

Courses Taught

- NRES 459/859  Limnology (with laboratory)
- NRES 468/868  Wetlands (with lab; team taught)
- NRES 898  Aquatic Botany (with lab; team taught)
- NRES 866  Advanced Limnology (team taught)
- NRES 404  Wildlife Seminar

Masters and Doctoral Students Advised:
M.S. 21 (completed); Ph.D. 5 (completed), 1 (pending); Postdocs 4 (completed).

**RESEARCH**

My laboratory has focused on the ecotoxicology of agrichemicals on algae in lakes and streams, with emphasis on the commonly used herbicides atrazine and alachlor, as well as algal toxins. This research has been conducted at the population and community levels, at both chronic and acute exposures. In addition, the lab is addressing aquatic ecology issues including lake restoration, lake classification, and water quality assessment. A total of 60 peer-reviewed publications have resulted from this research.

**SELECTED GRANTS AND CONTRACTS**


*Change in filter strip performance over time: an evaluation of runoff chemistry*, USDA (with M. Dosskey and J. Brandle), $78,000; 2003-2005.

*Develop a research and technical needs catalog for national parks in the Great Plains*, National Park Service (Great Plains CESU) (with C. Lockert and G. Willson), $41,000; 2002-2004.


*Development and implementation of a comprehensive lake and reservoir strategy for Nebraska as a model for agriculturally dominated ecosystems*, U.S. Environmental Protection Agency (J. Holz lead PI), $1,224,706; 2000-2004.
Appendix V – Faculty CVs - 62


Development of a Dissolved Oxygen Circulation Model for Lake Ogallala, Nebraska Game & Parks Commission (J. Stansbury, Civil Engineering, lead PI), $123,368; 2000-2002.


Nebraska lake classification and assessment program, Nebraska Department of Environmental Quality (with J. Holz), $370,000; Nebraska Game & Parks Commission, $45,000; 1998-2001.


Changes in primary productivity in Pawnee Reservoir as a result of reservoir aging, U.S. Army Corps of Engineers, $49,772; 1997-1999.


Diatom attachment at aquatic interfaces: molecular interactions, mechanisms and physiology of adhesion, Office of Naval Research (with M. Gretz), $565,541 (incl. $67,905 of ASSERT fellowship funding); 1993-1996.

Biochemistry of the fouling marine diatom adhesives and the effects of substrate preconditioning on adhesion, Office of Naval Research (with M. Gretz), $328,661; 1990-1993.

Impacts of global climate change on phytoplankton productivity in lakes along a thermal gradient, Department of Energy, NIGEC (Great Plains Regional Center) (with S. Ernst), $123,070; 1994-1996.

SELECTED PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES

President, National Institutes for Water Resources (2007-2008)
Treasurer, Phycological Society of America (1998-2000)
ARIS A. HOLZ, Research Assistant Professor, 25% Teaching, 73% Research, 2% University Service

Areas of Interest: Aquatic Ecology, Saline Lakes, Phytoplankton, Algal Toxins, Lake and Stream Nutrient Criteria
Contact: aholz2@unl.edu, 402-472-8182

EDUCATION
B.S. Biology, University of Nebraska-Lincoln (1992)
M.S. Parasitology, University of Nebraska-Lincoln (1994)
Ph.D. Natural Resources, University of Nebraska-Lincoln (2005)

PROFESSIONAL EXPERIENCE
2005-present  Research Assistant Professor, School of Natural Resources, University of Nebraska-Lincoln
2007 Cooperator, Water Science Major, School of Natural Resources, University of Nebraska-Lincoln
2007 Member, US EPA Technical Advisory Committee on Nebraska Lakes
2005-2006 Advisor, US EPA Region VII Streams Technical Assistance Group
2001-2004 Advisor, US EPA Region VII Lakes Regional Technical Assistance Group
2001-2005 Research Assistant, University of Nebraska-Lincoln, SNR
1999-2000 Research Technologist, University of Nebraska-Lincoln, SNR, Limnology
1997-1999 Laboratory Coordinator/Instructor, Dept. of Biology, Creighton University

HONORS AND AWARDS
Best Student Poster Presentation, 21st International Symposium of the North American Lake Management Society (2001)
A.C. Cuckler Award for outstanding parasitology graduate student (1994)

TEACHING
Courses Taught (Fall, Spring, Summer)
WATS 498a Senior Thesis in Water Science, 1st semester (F08, S09)
WATS 498b Senior Thesis in Water Science, 2nd semester (F08, S09)
NRES 465 Limnology Lab (S01)
BIOS 385 Parasitology Lab (S94)
BIOS 112 Zoology Lab (F91, S92, S93, F94)
BIOS 101 Introductory Biology Lab (F92, S93)

Masters and Doctoral Student Committee Member
Amy Zoller (M.S. Geography 2009)
Kimberly Laing (M.S. Natural Resources 2008)

RESEARCH
My research involves developing statistical methodologies for lake and stream classification using landscape based regions (hydroecoregions) as a means of quickly and cost effectively predicting water quality for rivers, streams and reservoirs. I am also involved in developing predictive models for freshwater cyanobacterial and toxic cyanobacterial blooms by integrating in-lake water quality, geographical, and weather parameters. I have been determining the frequency of algal blooms and toxic algal blooms pre and post European settlement in freshwater lakes using paleolimnological techniques and identifying the unique nutrient stoichiometry that limits phytoplankton growth over a range of freshwater and alkaline lakes in the Nebraska Sandhills.

UNIVERSITY SERVICE
I have served as chair of the School of Natural Resources Sustainability Committee (2008-present), co-chair of the Five Year Review Water Group (2008-present). I have participated in Student Retention and Recruitment bi-monthly activities (2007-present). I was a participant, Water Student Recruiting Website development (2008-present) and a member, School of Natural Resources Undergraduate Curriculum Committee (2007-present).
SELECTED GRANTS
Fremont Alum Treatment Project, Nebraska Department of Environmental Quality, $201,700; 2007-2009.
Classification of Nebraska’s rivers and streams, Nebraska Department of Environmental Quality, $150,000; 2006-2007.
Determination of appropriate water quality expectations in agriculturally dominated ecosystems, University of Nebraska, Institute of Agriculture and Natural Resources, $39,856; 2006-2009.
Determining toxic algal bloom frequency in Nebraska lakes, University of Nebraska, Office of Research (Layman Award), $9,982; 2006-2007.
Classification of Nebraska’s streams and water quality outreach, Nebraska Department of Environmental Quality, $152,588; 2005 to 2006.
Developing procedures for predicting toxic blue-green algae blooms using remote sensing capabilities, Nebraska Department of Environmental Quality, $105,263; 2004 to 2006.

SELECTED PUBLICATIONS

OTHER PROFESSIONAL ACTIVITIES
Member, American Society for Limnology and Oceanography, 2002-present.
Member, International Society for Salt Lake Research, 2007-present.
Member, North American Lake Management Society, 2001-present.
JOHN C. HOLZ, Research Assistant Professor, 15% Teaching, 70% Research, 13% Extension/Outreach, 2% University Service (Resigned)
Areas of Interest: Lake Water Quality, Lake/Reservoir Restoration, Aquatic Ecology
Contact: jholz1@unl.edu, 402/472-6648

EDUCATION
B.S. Natural Resources; University of Nebraska, Lincoln, NE (1991)
M.S. Forestry, Fisheries and Wildlife; University of Nebraska, Lincoln, NE (1994)
Ph.D. Biological Sciences (Aquatic Ecology); University of Nebraska, Lincoln, NE (1998)

PROFESSIONAL EXPERIENCE
2002-present Member, US EPA Region VII Streams Regional Technical Assistance Group
1999-2004 Member, US EPA Region VII Lakes Regional Technical Assistance Group
1999-2002 Board of Directors, North American Lake Management Society
1998-present Research Assistant Professor, School of Natural Resources, University of Nebraska, Lincoln, NE
(50% Research/35% Extension/15% Teaching)
1994-98 Research Project Manager, School of Natural Resource Sciences, University of Nebraska, Lincoln, NE

HONORS AND AWARDS
Environmental Council of the States Program Innovation Award in recognition of the accomplishments of the Community Lake Enhancement and Restoration (CLEAR) Program (2001)
Selected as a Participant in the Dissertations Initiative for the Advancement of Limnology and Oceanography Symposium at the Bermuda Biological Station for Research (1999)
Best Student Presentation, 17th International Symposium of the North American Lake Management Society (1997)

TEACHING (last five years)
Courses Taught (Fall, Spring, Summer)
NRES 459/859 Limnology (Su 04, S 05, Su 06, S 07, Su 08, S 09)
NRES 464/864 Lake and Reservoir Restoration (S 04, S 06, S 08)

RESEARCH (last five years)
Understand causes of poor lake and stream water quality; research, develop and assess water quality management tools (e.g., alum aeration, dredging, watershed practices); nutrient impacts on water quality; land-use impacts on water quality; determination of realistic surface water expectations (TMDLs, nutrient criteria); toxic algae ecology and remediation.

EXTENSION (last five years)
Supervision of UNL’s Lake Water Quality Extension Program and UNL’s Toxic Algae Outreach and Extension Program; Assist water resource managers, owners, regulators and users with water quality issues; Produce written and web-based material on water quality problems and solutions; Adult and youth water quality education.

SELECTED GRANTS AND CONTRACTS (last five years)
Heartland Integrated Water Coordination Initiative, USDA CSREES 406, $561,603; 2008-2012
Stream Data Assessment, Nebraska Department of Environmental Quality, $149,888; 2008-2009
Water Quality Extension and Outreach, Nebraska Department of Environmental Quality, $54,560; 2008-2009
Statewide Algae Monitoring and Assessment, Nebraska Department of Environmental Quality, $29,744; 2008-2009
Classification of Nebraska's Streams, Nebraska Department of Environmental Quality, $150,000; 2007-2008
Water Quality Extension and Outreach, Nebraska Department of Environmental Quality, $54,343; 2007-2008
Toxic Algae and Extension, Nebraska Department of Environmental Quality, $29,744; 2007-2008
Fremont Alum Treatment Project, Nebraska Department of Environmental Quality, $201,700; 2007-2009
Appendix V – Faculty CVs - 66

Determination of Appropriate Lake Water Quality Expectations in Agriculturally Dominated Ecosystems, USGS/UNL Water Center, $39,928; 2006-2007

Determination of Appropriate Lake Water Quality Expectations in Agriculturally Dominated Ecosystems: Phase II, IANR-ARD, $20,600; 2006-2008

Classification of Nebraska’s Rivers and Streams, Nebraska Department of Environmental Quality, $152,588; 2006-2007

Water Quality Extension and Outreach, Nebraska Department of Environmental Quality, $44,494; 2006-2007

Toxic Algae Outreach, Nebraska Department of Environmental Quality, $26,088; 2006-2007

Toxic Algae Extension and Outreach, Nebraska Department of Environmental Quality, $26,853; 2005-2006

Water Quality Extension and Outreach, Nebraska Department of Environmental Quality, $47,045; 2005-2006

Stream Data Assessment (Classification of Nebraska’s Rivers and Streams), Nebraska Department of Environmental Quality, $150,000; 2005-2006


Reservoirs Biological Study: 2005, Nebraska Department of Environmental Quality, $45,000; 2005-2006

Reservoirs Biological Study: 2004, Nebraska Department of Environmental Quality, $45,000; 2004-2005

Classification of Nebraska Streams and Rivers: Phase 1 Data Assessment, Collection, and Analysis, Nebraska Department of Environmental Quality, $111,000; 2004-2005

Salt Valley Reservoirs Biological Study, Nebraska Department of Environmental Quality, $45,000; 2002-2004

States Lakes Classification 2002-03, Nebraska Department of Environmental Quality, $350,000; 2003-2004

SELECTED PUBLICATIONS (list up to 10, emphasize last five years)


Memberships in Professional Societies:

Member, American Society for Limnology and Oceanography

Member, Ecological Society of America

Member, North American Lake Management Society
QI STEVEN HU, Associate Professor, 53% Research, 15% Extension/Outreach, 2% University Service, 30% Department of Geosciences (Teaching)
Areas of Interest: Climate variability of regional and global scales, Hydrological responses to climate forcing, Intra-seasonal oscillations in the tropical atmosphere, Numerical modeling, Human dimensions in climate change
Contact: E-mail: qhu2@unl.edu, Telephone: 402/472-6642

EDUCATION
B.S. Meteorology, Lanzhou University, Lanzhou, China (1982)
M.S. Atmospheric Sciences, Colorado State University, Fort Collins, CO (1986)
Ph.D. Atmospheric Sciences, Colorado State University, Fort Collins, CO (1992)

PROFESSIONAL EXPERIENCE
2003-present Associate Professor, School of Natural Resources, and Department of Geosciences, University of Nebraska-Lincoln, Lincoln, NE
1999-2003 Assistant Professor, School of Natural Resources, University of Nebraska-Lincoln, Lincoln, NE
1995-1999 Research Assistant Professor, Department of Soil and Atmospheric Sciences, University of Missouri-Columbia, Columbia, MO
1995-1999 Director, Missouri Climate Center, University of Missouri-Columbia, Columbia, MO
1994-1995 Research Scientist, Pacific Northwest National Laboratory, Richland, WA

HONORS AND AWARDS
Junior Faculty for Excellence in Research, Agricultural Research Division, Institute of Agriculture and Natural Resources, University of Nebraska (2002)
Oversea Science Advisor of the Chinese Academy of Science, elected award (2005-present)

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 208 Applied Climate Science (F04, F05, F06)
NRES 467/867 Global Climate Change (F04, S06, S08)
NRES 907 Agricultural Meteorology (S03, S05)
METR 453/853 Physical Climatology (F05, F07)
METR 498/898 Special Topics (General Circulation of the Atmosphere, now METR415/815) (F06, F08)

Masters and Doctoral Students Advised
Kaikai Lu (MS School of Natural Resources 2002-03) (transferred to another program)
Lawren N. Graf (MS School of Natural Resources 2005) “Using the Theory of Planned Behavior to Determine Factors Affecting Agricultural Use of Climate Forecasts across Three Counties in Nebraska.
Melissa Melvin (MS School of Natural Resources 2004-05) (transferred to another program)
Yacoubou Tawaye (Ph.D. School of Natural Resources 2007) “Variations of Energetics of Cyclones in the Mid-latitude North America, 1948-2000”
James McComik (MS Geosciences/Meteorology 2006-07) (dismissed because of health problems)

RESEARCH
I have investigated variations in the summer precipitation in the central U.S. from interannual to multidecadal timescales and identified major sources affecting the variations. I have examined the decision-making processes of farmers and proposed pathways to improve farmer effective use of climate predictions in farming decision-making.

EXTENSION/OUTREACH
I am involved in improved understanding of the farmer decision-making and developed a prototype model (http://driftwood.unl.edu/farmsmart) to train farmers for their construction of personal knowledge of weather and climate predictions and their use in making farming decisions.
UNIVERSITY SERVICE
I have served as a member on numerous search committees for faculty positions in SNR and Geosciences Department. I also have served as a member of the Research Committee of SNR.

SELECTED GRANTS AND CONTRACTS
Transition of weather and climate forecasts into effective decision-making tools (with 4 collaborators), NOAA, $293,001; 2005-2008.
Predicting wheat curl mite movement and wheat streak mosaic virus spread (with Gary Hein and three collaborators), USDA CSREES, $89,662; 2006-2009.
NC-94 (NC-1018) Regional Climate Research (with K. Hubbard), USDA, $50,000; 2003-2008.
Evaluation of ecosystem models for beef cattle production (with T. Mader and one collaborator), DOE NIGEC, $324,513; 2004-2007.
Sand Hills Biocomplexity (with D. Wedin and 8 collaborators), NSF, $1.8M; 2003-2007.
Engaging agricultural communities in the Great Plains of the United States with the applications & developments of climate predictions & information (with 5 collaborators), NOAA, $432,916; 2002-2005.
Soil Enthalpy effects on land memory in the western United States, NOAA, $40,000; 2003-2004.

SELECTED PUBLICATIONS

OTHER PROFESSIONAL ACTIVITIES
Reviewer of proposals for NSF Climate Dynamics, Dynamics of Natural and Human Systems Program, and Science and Technology Center Program.
Reviewer of proposals for U.S. NOAA Office of Global Program.
Reviewer of proposals for U.S. Department of Energy NIGEC Program.
Reviewer of book proposals for *Cambridge University Press*.
Member of Editorial Board of *Journal of Advanced Meteorology* (http://www.hindawi.com/journals/amet/), 2008-present.
KENNETH G. HUBBARD, Professor and Director HPRCC, 10% Teaching, 48% Research, 20% Extension Outreach, 20% Scholarly Service, 2% University Service

Areas of Interest: Network topics on spatial resolution, sensor performance, micro-climate of shields, quality assurance, analysis techniques; Micro-climate topics on energy/water budgets and evapotranspiration

Contact: khubbard1@unl.edu, 402/472-8294

EDUCATION
B.S. Math and Physics, Chadron State College (1971)
M.S. Meteorology, S. Dakota School of Mines and Technology (1973)
Ph.D. Soil Science and Biometeorology, Utah State University (1982)

PROFESSIONAL EXPERIENCE
1987-present Director, High Plains Climate Center, University of Nebraska-Lincoln
1994-present Professor, School of Natural Resources, University of Nebraska-Lincoln
1986-1993 Associate Professor, University of Nebraska-Lincoln
1981-1990 State Climatologist, University of Nebraska-Lincoln
1981-1986 Assistant Professor, University of Nebraska-Lincoln

HONORS AND AWARDS

TEACHING
Course Taught (Fall)
NRES 208 Introduction to Bio-Atmospheric Resources (F05, F06, F07)
NRES 469/869 Bio-Atmospheric Instrumentation (F05, F07)

Masters and Doctoral Students Advised
Hector Flores (PhD Agricultural Meteorology 2007) Penman-Monteith formulation for direct estimation of maize evapotranspiration in well watered conditions with full canopy.
Nathan C Healey (M.S. Natural Resource Sciences 2008) A spatial analysis of anthropogenically derived and naturally occurring environmental controls on corn-based ethanol production in Nebraska.

RESEARCH
My research has focused on two main areas. The first major topic is climate data fidelity and the second is the surface energy and water budget for various microclimates. This includes study of how longwave forcing impacts the partitioning of energy in various ecosystems both natural and managed.

EXTENSION/OUTREACH
I am involved in the management of the Nebraska Automated Weather Data Network and the provision of leadership of the High Plains Regional Climate Center to accomplish collection, quality control and dissemination of data from federal and state networks in order to improve various updates and summaries made available to the public. A new Advanced Climate Information System has been developed to provide historical and near-real time data, networked and synchronous links between centers, and produces 1000’s of updated maps per day as well as special summaries through standard user interfaces <http://www.rcc-acis.org/about.php>.

UNIVERSITY SERVICE
I was a member of the SNR Director’s Faculty Advisory Council in 2007-2008 and a member of the Survey Committee from 2006-2008.
SELECTED GRANTS AND CONTRACTS

High Plains Climate Center Budget. NOAA, $460,000; May 2006-April 2007.
High Plains Climate Center Budget. NOAA, $325,000; May 2007-April 2008.
High Plains Climate Center Budget. NOAA, $525,000; May 2008-April 2009.

Improvement of instrumentation record, NOAA Climate Program Office, $169,000; July 2006-June 2009.


SELECTED PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES

President, American Association of State Climatologists, 1985-86.
Member, Committee on Applied Climate Service, American Meteorological Society, 2008-current.
Member, Standing Committee on Surface Mesonets, American Association of State Climatologists, 2007-2009.
JULIE A. HUDDLE, Research Assistant Professor, 5% Teaching, 50% Research, 45% University Service
Areas of Interest: Plant Ecophysiology, Forestry, Water Resources, Fire Ecology, Prairie Ecology
Contact: jhuddle2@unl.edu, 402/472-8556

EDUCATION
B.A. Biology, Grinnell College (1989)
Ph.D. Forestry, University of Missouri-Columbia (1995)

PROFESSIONAL EXPERIENCE
2008-present Assistant Research Professor, School of Natural Resources, University of Nebraska-Lincoln
2005-2006 Science Teacher, Barry Community Unit School District 1
2002-2004 Peace Corps Volunteer Forestry Instructor, Tribhuvan University, Institute of Forestry, Nepal
2000-2001 Biology Instructor, Northwest Missouri State University, Biology Department
1998-2000 Postdoctorate Population Ecologist, University of Nebraska, Department of Agronomy and Horticulture
1997-1998 Postdoctorate Research Associate, Texas A&M University, Rangeland Ecology and Management
1995–1997 Research Associate, Texas A&M University, Rangeland Ecology and Management

HONORS AND AWARDS
Superior Graduate Achievement Award, University of Missouri, Forestry Department (1991-1992)
Grinnell Trustee Scholarship (1985-1988)

TEACHING
Courses Assisted (Fall, Spring, Summer, Winter)
NRES 310 Forest Management (F08)
Guest Lecturing (Fall, Spring, Summer, Winter)
NRES 406/806 Plant Ecophysiology (F08, 2 lectures, 1 lab)
Courses Taught (Fall, Spring, Summer, Winter)
Biology I grades 9 & 10, Henry-Senachwine High School, C.U.S.D. 5, Henry, IL (F06, F07)
Biology II grades 11 & 12, Henry-Senachwine High School, C.U.S.D. 5, Henry, IL (F06, F07)
Life Science grades 10 & 11, Henry-Senachwine High School, C.U.S.D. 5, Henry, IL (F06, F07)
General Biology grades 9 & 10, Barry Community Unit School District 1, Barry, IL (F05, F06)
Biology grades 9 & 10, Barry Community Unit School District 1, Barry, IL (F05, F06)
Env. Science grades 9 & 10, Barry Community Unit School District 1, Barry, IL (F05, F06)
Silviculture 406 Tribhuvan University, Institute of Forestry (W02, W03)
Silviculture 451 Tribhuvan University, Institute of Forestry (S03)
Silviculture 556 Tribhuvan University, Institute of Forestry (S04)
BIO491 Senior Seminar, Northwest Missouri State University, Biology Department (F00, S01)
BIO575 Methods of Plant Ecology, Northwest Missouri State University, Biology Department (F00)
BIO113 Botany Lab, Northwest Missouri State University, Biology Department (S01)

RESEARCH
I am working to advance scientific understanding of the ecophysiology and population dynamics of plants and ecosystems and use this understanding to improve vegetation management. Last year I continued ongoing experiments at Nebraska Forest in Halsey, NE by operating, maintaining, and improving sap flux equipment to monitor evapotranspiration and climate and by measuring the size, and growth and sapwood length of trees. I have conducted surveys to document how vegetation in cottonwood riparian forests changes when invasive tree species are removed. As a Peace Corps Volunteer in Nepal, I designed and implemented a survey of non-timber forest products by the Lhosepakha Raniban Community Forest Users Group to improve their management plans.

UNIVERSITY SERVICE
Much of my University Service involves setting up sap flux experimental stations that will run for three years. This has involved designing data logging systems, solar power systems, monitoring wells, and access tubes. To
accomplish these tasks, I have become a Licensed Water Well Monitoring Technician and have passed training to obtain the University of Nebraska’s Radiation Safety Certificate. Last spring I served as an Environmentor with a Lincoln High School sophomore who was interested in the effects of household pollutants on plants. I attended the First Annual SNR Fall Workshop August 22 where an overview of the process was described, and I participated in listening and planning sessions of the Ecological Challenges and Water Resources and Water Quality. I served as a class sponsor both years that I taught high school.

SELECTED GRANTS AND CONTRACTS


SELECTED PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES

President, Wachiska Audubon Society (2009)
Recording Secretary, Wachiska Audubon Society (2008)
Member, Ecological Society of America (1995 – present)
Member, Natural Areas Association (2000 – present)
Graduate Student Representative, Missouri University Environmental Affairs Council (1991–1993)
Forestry Representative, Graduate Professional Council (1991–1992)
Member, University of Missouri Earth Week Steering Committee (Spring 1992 and 1993)
Appendix V – Faculty CVs - 73

SCOTT E. HYGNSTROM, Professor, 25% Teaching, 25% Research, 50% Extension
Contact: shygnstrom1@unl.edu, 402/472-6822

EDUCATION
B.S. Biology-Conservation, University of Wisconsin-River Falls (1980)
M.S. Natural Resources-Wildlife, University of Wisconsin-Stevens Point (1983)

PROFESSIONAL EXPERIENCE
2000-present Professor, School of Natural Resources, University of Nebraska-Lincoln
1994-2000 Associate Professor, School of Natural Resource Sciences, University of Nebraska-Lincoln
1999 Visiting Scientist, National Wildlife Research Center, USDA-APHIS-Wildlife Services
1988-1994 Assistant Professor, Department of Forestry, Fisheries and Wildlife, University of Nebraska-Lincoln
1987 Staff Lecturer, Department of Biology, University of Wisconsin-River Falls
1983-1986 Wildlife Damage Program Coordinator, University of Wisconsin-Extension

HONORS AND AWARDS
Twenty-year Service Award, University of Nebraska, 2008
Award of Excellence, Northeast Extension Directors Association, 2007

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 348 Wildlife Damage Management (S04, S05, S06, S07, S09)
NRES 496/896 Wildlife Diseases (S05, S07)
NRES 315 Wilderness Study Tours (Su05, Su06, Su07, Su08)

Masters and Doctoral Students Advised
Greg Clements (M.S. Natural Resource Sciences, 2008) Movements and Home Range of Male White-tailed Deer
Charles Frost (Ph.D. Natural Resource Sciences, expected 2009) Epidemiology of Chronic Wasting Disease
Travis Kinsell (M.S. Natural Resource Sciences, expected 2009) Scraping Behavior of White-tailed Deer
Justin Boner (M.S. Natural Resource Sciences, expected 2009) Prevalence of Chronic Wasting Disease
Jason Gilsdorf (M.S. Natural Resource Sciences, 2004) Frightening Devices for White-tailed Deer

SELECTED GRANTS AND CONTRACTS
Nebraska Master Naturalist Program, Nebraska Environmental Trust and Nebraska Game and Parks Commission, $168,000; 2009-2011.
Wildlife damage management on the web: protecting health and resources by providing research-based information through eXtension, USDA-CSREES-extension, $127,700; 2005-07.
Revision, expansion, and maintenance of the Internet Center for Wildlife Damage Management, USDA-CSREES-IPM-North Central and Eastern Regions, $60,000; 2004-06.
IPM in Nebraska schools, Nebraska Department of Agriculture and UNL-Extension, $89,490; 2002-05.
Individual-based models to predict the spread of chronic wasting disease in Nebraska, USGS-Biological Resources Division and Nebraska Game and Parks Commission, $352,105; 2004-08.
Appendix V – Faculty CVs

Evaluation of cross-unders to facilitate movements of white-tailed deer across Interstate Highway 80 and reduce deer-vehicle collisions, Nebraska Department of Roads, $94,265; 2008-2010.

Evaluation of novel fences for containing or excluding feral hogs, USDA-APHIS-WS-National Wildlife Research Center, $50,000; 2008-09.

Efficacy and secondary hazards of chlorophacinone for managing black-tailed prairie dogs, LiphaTech, Inc., $25,000; 2006-08.

Wallows as vectors of chronic wasting disease in elk, IANR Equipment Grant, $18,300; 2005-06.

Surveillance of wildlife diseases in Nebraska, USDA-APHIS-Wildlife Services, $155,000; 2003-06.

Distance delivery of wildlife damage management training materials for pest management professionals, USDA-CSREES-IPM-NC Region, $10,000; 2007-08.

Development of a course in wildlife damage management to reach distance learners, UNL Extended Education and Outreach, $10,000; 2006-07.

SELECTED PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES

Lead editor, Prevention and Control of Wildlife Damage Management. I was the lead editor for the 863-page book (1994) that is the leading resource in the field. We conservatively estimate that it saves $210 million per year in personal property and resources and $220 million per year in time and labor. The book is available on-line (http://icwdm.org/handbook/index.asp) and is currently being revised. The new edition will include 80 chapters and contributions from over 100 authors.

Developer (2006) and Coordinator, Internet Center for Wildlife Damage, (http://icwdm.org), which is the leading website in the field. The site currently receives about 15 million pagehits per year from over 1 million visitors in 140 countries. We were one of eight Pioneer Communities of Practice for eXtension and were the third CoPi to launch a website (2008) at (http://www.extension.org/pages/Wildlife_Damage_Management_Community_Page). Our website receives over 400,000 page hits per year, which is second only to Consumer Horticulture in the eXtension system.
AYSE IRMAK, Assistant Professor, 15% Teaching, 43% Research, 2% University Service, 40% Department of Civil Engineering (13% Teaching, 27% Research)


Contact: airmak2@unl.edu, 402/472-8024

EDUCATION
B.E. Agricultural Structures and Irrigation Engineering, Cukurova University, Adana, Turkey (1993)
M.E. Agricultural and Biological Engineering, University of Florida, Gainesville, Florida (1998)
Ph.D. Agricultural and Biological Engineering, University of Florida, Gainesville, Florida (May 2002)

PROFESSIONAL EXPERIENCE
2007-present Assistant Professor, School of Natural Resources and Civil Engineering, University of Nebraska-Lincoln
2004-2007 Research Assistant Professor, Biological Systems Engineering, University of Nebraska-Lincoln

HONORS AND AWARDS
Most popular paper award, ASCE/EWRI (2008)
Honorable Mention Paper Award, ASABE (2006)
Best practical paper award, ASCE/EWRI National Society Award (2005)
Young Researcher Award, presented by the Florida Section of the American Society of Agricultural Engineers, ASAE (2003)
Outstanding 2001 ASAE annual meeting paper award (IET section), Sacramento, California (2001)
University of Florida Presidential Recognition Award, for academic achievement and contributions to the University of Florida (2000)
Third Prize Winner, Poster Presentation in Agricultural & Environmental Sciences. The 2000 Graduate Student Forum of the University of Florida (2000)
Nominee for the 1999 Master's Thesis Award of the Conference of Southern Graduate Schools, University of Florida (1999)
Third Prize Winner for a Poster Presentation in Engineering and Math, the 1999 Graduate Student Forum of the University of Florida (1999)

TEACHING
Courses Taught (Fall, Spring, Summer
CIVE 898 GIS in Water Resources (F08, F06)
NRES 312 Introduction to Geospatial Information Science (S08, F08)
BSEN 130 Technical Drawing (S04)

Masters and Doctoral Students Advised

RESEARCH
My research team has been studying SEBAL/METRIC land surface energy balance models to map evapotranspiration (ET) using aerial and satellite remote sensing data. The Natural Resources Districts in Nebraska are implementing our project findings into their Integrated Management Plants that was mandated by LB962 to establish long-term supply-demand ratio for several watersheds. Our growers and state agencies such as Nebraska Department of Natural Resources and Natural Resources Districts are benefiting from the project results by implementing large-scale ET estimations to their long-term planning process. We also developed a distributed GIS-based soil water balance model to understand the processes controlling water use at the watershed scale. The model
simulates spatial distribution of each water balance component at a daily time step. This model is going to be merged with SEBAL/METRIC models to develop a better simulation of hydrologic processes for a given hydrologic domain. Our research efforts have resulted in submission of several peer-reviewed journal articles.

SELECTED GRANTS AND CONTRACTS

Remote sensing-based energy balance for mapping riparian water use technology, Anna Elliot funding, $60,000; June 01, 2009-May 31, 2011. My Role: PI. Percentage of Award: 100%.


Quantification of Crop Evapotranspiration, Evaporation and Water Balance of Tilled and Untilled Fields, Nebraska Environmental Trust, $679,106; April 4, 2008-March 30, 2011. My Role: Co-PI.


Measurement of growing season actual crop evapotranspiration and crop coefficients, and dormant season evaporative losses for key vegetation surfaces in the Central Platte Natural Resources District, Central Platte Natural Resources District, $492,564; July 1/2007-Dec. 31, 2010. My Role: Co-PI.

Estimation of Evapotranspiration from Riparian and Invasive Species Using Remote Sensing and In Situ Measurements in the Republican River Basin, Nebraska Department of Natural Resources, $946,549; March 1, 2007-March 1, 2011.

Demonstrate and Adapt Remote Sensing Technology to Produce and Utilize Consumptive Estimation of Evapotranspiration from Riparian and Invasive Species Using Remote Sensing and In Situ Measurement of growing season actual crop evapotranspiration and crop coefficients, and dormant season evaporative losses for key vegetation surfaces in the Central Platte Natural Resources District, Central Platte Natural Resources District, $492,564; July 1/2007-Dec. 31, 2010. My Role: Co-PI.

Estimation of Evapotranspiration from Riparian and Invasive Species Using Remote Sensing and In Situ Measurements in the Republican River Basin, Nebraska Department of Natural Resources, $946,549; March 1, 2007-March 1, 2011.


SELECTED PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES

Member, American Society of Civil Engineers, Task Committees on Standardization of Reference Evapotranspiration and Crop Coefficient Calculations.


Participation in the development and testing of the following softwares (1996-present): POTYLDR, CROPGRO-Soybean; CERES-Maize; DSSAT-Century.

Professional membership, American Geophysical Union (AGU), American Society of Civil Engineers, American Society of Agricultural Engineers, American Society of Agronomy.
ERKAN ISTANBULLUOGLU, Assistant Professor, 67% Research, 3% University Service, 30% Department of Biological Systems Engineering (30% Teaching)

Areas of Interest: Hydrology, ecohydrology, geomorphology, modeling

Contact: eistanbulluoglu2@unl.edu, 402/472-3500

Education

B.S. Agricultural Engineering, Uludag University (1996)
M.S. Agricultural Engineering, Uludag University (1998)
Ph.D. Civil and Environmental Engineering, Utah State University (2003)

PROFESSIONAL EXPERIENCE

2005-present Assistant Professor, School of Natural Resources
2005-present Assistant Professor, Biological Systems Engineering, University of Nebraska-Lincoln
2005-2008 Assistant Professor, Geosciences, University of Nebraska-Lincoln
2002-2005 Postdoctoral Associate, MIT, Civil and Environmental Engineering

TEACHING

Courses Taught (Fall, Spring)

GEOL/498, GEOS/898 Land and Water Dynamics
GEOL/450, GEOL/850 Landscape Evolution
GEOS 898/NRES 896 Statistical Methods in Hydrological Sciences
CIVE 353, NRES 853 Hydrology

Masters and Doctoral Students Advised

Omer Yetemen (Ph.D. candidate), University of Nebraska-Lincoln (current).
Evren Soylu (Ph.D. candidate), University of Nebraska-Lincoln (current).
Steven Walters (M.S. candidate), University of Nebraska-Lincoln (current).

RESEARCH

My research involves studying the water balance of the rivers in the Nebraska Sand Hills through streamflow and climate data analysis and modeling, vegetation-landscape interactions, and the geomorphic evolution of central New Mexico and modeling grassland dynamics in the Nebraska Sand Hills.

SELECTED GRANTS AND CONTRACTS

Quantifying uncertainty in Missouri River Adaptive Management processes, USGS, USACE, $247,000, Co-PI, with Andrew Tyre and Craig Allen (2009-2010).

Geomorphology & Landuse Dynamics/Ecosystem Studies, Collaborative Research: On Topographic Imprint of Hillside Aspect: Deciphering Aspect Controls on Vegetation and Landforms in Central New Mexico, PI (UNL share) NSF, $117,599, (September 1, 2008–August 31, 2010).

Riparian Vegetation Removal Impacts on Water Quantity, $433,960, Nebraska Department of Natural Resources, Quality and Stream Ecology, Co-PI, with D.T. Scott, and J.D. Lenters (March 1, 2008–June 30, 2010).

Analysis of Hydrological Data of the Niobrara River Basin, $39,746, Nebraska Game and Parks Commission, PI (June 1, 2007–March 31, 2008).

Regional Water Balance and Climate: Managing water resources under uncertainty in Nebraska, $11,038, USGS-PI (March 1, 2006-February 28, 2007).

SELECTED PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES

International invited short courses and presentations

Presenter at the University of Padova, Dept. of Land and Agroforest Environments, Padova Italy, July 2006

Ataturk University, College of Agriculture, Erzurum, Turkey, May, 2006

Department of Biological Sciences, University of Calgary, AB, CAN, April 2008

European Surface Processes Group, Gewatt, Switzerland, May 2008

Journal and Proposal Reviews


NSF Hydrology, NSF Geomorphology and Landuse Dynamics, Netherlands Organization for Science Research, Nebraska Natural Resources Commission. Participator in Community Science Efforts: Member in Community Surface Dynamics Modeling Systems (CSDMS), CU, Boulder, CO.
J. MICHAEL JESS, Geoscientist; 20% Teaching, 15% Research, 65% Scholarly Service
Areas of interest: Water resources, law and policy; Hydrology of rivers and aquifer systems; Landslides and slope stability; property boundaries near meandering shorelines
Contact: mjess3@unl.edu; 402/472-7570

EDUCATION
B.S. Civil Engineering, University of Nebraska-Lincoln (1968)
M.S. Civil Engineering, University of Nebraska-Lincoln (1969)
Certificate Administrative Law Judge, National Judicial College (1986)

PROFESSIONAL EXPERIENCE
1999-present Senior Lecturer, School of Natural Resources, University of Nebraska-Lincoln
1981-1999 Director of Water Resources and Chairman, Nebraska Boundary Committee, State of Nebraska
1975-1981 Deputy Director of Water Resources, State of Nebraska
1972-1975 Associate Hydrologist, Illinois State Water Survey, IL
1970-1972 First Lieutenant, U.S. Army Corps of Engineers (active duty), Ft. Belvior, VA
1969-1970 Assistant Hydrologist, Conservation & Survey Division, University of Nebraska-Lincoln

HONORS AND AWARDS
Ditchrider Award, Four States Irrigation Council (2000)
Pioneer Award, Nebraska Water Conference Council (1999)
Gladys Forsyth Award, Lincoln YWCA (1990)
Chi Epsilon, National Civil Engineering Honor Society (1989)

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 916, CIVE 916, LAW 774 Water Law & Policy (F04, F05, F06, F07, F08)
NRES 423/823 Integrated Resources Management (S03, S04, S05)
AGRO 481/881, NRES 415/815, GWOG 481/881, GEOL 415/815 Water Resources Seminar Series

Undergraduate mentoring and advising
McNair Scholars Mentor – 07, 08, 09
UCARE Advisor – 09

RESEARCH
My interests lie in water law and policy, especially as it relates to transfer/marketing of water rights and to conjunctive use of surface and ground water. Research supported by grants and periodic contracts has led to discovery of several innovative proposals adopted by the Department of Natural Resources.

EXTENSION/OUTREACH
Efforts in outreach/extension emphasize water law/policy and resolution of disputes where meandering shorelines serve as property boundaries.

SURVEY
Survey Division test hole records and data are sources used in providing ground water exploration recommendations to commercial well drillers and property owners in southeast Nebraska. Other Survey records are used in landslide and slope stability analyses. Jointly with others, I have participated in preparation of annual hydrological summaries of ground water and surface water supplies. In collaboration with other Survey personnel, I will participate in updating the 1998 Nebraska Groundwater Atlas (to be re-constituted/re-titled Nebraska Water Atlas). To fill the unexpired term of a former member, I was first elected to the UNL Faculty Senate in 2008. I was re-elected to a full term in 2009. Additionally, I am a member of the Senate’s Committee on Committees.
SELECTED GRANTS AND CONTRACTS

Water Rights Administration - - - Data and Assessment Support for Conjunctive Use Management (with J. David Aiken), Burlington Northern Endowment, $28,000; Sept. 2007.

Survey of Procedures for Assessing Full and Over-appropriation of Water (w/J. David Aiken & Sandra Zellmer), Nebraska Department of Natural Resources, $34,000; July 2006.

SELECTED PUBLICATIONS


Jess, J. Michael and J. David Aiken. Water Rights Administration - - - Data and Assessment Support for Conjunctive Use Management, Burlington Northern Report (UNF Fund No. 2844), Lincoln, NE.


OTHER PROFESSIONAL ACTIVITIES

Board Member, Nebraska State Irrigation Association, 1999-present.

Chairman of Resolutions & Legislative Committee, Nebraska State Irrigation Association, 2008-present.

Registered Professional Engineer, Nebraska & Illinois (inactive).
Appendix V – Faculty CVs - 81

ROBERT MATTHEW ("MATT") JOECKEL, Associate Professor, 30% Research, 13% Scholarly Service, 27% University Service, 30% Department of Geosciences (30% Teaching)
Areas of Interest: Stratigraphy, Pedology, Quaternary and Environmental Geology, Geomorphology, Paleontology
Contact: rjoeckel3@unl.edu, 402/472-7520

EDUCATION
B.S. Geology, University of Nebraska-Lincoln (1985)
M.S. Geology, University of Nebraska-Lincoln (1988)
Ph.D. Geology, University of Iowa (1993)
Also: graduate work at University of Kansas, University of Florida, and Iowa State University

PROFESSIONAL EXPERIENCE
2006-present Associate Professor, School of Natural Resources, University of Nebraska-Lincoln
2000-2006 Assistant Professor, School of Natural Resources, University of Nebraska-Lincoln
1996-2006 Assistant Professor, Department of Environmental Sciences, Bellevue University
1994-1996 Postdoctoral Research Fellow, University of Tennessee-Knoxville
1993-1994 Research Associate and Instructor, Department of Geosciences, University of Nebraska-Lincoln

TEACHING
Courses Taught (Fall, Spring, Summer)
GEOL 450/850 Surficial Processes (S09)
GEOL 110 Geological Natural Hazards (F08)
GEOL 100 Introduction to Geology (F07, S08, S09)
NRES 477/877 Great Plains Field Pedology (S05, S07, S08)

Masters and Doctoral Students Advised
Also: service on multiple M.S. and Ph.D. committees in Department of Geosciences, UN-L
*Assumed advising of these students after advisor William C. Zanner departed UN-L.

RESEARCH
I am involved in research in Cretaceous and Pennsylvanian stratigraphy and interpretation of depositional environments, sea-level change, and paleoclimates; (e.g., Early Cretaceous “Greenhouse World”), Quaternary, Cretaceous, and Pennsylvanian soil/paleosol/weathering profile morphology, development, and interpretation, acid rock drainage and mineral paragenesis; geomicrobiology and mineralogy of saline-alkaline wetlands and burrowing behavior of ancient rodents in Late Miocene.

EXTENSION/OUTREACH
I am involved in consultative service to individuals, municipalities, NRDs, and other entities regarding groundwater occurrence and supply in Nebraska. I work with city of Omaha and contract engineering offices to establish geologic framework for major public works project. I, also, do consultative services for oil and gas, limestone, cement, sand and gravel, and industrial clay producers.

SURVEY
I have produced 14 7.5-minute quadrangle geologic maps for U.S. Geological STATEMAP geologic mapping program (ongoing) and done a compilation of information about carbonatite resources (sources of rare-earth elements). I have sent a submission of yearly reports on Nebraska’s mineral industry to U.S. Geological Survey for
Minerals Yearbook (published online) and had integral involvement in Eastern Nebraska Water Resources Assessment (ENWRA) program (ongoing).

UNIVERSITY SERVICE
I have served as an Outreach Coordinator in SNR; also as member of Faculty Advisory, Survey and Natural Resources Undergraduate curriculum committees; member of Graduate Committee, Department of Geosciences; and served on committees in Center for Great Plains Studies.

SELECTED GRANTS AND CONTRACTS


Eastern Nebraska Water Resources Assessment (co-investigator), $216,000; 2007.


SELECTED PUBLICATIONS


Joeckel, R.M., K.D. Wally, S.A. Fischbein, and P.R. Hanson. 2007. Sulfate mineral paragenesis in Pennsylvanian rocks and the occurrence of slavikite in Nebraska, Great Plains Research, 17, 17-34.


Mason, J.A., R.M. Joeckel, and E.A. Bettis. 2007. Middle to Late Pleistocene loess record in eastern Nebraska, USA, and implications for the unique record of Oxygen Isotope Stage 2, Quaternary Science Reviews, 26, 773-792.


OTHER PROFESSIONAL ACTIVITIES

Member, Geological Society of America

Member, Nebraska Geological Society
JOHANNES M. H. KNOPS, Associate Professor, 10% Teaching, 10% Research (SNR); 80% School of Biological Sciences

Areas of Interest: ecosystem ecology, community ecology, plant ecology, biological invasions and biodiversity
Contact: jknops2@unl.edu, 402/310-3904

EDUCATION
Drs. Plant Ecology, University of Utrecht (1989)
Ph.D. Botany, Arizona State University (1994)

PROFESSIONAL EXPERIENCE
2005-present Director, Cedar Point Biological Station
2004-present Associate Professor, University of Nebraska, School of Biological Sciences, & School of Natural Resources
1999-2004 Assistant Professor, University of Nebraska, School of Biological Sciences & School of Natural Resources
1995-1999 Research Director, Long-Term Ecological Research program at the Cedar Creek Natural History Area, and adjunct assistant professor, Department of Ecology, Evolution and Behavior, University of Minnesota
1994-1995 Postdoctoral Research Fellow, Museum of Vertebrate Zoology, University of California, Berkeley (Sponsor: Dr. Walter D. Koenig)

HONORS AND AWARDS
Outstanding young scientist, Sigma Xi (2005)

TEACHING
Courses Taught (Fall, Spring, Summer)
Bios 457/857 Ecosystem Ecology (S05, S 09)
BIOS 207 Ecology and Evolution (F05, S07, S 08, S09)
RUTE Mathematics – Biology Undergraduate research experience (S08)
BIOS 901 Ecological Principles (S06, S05)

Masters and Doctoral Students Advised
Erin Miles (Masters) Plant community assembly in prairies (2005–2008)
Kate Bradley (Ph D.) Feedbacks on nitrogen cycling caused by nitrogen fertilization induced changes in microbial populations (2000–2005)

UNIVERSITY SERVICE

SELECTED GRANTS AND CONTRACTS
FSML, Facilities improvement at Cedar Point, Chancellor’s Office, UNL, DBI NSF, $172,500 plus $90,000 SVCAA and $143,820; 2008-2010.

The role of microbes in prairie plant species interactions, J. Knops and R. Laungani. Center for Invasive Plant Management, (S?); 2006.

Biodiversity, Environmental Change and Ecosystem Functioning at the Prairie-Forest Border, D. Tilman, S. Hobbie, P. Reich, J. Knops. National Science Foundation, $4,800,000; 2006-2012.


SELECTED PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES
Appendix V – Faculty CVs

CODY L. KNUTSON, Research Assistant Professor, 50% Research, 48% Scholarly service, 2% University Service

Areas of Interest: drought planning, environmental geography, water and natural resources policy, rural water development, indigenous peoples, environmental perceptions, public participation, collaborative planning, capacity building, environmental justice, and international development

Contact: cknutson1@unl.edu, 402/472-6718

EDUCATION
B.S. Geological Engineering, South Dakota School of Mines and Technology (1993)
M.S. Geological Engineering, South Dakota School of Mines and Technology (1996)
M.A. Anthropology, University of Nebraska-Lincoln (1997)
Ph.D. Geography, University of Nebraska-Lincoln (2004)

PREVIOUS EXPERIENCE AND TRAINING
2006-present Research Assistant Professor, School of Natural Resources/NDMC, UNL
2004-2006 Assistant Geoscientist, School of Natural Resources/NDMC, UNL
2002-2004 Water Resources Specialist, School of Natural Resources/NDMC, UNL
2001-2003 Lecturer and Teaching Assistant, Anthropology and Geography Department, UNL
2001-2002 Applied Anthropologist, Development Systems/Applications Int., Lincoln, NE
1997-2000 Water Resources Specialist, National Drought Mitigation Center, UNL
1996-1997 Technical Assistant, United States Geological Survey,
1994-1996 Hydrologic Technician, USDA Black Hills National Forest
1994-1994 Research/Teaching Assistant, SD School of Mines & Technology
1993-1994 Project Manager, American Technical Services
1991-1992 Geologist (Summers), Independence Mining Company

HONORS AND AWARDS
Research Fellowship, Human Rights/Human Diversity Initiative, UNL (2001)
Doctoral Research Fellowship, Endowed Fellowship, UNL (2000)

TEACHING
Courses Taught (Fall)
NRES 898 Human Dimensions of Natural Resources Management (F07)
GEOG 898 Nature and Society: A Geographic Perspective (F09)

Masters Students Advised
Ryan Bjerke (M.S. SNR, expected 2009)
Melissa Mosier (M.S. SNR, expected 2011)

RESEARCH
Research includes investigating how individuals and groups perceive and manage water scarcity and drought, as well as the development of tools, strategies, and guides to help better prepare for and respond to drought at the local, regional, tribal, state, and national levels. International planning guides have been developed in collaboration with the United Nations International Strategy for Disaster Reduction and the Food and Agriculture Organization of the United Nations Near East Regional Office. Domestically, drought planning guides are being developed to assist livestock producers, communities, and tribes.

SCHOLARLY SERVICE
Oversee outreach activities at the National Drought Mitigation Center (NDMC) and participate in many drought planning education and training activities across the U.S. and abroad. Since 2005, have made 63 presentations in Canada, China, India, Spain, Saudi Arabia, Switzerland, and 15 in the U.S. Also oversee the organization and facilitation of NDMC workshops across the U.S., as well as serve on several committees, such as the National Integrated Drought Information System Education and Outreach Working Group, the United Nations International Strategy for Disaster Reduction Drought Advisory Group, and the UNCCD Working Group III.
SELECTED GRANTS AND CONTRACTS


SELECTED PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES

Member, UNCCD Socio-Economic and Knowledge Assessment Working Group III, 2009 - present
Member, Climate Change Initiative Advisory Panel, University of Nebraska-Lincoln, 2008-present
Member, Education/Outreach Committee, NOAA National Integrated Drought Information System, 2008-present
Member, Scientific Advisory Committee, Indian Centre for Climate and Societal Impacts Research, 2007-present
Member, Drought Advisory Group, UN International Strategy for Disaster Reduction, 2006-present
Member, Municipal Water Supply, Health, and Energy Subcommittee; Nebraska CARC, 1998-present
MARK S. KUZILA, Professor, 15% Teaching, 30% Research, 20% Scholarly Service, 35% University Service
Areas of Interest: Soil Survey, Soil Genesis and Morphology, Surficial Geology
Contact: mkuzila@unl.edu, 402/472-7537

EDUCATION
B.S. Agronomy, Kansas State University (1973)
M.S. Agronomy, Kansas State University (1976)
Ph.D. Agronomy, University of Nebraska (1988)

PROFESSIONAL EXPERIENCE
9/2007-Present Professor, Director, Conservation and Survey Division, School of Natural Resources
2003-8/2007 Director, School of Natural Resources, University of Nebraska-Lincoln
1998-2003 Director, Conservation and Survey Division, School of Natural Resources, UNL
1983-1998 Principle Soil Scientist, Conservation and Survey Division, University of Nebraska-Lincoln
1977-1983 Assistant Principle Soil Scientist, Conservation and Survey Division, University of Nebraska-Lincoln
1975-1977 Soil Scientist, Conservation and Survey Division, University of Nebraska-Lincoln

TEACHING
Courses Taught
NRES 108 Earths Natural Resources Systems
NRES 279 Soil Evaluation
NRES 477/877 Great Plains Field Pedology

RESEARCH
My research program was re-established in 2008. Projects include: Surficial Geology in Lancaster County, Nebraska, Soil Characteristics of Tern and Plover Nesting Sites, Physical and Chemical Properties of Loess Soils under Forest and Grassland ecosystems, and the Effect of Loess and Glacial Till Soils on Viticulture in Southeast Nebraska.

EXTENSION/OUTREACH
I am involved in interpretation of soil survey data for land use management.

SURVEY
I am the Nebraska State Geologist with responsibilities include addressing the mission of the Conservation and Survey Division in research, scholarly service, education and publication and the facilitation of projects and activities pertaining to geology, soils, water, and remote sensing.

OTHER PROFESSIONAL ACTIVITIES
Member, Association of American State Geologists
Member, Geological Society of America
Member, Nebraska Society of Professional Soil Scientists
Member, Registered Professional Geologist
Member, Soil Science Society of America
Member, Soil and Water Conservation Society
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SUSAN OLAFSEN LACKEY, Geoscientist, 25% Research, 70% Scholarly Service, 5% University Service

Areas of Interest: Hydrogeology, Geology, Groundwater – Surface Water Interaction
Contact: slackey1@unl.edu, 402/370-4007

EDUCATION
B.S. Geological Engineering, South Dakota School of Mines and Technology (1982)
9 graduate credit hours Hydrogeology, Oklahoma State University (1990)

PROFESSIONAL EXPERIENCE
1991 - Present Hydrogeologist, Conservation and Survey Division, University of Nebraska, Norfolk, Nebraska
1984 - 1987 Construction Engineer, Department of Transportation, Custer, South Dakota
1982 - 1983 Radiation Tester, Batelle Northwest Laboratory, Edgemont, South Dakota
Summer 1982 Teaching Assistant; Black Hills Field Station, Rapid City, South Dakota

RESEARCH
I am involved in a coalition of six Natural Resources Districts (NRDs) initiated the Eastern Nebraska Water Resources Assessment (ENWRA) project after discussing groundwater-surface water relationships in eastern Nebraska. I am, also, involved in the Nebraska Water Science Center, a part of the U.S. Geological Survey and the Conservation and Survey Division (CSD) of the School of Natural Resources at the University of Nebraska. The staff from the Nebraska Department of Natural Resources (NDNR) also joined the project as technical advisors. During these discussions, it became clear that the careful management of all aquifers even those not directly connected to surface water are also important because the localized and hydrogeologically-complex nature of many aquifers in eastern Nebraska makes them susceptible to overdevelopment. The ultimate goal of ENWRA is to develop a three-dimensional geologic framework and water budget for all of eastern Nebraska. Pilot studies were designed to investigate these complex systems on a limited scale and determine the technology needed to map aquifers in areas impacted by glaciation. Standard techniques were applied including test hole drilling, monitoring well installation, water level and chemistry monitoring, and aquifer testing. The results of these techniques will be used to assess new technology that can be more economically applied to larger areas. New techniques applied at the pilot sited sites included Helicopter Electromagnetic (HEM), Time Domain Electromagnetic (TDEM), Passive seismic, and gravity surveys. This effort has produced an educational bulletin published in 2009. Technical Bulletins and/or Water Supply Papers will be published for each of the pilot study sites over the next two years.

SURVEY/SCHOLARLY SERVICE
The Nebraska Grout Task Force (NGTF) was formed in 2001 to consider further investigation of anomalies detected in bentonite slurry grout by a down-hole camera survey that was performed on the first clear-cased well 16 months after installation. This project was originally developed to study in-situ bentonite grouts over a two-year period to assess state regulations related to minimum percent solids requirements and observe the nature of grout material under varying geologic and hydrologic conditions. These clear-cased wells were constructed with bentonite slurry grouts containing less than 20, equal to 20, and greater than 20 percent solids. In 2003, after a portion of the site monitoring was performed, it became evident that the bentonite slurry grouts did not perform as expected in the unsaturated zone. Therefore, the NGTF decided to expand the project. First, the Task Force decided to test all grouts, including chip bentonite, geothermal, and cement-based grouts, approved by the State of Nebraska. Second, it was decided to support a study to provide detailed analyses of the physical and chemical nature of the unsaturated zone and compare these results to the nature of the grout observed in the 90-day down-hole camera surveys. The results of this study were published in August 2005 as a University of Nebraska master’s thesis entitled “Water Well Annular Seal Conditions and Stratigraphic Characteristics of the Unsaturated Zone: Case Studies from Nebraska”. In 2006, preliminary assessment of this field-based research indicated most grouts were not performing as expected in the unsaturated zone. In the fall of 2005 the Nebraska Well Drillers Association (NWDA) licensing board voted to expand the project to include testing of new annular seal materials above the water table. The objective of the unsaturated zone study was to identify materials that divert water away from the borehole in the unsaturated zone. These materials were also to be economical as well as relatively easily placed. Preliminary results of this study have
Appendix V – Faculty CVs - 90

been presented at a number of national, regional, and state conferences and workshops. Project reports are presently being written for the original and the unsaturated zone studies. The project reports will be summarized into a formal educational publication that will be available this fall at the Nebraska Grout and Unsaturated Zone Study Conference.

UNIVERSITY SERVICE

SELECTED GRANTS AND CONTRACTS
Elkhorn-Loup Model (ELM) (with J. Goeke), Lower Loup NRD via Integrated Management Funds, $100,000; 2008-2010.
Eastern Nebraska Water Resources Assessment (ENWRA) (with P. Hanson and R. Joeckle), Lower Platte North NRD via Integrated Management Funds, $476,000; 2006-2010.
Streambed Tests in the Elkhorn River Basin, Nebraska (with X. Chen), Lower Elkhorn NRD via interlocal agreement with Upper Elkhorn NRD and Nebraska Department of Natural Resources, $85,000; 2007-2009.
Lower Elkhorn Hydrogeologic Studies, Lower Elkhorn NRD, $460,000; 1999-2010.

SELECTED PUBLICATIONS
Olafsen-Lackey, S., 2005. Specific Yield of the Principal Aquifer, Sioux City Quadrangle, Nebraska, Nebraska Water Survey Map GM-66.10.
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**CINDY S. LARSON-MILLER**, Program Specialist, 20% Teaching, 10% Recruitment/Outreach, 10% Academic Advising, 60% Coordinate Toyota USA Foundation Grant
Areas of Interest: Science Education, Earth Systems, Integrated Science, Application, and Inquiry
Contact: clarsonmiller2@unl.edu, 402/730-9691

**EDUCATION**
B.S.  Biological Sciences, University of Nebraska-Lincoln (1993)
M.S.  Curriculum and Instruction, Secondary Science, University of Nebraska-Lincoln (2000)
Ph.D.  Candidate, Teaching, Learning, and Teacher Education, University of Nebraska-Lincoln (2010)

**CERTIFICATION**
Educational Administration K-12, University of Nebraska, Lincoln, Nebraska, (2010)
Nebraska Teaching Certificate Natural Sciences (7-12), August 2001
Nebraska Initial Teaching Certificate Natural Sciences (7-12), August 1996
Project Wild Certificate August 1995

**PROFESSIONAL EXPERIENCE**
2007-present  Program Specialist, School of Natural Resources, University of Nebraska-Lincoln
2006-2007  Project Manager – Inspiring Inquiry, College of Education and Human Sciences, University of Nebraska-Lincoln
2005-2007  Elementary Science Methods Instructor, College of Education and Human Sciences, University of Nebraska-Lincoln
2002-2006  Secondary Science Methods Instructor, College of Education and Human Sciences, University of Nebraska-Lincoln

**HONORS AND AWARDS**
*Paul & Edith Babson Fellowship*, University of Nebraska, Lincoln, Nebraska (August 2002-May 2005)

**TEACHING**
Courses Taught (Fall, Spring, Summer)
FDST 801  Teaching Applications of Food Science, co-taught with Dr. John Rupnow  (F07, S08, Su 08, F09, S09, Su10)
AGRO 896  Teaching Biotechnology, co-taught with Dr. Don Lee (Su08)
NRES 809  Laboratory Earth: Earth and Its Systems, co-taught with Dr. Dave Gosselin (F08)
NRES 814  Laboratory Earth: Earth’s Natural Resource Systems, co-taught with Dr. Dave Gosselin (S09, Su 10)
NRES 822  Laboratory Earth: Earth’s Changing Systems, co-taught with Dr. Dave Gosselin (F08, Su10)

Masters Students Advised
Joel Fritz (M.AS. Science for Educators) Non-thesis option.

**COORDINATION TOYOTA USA FOUNDATION GRANT**
The focus of this grant is to develop content-driven, standards-based, inquiry-based, integrated, and application-minded courses designed for K-12 science educators. We now have a set of 24 hours of online courses that meet our template of inquiry, integration, and application set forth in our plan for an online masters degree program. In addition, we have recently secured the name change of the Master of Agriculture to the Master of Applied Science. We believe this change will be a much more marketable program for our audience.

**RECRUITMENT/OUTREACH**
I work towards recruiting graduate students from around the country. To date, we have taught our Science in Action courses to over 150 students from across the United States. Our goal is to recruit 20 new students into our program per semester.
ACADEMIC ADVISING
Once we have students in the courses, I work with them to address their needs, concerns, and future plans in order to move them towards degree completion.

SELECTED GRANTS AND CONTRACTS
Masters Degree in Applied Science Education, Toyota USA Foundation (Faculty Partners -Non-IANR/CEHS: Billie Strand, Extended Education and Outreach; IANR/CEHS Associated Faculty: David Gosselin and Ronald Bonnstetter, Co-Principal Investigators), $540,335; July 2007–June 2011.
NASA Earth System Science Class Involvement, Teacher Training Mini-grants, NASA Space Grant, $7,500; August 2009–May 2010.

OTHER PROFESSIONAL ACTIVITIES
Member, National Science Teachers Association (1994–present)
Presenter, Nebraska Association of Teachers of Science (2000-2004)
STEPHEN J. LAVIN, Professor, 60% Teaching, 30% Research, 10% Service
Areas of Interest: Cartography, Map and Atlas Design, Scientific Visualization, Map Animation, GIS
Contact: slavin1@unl.edu, 402/472-3580

EDUCATION
B.S. Geography/Geology, State University of New York at Buffalo (1969)
M.S. Earth Sciences, Montana State University (1971)
Ph.D. Geography, University of Kansas (1979)

PROFESSIONAL EXPERIENCE
2008-present  Professor, Geography, School of Natural Resources, University of Nebraska-Lincoln
2005-2008  Professor, Department of Anthropology and Geography, University of Nebraska-Lincoln
1989-2004  Associate Professor, Department of Geography, University of Nebraska-Lincoln
1981-1988  Assistant Professor, Department of Geography, University of Nebraska-Lincoln
1977-1981  Instructor/Assistant Professor, Department of Geography, Dartmouth College

HONORS AND AWARDS
Reference/Humanities and Social Sciences Category, Conferred by the Professional and Scholarly
Library Journal (2007)
Choice Award for Outstanding Academic Title, For Atlas of American Politics: 1960-2000. J. Clark Archer,
Stephen Lavin, Kenneth Martis and Fred Shelley. Conferred by the American Library Association, January
(2003)
British Cartographic Society Award, Best Article, The Cartographic Journal, with Randall Cerveny. For
Unit-Vector Density Mapping (1988)
Andrew McNally award for Finest Article In Cartography in 1984, Rand-McNally Corporation and American
Congress on Surveying and Mapping, Washington, D.C. For Computer-Produced Unclassed Bivariate
Choropleth Maps, with J. Clark Archer, (1985)

TEACHING
Courses Taught (Fall, Spring)
GEOG 317 Cartography I - Introduction to Cartography (F04, F05, F06, F07, F08)
GEOG 417/817 Cartography II – Electronic Atlas Design and Construction (S04, S05, S06, S08)
GEOG 425/825 Scientific Visualization in Cartography (S05, S06 S07)
GEOG 915 Seminar in Cartography (S04, S07, S08)

Masters and Doctoral Students Advised
Natia Lys, (M.A. Geography 2009), Analysis of Thematic Maps in Newspapers: Quality, Quantity and Variety
David Weekley (M.A. Geography 2009), Non-thesis option
Sarah Kohtz (M.A. Geography, 2008), Non-thesis option
Patrick Gui berson, (Ph.D. Geography, 2007), A Cartographic Analysis of Visual Transparency on Maps
Joan Lubischer (Ph.D. Geography 2006), Metropolitan Areas as Unique Economic Regions
Matthew Dooley, (Ph.D. Geography 2006), Multi-Temporal Land-Use Patterning in the Western Papagueria: A
Geoarchaeological Analysis of Pre-Columbian Cultural Landscapes
Michael Shambaugh-Miller, (Ph.D. Geography 2004), Rural Health Delivery Systems: A GIS Analysis

RESEARCH
My research has been devoted to various aspects of cartographic visualization including design of alternate
computer map symbolizations and the design, uses and evaluation of map animation. Most recently, I have been
involved in a number of atlas projects for publication, including Atlas of American Politics: 1960-2000 and the
nearly completed Atlas of the Great Plains, scheduled for publication in 2010. My newest project, tentatively
titled “An Atlas of the Watershed Election of 2008” is in its beginning stages and involves collaboration with
political geographers and political scientists from across the country. It will be completed in the summer of 2010.
UNIVERSITY SERVICE
I have served as the Chair for the Program and Planning Committee and the Center for Great Plains Studies (2005-2006). I have been a member of the Curriculum Committee, Arts and Sciences (2005-present), Program and Planning Committee, Center for Great Plains Studies (2004-2005) and Board of Governors, Center for Great Plains Studies (2003-2006). I was the Chair for the Scholarship Committee, Center for Great Plains Studies (2003-2005), Fellow for the Center for Great Plains Studies (2002 to present). I also served as Director, UNL GIS Certificate Program (2002-2009) and the Chair for the Geography Graduate Committee, University of Nebraska (1992 to Present).

SELECTED GRANTS
*Atlas of the Great Plains*, University of Nebraska Foundation, University of Nebraska Research Council, University of Nebraska Center for Great Plains Studies, with J. Clark Archer, $34,000; 2002-2004

SELECTED PUBLICATIONS
JOHN D. LENTERS, Associate Professor, 15% Teaching, 50% Research, 5% University Service, 30% Department of Geosciences (8% Teaching, 17% Research, 5% Service)

Areas of interest: Lake energy and water balances, climate variability and change, physical limnology, hydrology

Contact: jlenters2@unl.edu, 402-472-9044

EDUCATION
B.S. Physics and Mathematics, Hope College (1991)
M.S. Atmospheric Science, Cornell University (1995)
Ph.D. Atmospheric Science, Cornell University (1997)

PROFESSIONAL EXPERIENCE
2006-present Associate Professor, School of Natural Resources and Department of Geosciences, University of Nebraska-Lincoln (UNL)
2001-2006 Assistant Professor, Department of Geology and Physics, Lake Superior State University (LSSU)
2002 Visiting Assistant Professor, Center for Sustainability and the Global Environment (SAGE), University of Wisconsin-Madison
1996-2001 Postdoctoral Research Associate, Center for Limnology and Center for Climatic Research, University of Wisconsin-Madison

HONORS AND AWARDS
*Postdoctoral research award*, National Research Council (1997)
*Graduate fellowship honorable mention*, National Science Foundation (1991)
*Magna cum laude graduate*, Hope College (1991)

TEACHING
Courses Taught (Fall, Spring)
NRES 478/878 Regional Climatology (S07, S09)
NRES 496/896 Hydroclimatology (F08)
GEOS 898 Physical Limnology (S08)
METR 898 Graduate Research Forum (F07)
GG108 Physical Geography: Meteorology and Climatology (S04, S06) – taught at LSSU
PH231 Applied Physics for Engineers and Scientists I (F05) – taught at LSSU
PH232 Applied Physics for Engineers and Scientists II (S05, S06) – taught at LSSU
GE411 Hydrologic Systems: Surface and Groundwater (S05) – taught at LSSU
PH221 Elements of Physics I (F04) – taught at LSSU
PH222 Elements of Physics II (S04) – taught at LSSU

Masters and Doctoral Students Advised
Sandra L. Jones (M.S., Natural Resource Sciences, expected 2009)
Gregory J. Cutrell (M.S., Natural Resource Sciences, expected 2010)
Nathan C. Healey (Ph.D., Natural Resource Sciences, expected 2011)

RESEARCH

UNIVERSITY SERVICE
I am a member of Graduate Committee, School of Natural Resources, UNL (2007–present), Water Science Undergraduate Curriculum Committee, UNL (2007–present) and was a member of the General Education committee (LSSU, 2005-2006. I was the Director of University Honors Program (LSSU, 2004-2006).

SELECTED GRANTS AND CONTRACTS
Collaborative research: Evolution of dissolved organic nitrogen (DON) from the headwaters to the catchment outlet: Sources, variation with scale, and differences with DOC (with five collaborators), National Science Foundation, $540,634; October 2008–September 2011.
Riparian vegetation impacts on water quantity, quality, and stream ecology (with E. Istanbulluoglu and one collaborator), Nebraska Environmental Trust, $433,960; April 2008–June 2010.
Collaborative research: Changes in lake dynamics on the Arctic Coastal Plain of North America over the past half century (with seven collaborators), National Science Foundation, $735,387; September 2007–August 2010.

SELECTED PUBLICATIONS

OTHER PROFESSIONAL ACTIVITIES
Proposal reviewer, NSF Division of Ocean Sciences, NOAA Climate and Global Change Program, NSF Division of Earth Sciences, NOAA Pan American Climate Studies (PACS).
Session co-chair, “Regional lake-atmosphere interactions: Past, present, and future,” 50th Annual Conference, International Association for Great Lakes Research (IAGLR); and “Climate effects on lake hydrology and thermal structure,” 47th Annual Conference (IAGLR).
JAMES W. MERCHANT, Professor, 40% Teaching, 33% Research, 27% University Service
Areas of Interest: Remote Sensing, Geographic Information Systems, Landscape Ecology
Contact: jmerchant1@unl.edu, 402/472-7531

EDUCATION
B.S. Geography, Towson State University (1969)
M.A. Geography, University of Kansas (1973)
Ph.D. Geography, University of Kansas (1984)

PROFESSIONAL EXPERIENCE
2008-present Professor and Director, Center for Advanced Land Management Information Technologies, and Five-year Review Coordinator, School of Natural Resources
1998-2008 Professor and Associate Director, Center for Advanced Land Management Information Technologies, School of Natural Resources
1989-1998 Associate Professor and Associate Director, Center for Advanced Land Management Information Technologies, Conservation & Survey Division, University of Nebraska-Lincoln
1986-1989 Assistant Professor, Department of Geography, University of Kansas

HONORS AND AWARDS
Outstanding Service Award, American Society for Photogrammetry and Remote Sensing (2008)
Career Achievements Award, MidAmerica GIS Consortium (2004)
Outstanding Contributions Award, Nebraska GIS/LIS Association (1999)
John Wesley Powell Award, U.S. Geological Survey (1997)

TEACHING
Courses Taught (Fall, Spring, Summer)
GEOG 217 Map and Air Photo Interpretation (F07)
GEOG/NRES 412/812 Geographic Information Systems (F04, S06, F06, S07, S08, S09)
GEOG/NRES 418/818 Introduction to Remote Sensing (F04)
GEOG 902 Geography General Seminar (S09)

Masters and Doctoral Students Advised
Ruopu Li (Ph.D. Natural Resources, expected 2010) Groundwater Pollution Risk Assessment under Scenarios of Climate and Land Use Change in the Northern Great Plains
Roberto Bonifaz (Ph.D. Geography, expected 2010) Estimating Biophysical Parameters of Tropical Forests from AVHRR Data
Henry Bulley (Ph.D. Geography, 2004) A Watershed-Based Classification System for Lakes in Agrically Dominated Ecosystems: A Case Study of Nebraska Reservoirs
Nathan Freitas (MA Geography, expected 2010) Non-thesis option
Andrew Kessler (MS Natural Resources, expected 2009) Decision Support Tools for Mitigating the Impacts of Invasive Vegetation on Sandhill Crane (Grus Canadensis) Habitat
Amy Zoller (MS Natural Resources, 2008; co-advisor with J. Holz) A GIS Approach to Modeling Soil erosion and Sediment Transport in a Small Agricultural Watershed
Thad Miller (MS Natural Resources, expected 2009; co-advisor with C. Allen) Risk Assessment: An Approach to Prioritizing the Control of Invasive Plant Species and the Conservation of Rare Species and Plant Communities
Travis Talbitzer (MA Geography, 2005) Non-thesis option.
**RESEARCH**
My research focuses on land cover characterization using digital multispectral satellite data, spatial and contextual analysis of digital images and application of geospatial information technologies in modeling.

**UNIVERSITY SERVICE**
I served as SNR Research Coordinator (2002-2005) and Coordinator for the SNR Five-Year Review in 2003 and 2008-2009. In addition, I have served on many other SNR committees including as Chair of the Faculty Advisory Committee (2006-present).

**SELECTED GRANTS AND CONTRACTS**
*Initial Design and Implementation of the Nebraska Geospatial Data Sharing and Web Services Network*, Nebraska Office of the Chief Information Officer, $290,870; August 6, 2008-February 5, 2011.
*Leadership to Design and Implement the Nebraska Geospatial Data Sharing and Web Services Network*, Nebraska Office of the Chief Information Officer, $5482; October 18, 2007-January 17, 2008.
*Monitoring, Mapping, Risk and Management of Invasive Species in Nebraska* (collaborator with C. Allen), Nebraska Environmental Trust, $325,081; May 2006-April 2009.
*Land Use and Land Cover Mapping of Nebraska* (with P. Dappen), Nebraska Department of Natural Resources, $477,802; August 2005-June 2007.

**SELECTED PUBLICATIONS**

**OTHER PROFESSIONAL ACTIVITIES**
*Guest Editor, Journal of Geography*, special issue on *Using Geospatial Data in Geographic Education* (November/December 2007)
*Guest Editor, Great Plains Research*, selected papers from the Association of American Geographers 2006 joint meeting of the Great Plains-Rocky Mountain &West Lakes Divisions (Fall 2007)
*Technical Program Chair*, Pecora 16 Symposium, October 21-27, 2005, Sioux Falls, SD.
*Served on planning committee* for Natural Areas Association annual conference, Lincoln, NE, September 2005.
**SUNIL NARUMALANI**, Professor, 40% Teaching, 50% Research, 10% University Service  
(40% SNR; 60% CAS)

Areas of Interest: Geography, GISciences, Ecological Applications, Water Resources

Contact: snarumalani1@unl.edu, 402/472-9842

**EDUCATION**
M.A. Geography, University of Georgia (1989)  
Ph.D. Geography, University of South Carolina (1993)

**PROFESSIONAL EXPERIENCE**
2008-present Geography Program Coordinator, School of Natural Resources, University of Nebraska-Lincoln
2008-present Associate Director, CALMIT, School of Natural Resources, University of Nebraska-Lincoln
2007-present Professor, School of Natural Resources, University of Nebraska-Lincoln
2005-present Research Coordinator, School of Natural Resources, University of Nebraska-Lincoln
1998-2007 Associate Professor, School of Natural Resources, University of Nebraska-Lincoln
1993-1998 Assistant Professor, Department of Geography, University of Nebraska-Lincoln

**HONORS AND AWARDS**
3436th Military Intelligence Detachment for geospatial assistance in Operations in Iraq & Afghanistan (2004)  
Autometric Award for Outstanding Paper on Photographic or Imagery Interpretation American Society for Photogrammetry & Remote Sensing (1996)  
Certificate of Recognition for Contributions to Students University of Nebraska (1995)

**TEACHING (last five years)**
Courses Taught (Fall, Spring, Summer)
- GEOG/NRES 412/812 Introduction to Geographic Information Systems (S06, F07, F08)
- GEOG 420/820 Digital Image Analysis (S04, S05, S07, S08)
- GEOG 422/822 Advanced Geographic Information System (S04, S05)

Masters and Doctoral Students Advised
- Chad Smith (M.A. Geography 2006) A GIS for Applications in Viticulture
- Paul Merani (M.A. Geography expected 2007) Salt Marsh Species Discrimination and Mapping in the Chesapeake Bay Using Hyperspectral Remote Sensing
- Jeffrey Rhodes (M.A. Geography 2007) A GIS Analysis of Social Vulnerability in the New Orleans Area

**RESEARCH**
My research has focused on the application of geographic information systems (GIS) and remote sensing toward various physical processes, landscape ecology, environmental and natural resources management issues. Some projects include mapping the distribution of vegetation invasive species, military and homeland security applications of remote sensing and GIS, developing integrated natural resources management plans, as well as GIS databases for the Army National Guard, and using GIS for national park condition assessments.

**UNIVERSITY SERVICE**
University service has focused on my administrative roles as Research Coordinator for the SNR, Geography Program Coordinator, Associate Director of CALMIT, and service on several SNR and UNL committees including the SNR’s Graduate and Faculty Advisory Committees, the UNL Research Council, IANR Vice Chancellor’s Liaison Committee.

**SELECTED GRANTS AND CONTRACTS**
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**SELECTED PUBLICATIONS**


**OTHER PROFESSIONAL ACTIVITIES**

Chair: Remote Sensing Specialty Group, Association of American Geographers (March 2008–present)

Member, Geography Undergraduate Curriculum Committee, University of Nebraska (September 2008–present)

Member, Environmental Studies Advisory Council, University of Nebraska (September 2008 – present)

Member, Editorial Board, GIScience and Remote Sensing (2003–present)

Member, Organizing Committee, Map Asia 2003 Conference in Kuala Lumpur, Malaysia (2002-2003)

Member, Editorial Board, International Journal of Geoinformatics (2002 – present)

ROBERT J. OGLESBY, Professor, 28% Research, 2% University Service (SNR); 30% Teaching, 35% Research, 5% Service (Geosciences)

Areas of Interest: Global and regional climate modeling, past and future climate change, land-surface atmosphere interactions

Contact: roglesby2@unl.edu, 402/472-1507

EDUCATION
B.S. Physical Geography University of California, Davis (1985)
Ph.D. Geophysical Fluid Dynamics Yale University (1990)

PROFESSIONAL EXPERIENCE
2006-present Professor, Dept. of Geosciences and School of Natural Resources, University of Nebraska-Lincoln
2001-2005 Senior Scientist, Marshall Space Flight Center, NASA
2001-2005 Adjunct Associate Professor, Department of Atmospheric Sciences, University of Alabama in Huntsville
1997-2000 Associate Professor, Department of Earth and Atmospheric Sciences, Purdue University
1995-1999 Adjunct Fellow, Centre for Resource and Environmental Studies, Australian National University
1992-1997 Assistant Professor, Department of Earth and Atmospheric Sciences, Purdue University
1990-1991 Postdoctoral Research Associate, Department of Geological Sciences, Brown University

RESEARCH
My major research emphases are on climate change, past and future; climate predictability on seasonal and longer time scales; land surface-atmospheric interactions, and controls on drought. In the last five years, I have published over 20 papers in major journals, including 2 in Science, and have successfully completed three major funded projects.

UNIVERSITY SERVICE
My major university service emphasizes two areas: bringing the east campus and city campus atmospheric and climate science groups together on matters of research and curriculum and helping to develop the UNL climate change initiative. I have also served on the usual assortment of university and department committees.

SELECTED GRANTS AND CONTRACTS
Understanding and predicting tropical and North Atlantic SST forcing on variations in warm season precipitation over North America, NOAA, Lead PI Hu, co-PI Oglesby, $300,000; July 2009-June 2011
Evaluating the role of global snow cover on seasonal to interannual predictability of precipitation National Aeronautics and Space Administration (NASA), lead PI – Oglesby, Co-PI’s David Erickson, Oak Ridge National Laboratory; John Roads University of California, San Diego, $598,215; March 2006-February 2010
Climatic Aspects of Initiation of the Laurentide Ice Sheet, National Science Foundation (subaward from Ohio State University), Lead PI – David Bromwich, Ohio State University; UNL co-PI Oglesby, $100,678 (UNL subaward); January 2006 – September 2008
Investigation into the Ecological and Climatic Effects of Past and Present Human Activity in the Central American Region, National Aeronautics and Space Administration (NASA), lead PI Tom Sever, NASA/MSFC; co-PI Oglesby, $1,122,000 (Funds at MSFC/NASA); January 2003–December 2007

SELECTED PUBLICATIONS
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Rowe, C.M., D.B. Loope, R.J. Oglesby, R. Van der Voo, and C.E. Broadwater. 2007. *Inconsistencies between Pangean reconstructions and basic climate controls*, Science, 318, 1284-1286, DOI: 10.1126/science.1146639


OTHER PROFESSIONAL ACTIVITIES

*Associate Editor*, Environmental Modelling and Software 1995-present

*Board Member*, International Environmental Modeling and Software Society 2000- present

*Associate Editor*, Journal of Geophysical Research 1998-2002


*Chair of Graduate Admissions*, Geosciences, UNL 2007-present
MARK A. PEGG, Associate Professor, 48% Teaching, 48% Research, 4% University Service
Areas of Interest: Fish Ecology and Management; River Ecology, Restoration Ecology, Invasive Species
Contact: mpegg2@unl.edu, 402/472-6824

EDUCATION
B.S.  Fisheries and Wildlife Biology, Iowa State University (1992)
M.S.  Biology, Tennessee Technological University (1994)
Ph.D. Fisheries Biology, Iowa State University (2000)

PROFESSIONAL EXPERIENCE
2008-present  Associate Professor, School of Natural Resources, University of Nebraska-Lincoln
2005-2008  Assistant Professor, School of Natural Resources, University of Nebraska-Lincoln
2000-2005  Assistant Professional Scientist, Illinois Natural History Survey
1995-2000  Graduate Research Assistant, Iowa State University
1994-1995  Senior Fishery Biologist, Kentucky Department of Fish and Wildlife
1994  Research Associate, Tennessee Technological University

HONORS AND AWARDS
Junior Faculty Excellence in Research Award, UNL Agriculture Research Division (2007)
Outstanding Achievement Award, Illinois Natural History Survey (2003)

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 315  Tropical Ecology – Study Abroad (S08)
NRES 463/863  Fisheries Science (F06, F07, F08)
NRES 489/889  Ichthyology (S06, S08)
NRES 492  Southern African Ecology – Study Abroad (Su07, Su09)
NRES 896/897  Managed Aquatic Systems (S07, S09)

Masters and Doctoral Students Advised
Cameron Goble (M.S. Aquatic Ecology, expected 2011) Catfish population dynamics.
Mike Archer (M.S. Aquatic Ecology expected 2009) Status of large woody debris in the Missouri River.
Tony Barada (M.S. Aquatic Ecology 2009) Catfish population dynamics in the Platte River, Nebraska.
Jennifer Hogue (M.S. Natural Resources 2008) Respiration rates of two invasive carp species.
Ben Neely (M.S. Aquatic Ecology 2008) Movements and habitat use of blue suckers in the Missouri River.
Mike McClelland (M.S. Biology, Western Illinois University 2005) Illinois River fish communities.

RESEARCH
My research has largely focused on fish related issues in rivers. Specifically, this research has focused on fish ecology and management, restoration ecology of large river systems, as well as ecology and control of invasive species. I have sought funding that fits collaboratively with ongoing research projects in my lab in an attempt to build a nexus of data on river fish ecology to answer problems outside the scope of any one project. To this end, my students and I are fitting fish community data for the Missouri River and its tributaries to develop large-scale river paradigms on the contribution of tributaries to modified river systems.

UNIVERSITY SERVICE
My service oriented activities have largely centered on graduate and undergraduate interests. Undergraduate activities include serving as a peer-reviewer for the University’s Program of Excellence through Assessment, Research, and Learning (PEARL) program, serving on the CASNR International Studies Task Force, and as acting
co-coordinator of the Fisheries and Wildlife major while the coordinator is on sabbatical. I have served the past three years as a member (co-Chair for the past two years) of the SNR Graduate Committee where we have attempted to standardize entrance requirements and student quality across the diverse disciplines represented within SNR. I also serve on the SNR Faculty Advisory Committee outside of student-related service activities.

SELECTED GRANTS AND CONTRACTS
Sturgeon Management in the Platte River, Nebraska: Implications to a Declining Sportfish Population, Nebraska Game and Parks Commission, $801,000; August 2008–July 2013.
AISR: Ecosystem-Scale Evaluations of the Effectiveness of Sound-Bubble Barriers to Prevent Spread of Bighead and Silver Carp (with INHS faculty), National Sea Grant College Program, $200,000; January 2008–December 2009.
Habitat Usage of Missouri River Paddlefish in Nebraska, Nebraska Environmental Trust, $55,050; June 2007–May 2010.
Recruitment, Movement and Influence of Large Woody Material on Aquatic Biota in the Missouri River: A Modified Large River System, Nebraska Game and Parks Commission, $133,000; October 2006–September 2009.
Aquatic Invasive Species Research - Evaluating Asian carp colonization potential and impact in the Great Lakes, National Sea Grant, $443,000; July 2006–June 2008.

SELECTED PUBLICATIONS

OTHER PROFESSIONAL ACTIVITIES
Member (Governor appointed), Nebraska Aquaculture Board (2005–present)
North Central Representative, Education Section, American Fisheries Society (2006–present)
President, Nebraska Chapter American Fisheries Society (2007-2008)
Chair, Scholarship Committee, Nebraska Chapter American Fisheries Society (2006–present)
Member, Conservation Leaders for Tomorrow (2007–present)
**RICHARD L. PERK**, Assistant Geoscientist, 100% Research

Areas of Interest: Hyperspectral Remote Sensing & Thermography as applied to precision agriculture, water quality and invasive species

Contact: rperk1@unl.edu, 420/472-0310

**EDUCATION**

- **BSE (Biology/Math)**
  University of South Dakota-Springfield (1971)
- **Additional Post-Graduate Course work**
  University of South Dakota, United States Naval Academy, California Institute of Technology, and the University of Nebraska -Lincoln.
- **Currently finishing MS in Geography**
  University of Nebraska-Lincoln
- **Level I Certified Thermographer**
  Flir Infrared Training Center, Boston, MA (2007)
- **Level II Certified Thermographer Flir**
  Infrared Training Center, Boston, MA (2009)
- **Assistant Geoscientist**
  School of Natural Resource Sciences, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln
- **Nebraska Aerial Remote Sensing Project Coordinator**
  School of Natural Resource Sciences, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln

**PROFESSIONAL EXPERIENCE**

1996-Present  
Assistant Geoscientist (Airborne Remote Sensing Project Coordinator) -CALMIT

1989-1996  
Earth Science Educator/Head Football Coach, Waverly High School, Waverly NE

1984-1989  
Director of Manufacturing and Installation, SEMTECH, Salt Lake City, Utah

1975-1984  
Science Educator, Head Coach, Athletic Director Hartington Cedar Catholic High School, Hartington, NE

1971-1975  
Math/Science Educator, Coach, Chester-Hubbell High School

**RESEARCH**

I have been involved in management and development of airborne research strategies associated with numerous water quality, viticulture, precision agriculture, and invasive species research projects. I have also been involved in the identification and integration of new instrumentation for the Nebraska Aerial Remote Sensing Program and the development of state-of-the-art field research vehicles for precision agriculture. I am currently working on hyperspectral image applications for aquatic and terrestrial environments, remote sensing and GIS as applied to precision agriculture and educational outreach programs promoting remote sensing and GIS.

**SELECTED PUBLICATIONS**


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OTHER PROFESSIONAL ACTIVITIES

*Member*, University Consortium for Geographic Information Science (UCGIS)

*Member*, Photogramatic Engineering & Remote Sensing

*Member*, Nebraska GIS/LIS Association
KEVIN L. POPE, Adjunct Associate Professor, 0% Teaching, 0% Research, 0% Extension/Outreach, 0% University Service

Area of Interest: Fishery Ecology
Contact: kpope2@unl.edu, 402/472-7028

EDUCATION
B.S. Wildlife and Fisheries Sciences, Texas A&M University (1991)
M.S. Fisheries and Allied Aquacultures, Auburn University (1993)
Ph.D. Biological Sciences, South Dakota State University (1996)

PROFESSIONAL EXPERIENCE
2005-present Assistant Unit Leader, USGS—Nebraska Cooperative Fish and Wildlife Research Unit and Adjunct Associate Professor, School of Natural Resources, University of Nebraska-Lincoln
2004-2005 Associate Professor, Dept. of Range, Wildlife, and Fisheries Management, Texas Tech University
1998-2004 Assistant Professor, Dept. of Range, Wildlife, and Fisheries Management, Texas Tech University
1997 Assistant Professor, Dept. of Wildlife and Fisheries Sciences, South Dakota State University

HONORS AND AWARDS
Outstanding Fishery Worker of the Year for Education, Texas Chapter of the American Fisheries Society (2006)
Faculty of the Semester Award, Texas Tech Range, Wildlife, and Fisheries Club (Fall 2004)
New Faculty Award, Texas Tech Alumni Association (2002)
Outstanding Fishery Worker of the Year for Education, Texas Chapter of the American Fisheries Society (2001)

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 896 Managed Aquatic Systems (S07, S09; team-taught with M. A. Pegg)
NRES 896 Quantitative Fishery Assessment (S08)
RWFM 2305 Freshwater Ecology and Fisheries (S04, F04, S05)
RWFM 4335 Fisheries Science (S04)
HONS 3302 Honors Seminar in Science – The Good, the Bad and the Ugly of Fishing (F04)
RWFM 5100 Seminar (F04)
RWFM 5335 Advanced Fisheries Science (S04)

Masters and Doctoral Students Advised
Jason DeBoer (Ph.D. Natural Resource Sciences, expected 2013). Recruitment of walleye and white bass in Midwestern irrigation reservoirs.
Ryan Lueckenhoff (M.S. Natural Resource Sciences, expected 2010). Morphological characteristics that distinguish juvenile white bass and hybrid striped bass.
Lindsey Richters (M.S. Natural Resource Sciences, expected 2010). Influence of water-body type and stocking history on population structure of channel catfish.
Carla Knight (M.S. Natural Resource Sciences, expected 2010). Anglers’ abilities to identify fishes.
Alexie Maple (M.S. Natural Resource Sciences, expected 2009). Temporal pattern in size structure of fish captured by recreational anglers.
Dustin R. Martin (M.S. Natural Resource Sciences, 2008). Relative importance of spawning habitats for walleye and white bass in irrigation reservoirs.
Nathan J. C. Gosch (M.S. Natural Resource Sciences, 2008) Predation as a mechanism for control of white perch: an investigation of food habits in two Nebraska reservoirs.
Christopher J. Chizinski (Ph.D. Fishery Science, 2007) Variation in life-history traits and morphology of stunted and non-stunted fish. (co-advised with G. R. Wilde)
Caleb G. Huber (M.S. Fishery Science, 2007) Habitat use by juvenile common snook in the lower Rio Grande. (co-advised with R. Patiño)

RESEARCH
My research is in applied fishery ecology on lakes and reservoirs and is focused on understanding mechanisms that alter population dynamics (recruitment, growth, mortality) of fishes, especially for purposes of predicting changes in fish populations cause by anthropogenic disturbances. My studies are initiated in response to the needs of Cooperators and are designed to provide information useful in directly improving management of aquatic resources.

UNIVERSITY SERVICE
I am currently serving as an elected member of the Research Committee for the School of Natural Resources.

SELECTED GRANTS AND CONTRACTS [since 2004 (>3.9 million)]

SELECTED PUBLICATIONS (N = 45; h-index of ISI publications = 10)

OTHER PROFESSIONAL ACTIVITIES
Associate Editor, Transactions of the American Fisheries Society, American Fisheries Society (2005-present)
Invited keynote speaker, Annual Meeting of the Nebraska Chapter of the American Fisheries Society, Gretna, NE, February 12-13, 2008
President-Elect, Nebraska Chapter of the American Fisheries Society, 2008-2009.
LARKIN A. POWELL, Associate Professor, 60% Teaching, 38% Research, 2% University Service

Areas of Interest: Wildlife Ecology, Conservation Biology, Avian Ecology

Contact: lpowell3@unl.edu, 402/472-6825

EDUCATION
B.S. Biology, Graceland University (1990)
M.S. Ecology and Evolutionary Biology, Iowa State University (1992)
Ph.D. Ecology, University of Georgia (1998)

PROFESSIONAL EXPERIENCE
2005-present Associate Professor, School of Natural Resources, University of Nebraska-Lincoln
2001-2005 Assistant Professor, School of Natural Resources, University of Nebraska-Lincoln
1998-2001 Assistant Professor, Department of Biology, University of Dubuque
1998 Postdoctoral Associate, School of Forest Resources, University of Georgia

HONORS AND AWARDS
Teaching Award of Merit, National Association of College Teachers of Agriculture (2008)
Superior Academic Advising Award, College of Agricultural Sciences and Natural Resources (2007)
Holling Family Junior Faculty Award for Teaching Excellence, College of Agricultural Sciences and Natural Resources, University of Nebraska (2004)
Faculty of the Year, University of Dubuque (2000)

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 311 Wildlife Ecology and Management (S04, S05, S06, S07, S08)
NRES 312 Introduction to Geospatial Information Sciences (S04, S05, S06)
NRES 350 Wildlife Management Techniques (F04, Sum05, F06, Sum07, F08)
NRES 492/892 Study Tours: BWCA Wilderness Ecology (Sum05, Sum07)
NRES 492 Study Tours: Puerto Rico Tropical Ecology (S06, S08)
NRES 896 Parameter Estimation (S06, S08)
NRES 896 Avian Ecology Seminar (S08)

Masters and Doctoral Students Advised
Karen Leavelle (M.S. Natural Resource Sciences 2008). Occupancy and associated habitat characteristics, fruit preferences, and nesting behaviors of the Blue-headed Quail-dove (Starnoenas cyanocephala) of Cuba.
Ty W. Matthews (Ph.D. Natural Resources Sciences, expected 2009).
Zach Cunningham (M.S. Natural Resources Sciences, expected 2009).
Matt Giovanni (Ph.D. Agronomy, expected 2009).
Ingrid Barcelo (Ph.D. Natural Resources Sciences, expected 2010).
Sarah Rehme (M.S. Natural Resources Sciences, expected 2010).
Lars Anderson (M.S. Agronomy, expected 2012).

RESEARCH
My research emphasis revolves around reproduction, survival, and movement of wildlife species with regard to management and conservation questions.
SELECTED GRANTS AND CONTRACTS
Using high-resolution, hyperspectral images to characterize vegetation cover on Sandhills prairie (co-PI with W. Schacht and D. Rundquist), Sampson Range and Pasture Management Endowment, $20,000; 2007.
Assessing local and regional variability in productivity and fidelity of grassland birds on NPS units in the Great Plains (co-PI with C. Allen and K. Hobson), NPS/USGS, $212,121; 2007.
Use of state wildlife surveys to assess benefits of Farm Bill Program (co-PI with R. Tyre), USDA-NRCS, $70,935; 2007.
Greater prairie-chicken habitat selection (co-PI with R. Tyre), Nebraska Game and Parks Commission, $68,084; 2007.
Conservation status of the blue-headed quail-dove in Cuba (transfer of funds to UNL from F. Chavez-Rameriz), Platte River Whooping Crane Maintenance Trust, $50,000; 2005.
Effects of grassland management on ring-necked pheasant habitat selection and productivity, Nebraska Game and Parks Commission, $53,250; 2004.
Duck recruitment in the Nebraska Sandhills (Written with S. Stephens, M. Vrtiska, R. Heiniger, Co-PI's), Sandhills Task Force, $20,000; 2004.
Effects of red cedar removal on bird and small mammal populations in upland habitats of the Niobrara Valley, Great Plains CESU (NPS), $77,110; 2004.
Monitoring small mammal and songbird communities in the Niobrara Valley, Nebraska Game and Parks Commission, $24,053; 2004.

SELECTED PUBLICATIONS

OTHER PROFESSIONAL ACTIVITIES
Instructor, Conservation Leaders for Tomorrow (2008-present)
Coordinator, Fisheries and Wildlife major (2004-2008)
KARL J. REINHARD, Professor, 5% Teaching, 45% Research, 48% Outreach, 2% University Service

Areas of Interest: Environmental Archaeology, Forensic Science
Contact: kreinhard1@mac.com, 402/472-6858

EDUCATION
B.S. Anthropology, University of Arizona (1977)
M.S. Ecology and Evolution, Northern Arizona University (1985)
Ph.D. Anthropology, Environmental Archaeology, Texas A&M University (1989)

PROFESSIONAL EXPERIENCE
2005-present Professor, School of Natural Resources, University of Nebraska-Lincoln
2000-2004 Assistant Professor, School of Natural Resources, University of Nebraska-Lincoln
1995-1999 Associate Professor, Department of Anthropology, University of Nebraska-Lincoln
1989-1994 Assistant Professor, Department of Anthropology, University of Nebraska-Lincoln
1988-1989 Instructor, Department of Anthropology, Texas A&M University
1985-1988 Teaching Assistant, Department of Biosciences, Texas A&M University
1982-1984 Teaching Assistant, Department of Biosciences, Northern Arizona University
1977-1979 Instructor, Arizona State Museum, University of Arizona

HONORS AND AWARDS
Fulbright Senior Specialist, 2004-2009

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 896 SNR Seminar (F05, F05, F06, F08)
NRES 445/845 Human Remains in Forensic Science (S09)
NRES 446/846 Palynology (F08)

Masters and Doctoral Students Advised
Nicole Wall (Ph.D. Natural Resource Sciences, expected 2011) Statistical Theory in Forensic Palynology

RESEARCH
I mapped the distribution of various parasite species through time and space for the Americas and defined the effects of empire expansion on parasitic disease. I aided the establishment of laboratories in Peru, Chile, Brazil and Argentina. I have collected dietary data from Southwestern USA and northern Mexico sites that reveal 10,000 years of dietary development. My data provide an excellent explanation of how diabetes evolved in western tribes I am reconstructing the diet of the earliest Chinchorro culture to the latest Inka cultures in the Atacama Desert. I am integrating palynology and forensic botany in crime scene investigation.

EXTENSION/OUTREACH
I am an associate editor for the Journal of Parasitology and review articles for parasitology and archaeology journals. I have consulted with Nebraska law enforcement personnel on several homicides and have taught workshops for regional law enforcement agencies.

UNIVERSITY SERVICE
I helped develop the new Forensic Science Degree Program and designed two courses.

SELECTED GRANTS AND CONTRACTS
Professor Visitante, Escola Nacional de Saúde Pública, Fundação Oswaldo Cruz, ENSP/FIOCRUZ 2006 (Visiting researcher, National School of Public Health, Oswaldo Cruz Foundation, Rio de Janeiro), Brazilian CAPES Agency, $24,000; August 2007–January 2008
Fulbright Senior Specialist, Chico Norte Project, Universidad Peruana de Cayetano Heredia, Lima, Peru.
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U.S. State Department, $10,000; March. 2007–April 2003
Fulbright Senior Specialist, Archaeobotany and Forensic Botany Universidade de São Paulo, São Paulo, Brazil
U.S. State Department, $10,000; March. 2007–April 2003, $15,000; February 2005-March 2005.
Fulbright Scholar, ENSP/FIOCRUZ Brazil, U.S. State Department, $30,000; February 2001-September 2001.

SELECTED PUBLICATIONS * indicate Reinhard was corresponding author

OTHER PROFESSIONAL ACTIVITIES
Member of the Board of Directors of the Fulbright Academy of Science and Technology, 2003-2008.
DONALD C. RUNDQUIST, Professor, 35% Teaching, 63% Research, 2% University Service

Areas of Interest: Remote sensing of surface waters and agricultural vegetation, field methods
Contact: drundquist1@unl.edu, 402/472-7536

EDUCATION
B.S. Geography, University of Wisconsin-Whitewater (1967)
M.A. Geography, University of Nebraska-Omaha (1971)
Ph.D. Geography, University of Nebraska-Lincoln (1977)

PROFESSIONAL EXPERIENCE
1989-present Professor, Conservation & Survey Division and School of Natural Resources, UNL
1986-2008 Director, Center for Advanced Land Management Information Technologies
1983-1988 Associate Professor, Conservation & Survey Division, UNL
1982 Assistant Professor, Conservation & Survey Division, UNL
1974-1981 Assistant Professor, Department of Geography, University of Nebraska-Omaha

HONORS AND AWARDS
John I. Davidson American Society for Photogrammetry and Remote Sensing Award for Practical Papers (1990-1989)
University of Nebraska Board of Regents Commendation (1979)
Charles A. Lindbergh Award/Grant in Aerospace and Aeronautics (1978), presented by Astronaut Neil Armstrong.

TEACHING
Courses Taught (Fall, Spring)
GEOG/NRES 418/818 Introduction to Remote Sensing (F06, F07, F08)
GEOG/AGRON 419/819 Practical Applications of Remote Sensing (F04, F05, S08, S09)
NRES 420/820 Practical Applications of Remote Sensing (F04, F05, S08, S09)
NRES/GEOG 421/821 Field Techniques in Remote Sensing (S04, S05, S06, S07)

Masters and Doctoral Students Advised
Ting Chen (current M.A. student in Geography)
Art Zygielbaum (current Ph.D student in Geography; co-chair with Anatoly Gitelson)
Andy Boateng (current Ph.D student in Natural Resources)
Paul Merani (current Ph.D student in Geography)
Dan Becker (M.A., Geography, 2008) Modeling the effect of urbanization on surface runoff within the Apalachicola-Chattahoochee-Flint watershed
Mark R. Steele (M.A., Geography, 2007) Non-destructive estimation of leaf pigments and monitoring phenology of grapevines
Joel A. Connot (M.A., Geography, 2005) Using close-range spectroscopy to quantify corn leaf defoliation caused by simulated hail damage

RESEARCH
I am involved in on-going programs related to hyperspectral remote sensing of inland water quality, marine benthic features, coastal estuaries, and agricultural crops. I led development of world-class field spectroscopic data-collection capability. I led, with Rick Perk from the CALMIT program, of airborne hyperspectral remote sensing. I, also, facilitated acquisition of thermal scanner for CALMIT aircraft.

UNIVERSITY SERVICE
I served as Chairman of SNR Promotion and Tenure Committee 2005 through 2008. I was a member of the Vice Chancellor for Research Advisory Committee, 2004. I served on various other committees.

SELECTED GRANTS AND CONTRACTS
Rundquist, D. (PI), Pesticide Sensitive Crop Locater, Nebraska Department of Agriculture, $28,523; 2007, for one year.
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**SELECTED PUBLICATIONS**

**OTHER PROFESSIONAL ACTIVITIES**
Associate Editor, GIScience and Remote Sensing
JAE H. RYU, Hydrologist, 70% Research, 30% Scholarly Service
Areas of Interest: Drought, Water Management, Hydrologic Modeling and Forecasting, Geographic Information Systems
Contact: jryu2@unl.edu, 402/472-1483

EDUCATION
B.S. Agricultural Engineering, Konkuk University, Seoul, Korea (1996)
M.S. Agricultural Engineering, Konkuk University, Seoul, Korea (1998)
M.S. Civil and Environmental Engineering, University of Washington (2001)
Ph. D. Civil and Environmental Engineering, University of Washington (2006)

PROFESSIONAL LICENSES
2006-present Postdoctoral Research Associate (Hydrologist), School of Natural Resources, University of Nebraska-Lincoln
2009-present Professional Engineer, The State of Nebraska since 2009
2004-present Professional Engineer, The State of Washington since 2004

RESEARCH
As a hydrologist with the National Drought Mitigation Center, School of Natural Resources, University of Nebraska-Lincoln I am involved in developing seasonal predictive capability for drought mitigation. This is a state-of-the-art forecast tool in the Decision Support System (DOSS) and is utilized to improve seasonal drought predictive capability using Earth Science Models, such as GAME, CUFFS, CAM, Cerf and NAR. The research will provide real-time decision support information regarding "what to do now" and "when to wait and see". I, also, am involved with Basin Scale Water and Drought Portal. This portal will be a clearinghouse for water-related data in the Republican River Basin, Colorado, Nebraska, and Kansas. Available information in this portal include past, current, and potential water and drought conditions, as well as drought mitigation actions that can be taken to foster effective water and drought management. I am involved in the US Hydro Drought Atlas. The US Drought Atlas has been initiated by the Institute for Water Resources (EWER/USAGE). We extended the scope of the previous Atlas project and enhanced system visualization to help stakeholders make short-term decisions and; long-term strategies' for water resources planning and management. I am involved in the Drought Information System for National Drought Disaster Reduction. Drought continues to result in significant economic, social, and environmental impacts, not only in developing countries, but also in developed countries, such as United States and Korea. This research will promote drought knowledge networks and collaboration to share data, information, technologies, tools and good practices on drought disaster reduction, mitigation and preparedness. Working with international collaborators in Korea, NMS support to building the initial nation-wide drought monitoring system and share sound technologies and tolls learned from precious successful practices worldwide. As a Ph.D. candidate (Graduate Research Assistant) I worked with Professor Richard N. Palmer, Department of Civil and Environmental Engineering, University of Washington, Seattle, from August, 2004, to May 2, 2006. I worked on the Streamflow Forecast using a GCM. These streamflow forecasts are critical for water management. The forecast system attempts to anticipate the onset of wet/dry spells by using regional climate and watershed information to identify conditions that suggest the potential for extreme hydrologic events. A mid-range climate forecast model, streamflow forecast system (up to 3 months lead-time) was used to inform decision makers, resource managers and stakeholders and to ensure that decisions are based upon scientific facts and forecasts, rather than past operations or ad-hoc management.

SELECTED GRANTS AND CONTRACTS
Developing a Predictive Capability Decision Support System for Drought Mitigation, National Aeronautics and Space Administration, $332,000; October 2007–September 2010.
SELECTED PUBLICATIONS

OTHER PROFESSIONAL ACTIVITIES
Committee, American Society of Civil Engineers, World Environmental & Water Resources Congress (2002-present)
Member, American Water Resources Association (2002-Present)
Member, American Geophysics Union (2002-Present)
KARINA SCHOENGOLD, Assistant Professor, 25% Teaching, 5% Research, 75%
Department of Agricultural Economics (75% Research)
Areas of Interest: Environmental and natural resource economics, water resource economics, water pricing, technology choice, agricultural economics
Contact: kschoengold2@unl.edu, 402/472-2304

EDUCATION
M.S. Agricultural and Resource Economics, University of California-Berkeley (2001)
Ph.D. Agricultural and Resource Economics, University of California-Berkeley (2005)

PROFESSIONAL EXPERIENCE
2005-present Assistant Professor, Department of Agricultural Economics and School of Natural Resources, University of Nebraska-Lincoln

TEACHING (last five years)
Courses Taught (Fall, Spring, Summer)
NRES 323 Natural Resource Policy (S06, F07, S07, F08 – 2 sections, F09 – 2 sections)
AECN 901J Environmental and Resource Economics (F08)
AECN 902J Environmental and Resource Economics (S08)

Masters and Doctoral Students Advised
Prabhakar Shrestha (M.S. Agricultural Economics, expected 2009) The Economic Impacts of Drought on the Whitewater Rafting Industry in Colorado
Zhenyu Zhang (Ph.D. Agricultural Economics, expected 2009) Economic Growth and Carbon Emission Control

RESEARCH
My overall research agenda is focused on improving water management and allocation between different uses and different users. Some of my recent research projects have looked at the impact of drought on the adoption of conservation tillage, the effect of increased electricity prices on groundwater irrigation use, and the impact of a change in water prices on the irrigation technology and crop choice.

UNIVERSITY SERVICE
Since starting my current position at the University of Nebraska in 2005, I have been an active member of various departmental and university-level groups, providing service to the university at various levels. I have been a contributing member of two graduate committees (School of Natural Resources and Department of Agricultural Economics), chair of the seminar committee for the Department of Agricultural Economics, and an active participant in various Water Resource Research Initiative conferences, workshops, and programs.

SELECTED GRANTS AND CONTRACTS
Pollution and economic decision support tool for impaired watershed management plans in eastern Nebraska (with Daniel Ginting, Martha Mamo, and Charles Wortmann), CSREES, $335,000; September 2003–September 2008.
The Impact of Weather Extremes on Agricultural Production Methods: Dose Drought Increase the Adoption of Conservation Tillage Practices? (with Ya Ding and Tsegaye Tadesse), University of Nebraska-Agricultural Research Division, $39,876; July 2007–June 2009.
Estimating the Impacts of Complex Climatic Events: the Economic Costs of Drought in Colorado, Nebraska, and New Mexico (with Michael Hayes, Don Wilhite, Ray Supalla, and Ya Ding), National Oceanic Atmospheric Administration (NOAA), $300,000; July 2006–June 2009.
SELECTED PUBLICATIONS

OTHER PROFESSIONAL ACTIVITIES
Member, Agricultural and Applied Economics Association, Association of Environmental and Resource Economists, Western Agricultural Economics Association.
Departmental Representative, Western Agricultural Economics Association.
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PATRICK J. SHEA, Professor, 10% Teaching, 30% Research; 10% Extension, 25% University Service, 25% UNMC College of Public Health

Areas of Interest: Environmental Chemistry and Toxicology, Xenobiotics in Soil-Water-Biotic Systems, Remediation and Detoxification
Contact: pshea1@unl.edu, 402/472-1533

EDUCATION
B.S.  Biology (Pre-Medical focus), Fordham University (1975)
M.S.  Plant Science (Agronomy-Weed Science focus), University of Connecticut (1979)
Ph.D.  Crop Science (Soil Science minor, Xenobiotic Chemistry focus), North Carolina State University (1981)

PROFESSIONAL EXPERIENCE
2007-present  Professor and Vice-Chair, Department of Environmental, Agricultural and Occupational Health, University of Nebraska Medical Center, Omaha
1997-present  Professor, School of Natural Resources, University of Nebraska-Lincoln
2000-2001  Associate Director and Research Coordinator, SNRS, University of Nebraska-Lincoln
1993-1997  Professor, Department of Agronomy, University of Nebraska-Lincoln
1986-1993  Associate Professor, Department of Agronomy, University of Nebraska-Lincoln
1981-1986  Assistant Professor, Department of Agronomy, University of Nebraska-Lincoln

HONORS AND AWARDS
Excellence in Review Award, Environmental Science and Technology (2007)
Editor’s Citation for Excellence in Manuscript Review, Journal of Environmental Quality (2006)
Distinguished Achievement Award for Research, North Central Weed Science Society (1991)
Team Effort Award, IANR, University of Nebraska-Lincoln (1991)

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 891  Graduate Seminar Natural Resources (co-instructor S05, S06, S07; primary S08, S09)
TOXI 950 (UNMC)  (team-taught S05)
ENV 892 (UNMC)  (guest lecturer and UNL exam proctor F07, F08)

Masters and Doctoral Students Advised
Robin Culp (M.S. Toxicology 2004) Using a Bioluminescence Assay to Assess the Toxicity of Munitions-Contaminated Water During Remediation with Reducing and Oxidizing Agents.
Jong S. Kim (M.S. Natural Resource Sciences 2007) Formation of Nitrosamines from Reaction of Pharmaceuticals with Nitrite and Chloramine.

RESEARCH
I developed process-based index models to assess landscape vulnerability to pesticide contamination of ground and surface waters; demonstrated nitrosamine formation from secondary amine pesticides and pharmaceuticals in the presence of nitrate and during disinfection of water; used dithionite to remediate herbicide and explosives-contaminated aquifer sediment and characterized surface chemistry; demonstrated graphite and carbide remediation catalysts; and used gas-phase molecular descriptors to predict chloroalkane dechlorination rates by zerovalent iron.

EXTENSION
Guide for Weed Management in Nebraska Environmental Considerations When Applying Herbicides, Bernards, M.


UNIVERSITY SERVICE
I have served as Secretary to the Faculty Senate, 2004-2006; Executive Committee, 2003-2006; and Senator, 2002-present. I have also been a member of the Chancellor's Committee on Wellness, 2007-present; Academic Rights and Responsibilities Committee, 2006-present; co-Chair 2008-2009, and the Special Committee on Academic Titles, 2005-2006.

SELECTED GRANTS AND CONTRACTS


Building Surface Analysis into a New University Infrastructure in Environmental Science (lead PI with co-PIs M. Langell, P. Burrow, S. Comfort, T. Zhang), Nebraska Research Initiative, $390,000; July 2002–June 2005.

Evaluating the Physical and Biological Availability of Pesticides and Pharmaceuticals in Agricultural Contexts, USDA Multi-State Program (W-1082; Nebraska PI), $57,000; September 2006–September 2010.


SELECTED PUBLICATIONS


MARTHA D. SHULSKI, Assistant Professor and Director HPRCC, 20% Teaching, 33% Research, 30% Extension/Outreach, 15% High Plains Regional Climate Center Director, 2% University Service

Areas of Interest: Climate Variability and Change, Applied Climatology
Contact: mshulski2@unl.edu, 402/472-6709

EDUCATION
B.S. Meteorology, North Carolina State University (1996)
M.S. Agricultural Meteorology, University of Nebraska Lincoln (1998)
Ph.D. Soil Science/Climatology, University of Minnesota (2002)

PROFESSIONAL EXPERIENCE
2009-present  Assistant Professor and Director, School of Natural Resources and High Plains Regional Climate Center, University of Nebraska Lincoln
2007-2009  Adjunct Professor, Geography, University of Alaska Fairbanks
2002-2009  Research Professional, Geophysical Institute, University of Alaska Fairbanks
1999-2002  Graduate Research Assistant, Department of Soil, Water, and Climate, University of Minnesota
1999  Research Technician, High Plains Regional Climate Center, University of Nebraska Lincoln
1997-1998  Graduate Research Assistant, Climate and Bio-Atmospheric Sciences Group, University of Nebraska Lincoln

HONORS AND AWARDS
University of Alaska Fairbanks Travel Award for participation in the International Conference on Arctic Research Planning (2005)
Research Partnership Award for University of Minnesota Center for Transportation Studies living snow fence design and website implementation interdisciplinary project (2003)

TEACHING
Courses Taught (Fall, Spring, Summer)
GEOG 412 Geography of Climate and Environmental Change (S08, S09)
GEOG 401 Weather and Climate (F07)

Masters and Doctoral Students Advised
Peter Bieniek (M.S. Atmospheric Science, 2007) Climate and Predictability of Alaskan Wildfires

RESEARCH
The major area of research is on the topic of climate change and variability and serving as lead author on a book: The Climate of Alaska. Multidisciplinary research efforts resulting in publication include: impacts of extreme weather events and climate change on native ecosystems, extended duration extreme weather events (diagnostics and predictability), and human dimensions of climate change and variability.

EXTENSION/OUTREACH
Primary extension activities involve the development of climate summaries and climate monitoring products and information disseminated to stakeholder groups (media, private industry, educators, general public), climate service activities (providing climate data and information to users), developing and giving lectures and talks on weather and climate, serving as a science fair judge, and giving guidance on lesson planning for local educational outreach office.

UNIVERSITY SERVICE
Major university service activities include serving on committees, participating in undergraduate recruitment activities, and academic club service projects.

SELECTED GRANTS AND CONTRACTS


Climate change in the Koyukuk and Yukon Flats Regions of Alaska (with 2 collaborators), Alaska Fish and Wildlife Service and University of Alaska Fairbanks, $5,000; January-August, 2006.

Climate of the Coastal Zone of the Alaskan North Slope, British Petroleum Corporation, $10,000; January–March, 2005.

SELECTED PUBLICATIONS

OTHER PROFESSIONAL ACTIVITIES
Reviewer, Danish Journal of Geography (2008)
Co-Chair, Atmospheric Circulation, Dynamics, and Chemistry session at Global Change Connection to the Arctic Conference (GCCA-6) – Tokyo, Japan, December 12-13, 2005
Invited keynote speaker, Alaska Weather Symposium, University of Alaska, Fairbanks, AK, March 10-12, 2009
Invited speaker, First International Symposium on Arctic Research (ISAR-1), Tokyo, Japan, November 4-6, 2008
Invited speaker, Wildlife Response to Environmental Arctic Change (WildREACH), Fairbanks, AK, November 17-18, 2008
Invited speaker, 2nd Annual Alaska Book Festival, Fairbanks, AK, June 11-13, 2008
Climate Services Partnership Program participant, NOAA Climate Services Division, Washington, DC, November 1-14, 2004
Member, American Association of State Climatologists (2002-present)
**STEVEN S. SIBRAY**, Geoscientist, 25% Research, 74% Scholarly Service, 1% University Service

Areas of Interest: Geochemistry of ground water, ground water and surface water interaction, groundwater management and geologic framework of Nebraska Panhandle aquifers, exploration for uranium roll front deposits, and economic geology

Contact: ssibray1@unl.edu, 308/632-1382

**EDUCATION**

B.S. (with honors) Geology, University of California at Davis (1972)

M.S. Geology, University of New Mexico (1977)

**PROFESSIONAL EXPERIENCE**

2004 - present  Geoscientist, School of Natural Resources, UNL, Scottsbluff, NE

1995 - 2004  Associate Geoscientist, Conservation and Survey Division, UNL Scottsbluff, NE

1989 - 1995  Assistant Research Hydrogeologist, C.S.D., UNL, Scottsbluff, NE

1987 - 1989  Senior Reservoir Technology Geologist, Exxon, Midland, Texas

1985 - 1987  Senior Petroleum Geologist, Exxon, Midland, Texas

1981 - 1985  Petroleum Geologist, Exxon, Oklahoma, City, Oklahoma


**RESEARCH**

I am involved in emphasis on groundwater resources of the Nebraska Panhandle. Accomplishments include mapping of a significant paleochannel aquifer in the Brule Formation near Sidney, Nebraska. Some of my other accomplishments include evaluating the interconnection of groundwater and surface water in Lodgepole Creek and Pumpkin Creek watersheds. The geology of the economically significant uranium resources was also reinterpreted.

**EXTENSION/OUTREACH**

I am involved in an emphasis on educating the public on the importance of water conservation. Accomplishments include establishing groundwater management plans with local government agencies.

**SCHOLARLY SERVICE**

I am involved with an emphasis on delineating the geologic framework of the aquifers of the Nebraska Panhandle. Accomplishments include drilling and logging hundreds of test holes, compiling test hole logbooks, and installation of groundwater monitoring wells. Hundreds of ranchers and farmers were given assistance during the prolonged drought of 2000-2009.

**UNIVERSITY SERVICE**

I am a member of PREC arboretum committee. Accomplishments include emphasizing xeriscaping for water conservation.

**SELECTED GRANTS AND CONTRACTS**

*Heliborne Electromagnetic Surveys within the North Platte River and Lodgepole Creek Valleys, Western Nebraska* (Collaborator), Nebraska Environmental Trust Fund, $443,850; 2008.

*Characterization of Near-Surface Lithologies under Selected Irrigation Canals within the North Platte Valley, Western Nebraska, using Geophysical Methods* (Co-Investigator), Nebraska Department of Natural Resources, $1,192,896; 2006.

*Evaluation of Public Water Supply Wells Having High Arsenic and/or Uranium*, NHHSS Grant, $31,500; 2005.

**SELECTED PUBLICATIONS**


OTHER PROFESSIONAL ACTIVITIES

*Member*, National Groundwater Association

*Member*, American Association of Petroleum Geologists

Registered Professional Geologist, Wyoming #626

Certified Petroleum Geologist (American Association of Petroleum Geologists) #4565
RAMESH K. SINGH, Postdoctoral Research Associate, 100% Research
Areas of Interest: Water Management, Irrigation Engineering, Remote Sensing and Geographic Information Systems
Contact: rsingh2@unl.edu, 402/472-3497

EDUCATION
B.S. Agricultural Engineering, Rajendra Agricultural University (1992)
M.S. Agricultural Engineering, Indian Institute of Technology Kharagpur (1994)
Ph.D. Agricultural and Biological Systems Engineering, University of Nebraska-Lincoln (2009)

PROFESSIONAL EXPERIENCE
2009-present Postdoctoral Research Associate, School of Natural Resources, University of Nebraska-Lincoln
2005-2009 Graduate Research Assistant, Biological Systems Engineering, University of Nebraska-Lincoln
1999-2005 Scientist, Indian Institute of Remote Sensing, Dehradun
1998-1999 Scientist, Nagarjuna Agricultural Research and Development Institute, Hyderabad
1995-1998 R & D Engineer, Jain Irrigation Systems Ltd., Jalgaon

HONORS AND AWARDS
Outstanding Graduate Student Research Poster Award (2009)
Widaman Distinguished Graduate Student Award (2008)
Finalist for the International Graduate Student of the Year Award (2008)
Water Resources Research Initiative Fellowship (2007)
Milton E. Mohr Fellowship (2007)
Frank and Marie Wheeler Fellowship (2007)
Government of India Fellowship for Academic Excellence (1993-94)
Gold Medal for the 1st class rank in Bachelor degree (1992)
Merit Scholarship for outstanding performance in academics (1988-92)

TEACHING (last five years)
Masters and Doctoral Students Advised

RESEARCH (emphasize last five years)
My current research focuses on using visible and thermal remote sensing data for water management. I have been working on geospatial approach for estimating land surface evapotranspiration using satellite remote sensing data for my Ph.D. dissertation. For this, I have used energy balance models namely SEBAL and METRIC. The models algorithms have been modified for localized application. The modification resulted in improved estimation of evapotranspiration. I have also developed a modeling approach for estimating soil heat flux under different cropping systems and irrigation practices. In addition, I have also developed reflectance based crop coefficient for major crops using spectral data. While working at Indian Institute of Remote Sensing, I have carried out research on watershed management, soil erosion, water quality, and irrigation management.

SELECTED GRANTS AND CONTRACTS (emphasize last five years)

SELECTED PUBLICATIONS (list up to 10, emphasize last five years)
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OTHER PROFESSIONAL ACTIVITIES
Science Judge, Nebraska Science Bowl, 2009
Department representative for UNL Graduate Student Association, 2006-2008
Judge, Nebraska Junior Academy of Sciences Southeast Regional Science Fair, 2008
Parent representative of school for Lincoln Action Program policy committee, 2007-2008
Joint Secretary, Indian Society of Remote Sensing, Dehradun Chapter, 2004-2005
Member, Editorial board of CONTACT, an in-house publication of Indian Institute of Remote Sensing, 2003-2005
JOSEPH SKOPP, Associate Professor, 50% Teaching, 50% Research
Areas of Interest: Soil Physics, Contaminant Transport
Contact: jskopp1@unl.edu, 402/472-6304

EDUCATION
B.S. Chemistry, University of California, Davis (1971)
M.S. Soil Physics, University of Arizona (1975)
Ph.D. Soil Physics, University of Wisconsin (1980) (Minor Math)

PROFESSIONAL EXPERIENCE
1986-present Associate Professor, University of Nebraska-Lincoln
1980-1986 Assistant Professor, University of Nebraska-Lincoln
1976-1980 Research Assistant, University of Wisconsin
1973-1975 Research Assistant, University of Arizona
1972 Chemist, California Institute of Technology
Courtesy Appointment Department of Biological Systems Engineering

TEACHING
Courses Taught (Fall, Spring, Summer)
NRESAGRI 103 Recitation (F, S)
NRES 281 Introduction to Water Science (F, S)
NRES 461/861 Soil Physics (F)
SOIL 101 Soil and Society (F taught once)

RESEARCH
The primary focus of my research is on transport of chemicals in soil and water. This includes quantitative
descriptions of soil and transport. Applications include crop nutrient uptake and remediation of contaminated soils
or aquifers. The recent focus has been on ‘a priori’ methods of predicting hydrodynamic dispersion.

UNIVERSITY SERVICE
I am a past member of the Water Science Advisory Committee and past chair of the College and School Curriculum
Committee. I have, also, been a past member of the University of Nebraska Academic Senate Committee for
Computational Services and Facilities, past member of the University of Nebraska Radiation Safety Committee and
past chair of the Instructional Improvement Committee of the College of Agricultural Sciences and Natural
Resources.

SELECTED GRANTS AND CONTRACTS
Bank Removal Efficacy for Removal of Cryptosporidium Oocysts within the Lincoln, NE City Well Fields. Lincoln
Water System Principal Investigator ($?)
Carbon Dioxide Exchange and Energy Balance in a Grassland Ecosystem, NSF, Co-principal Investigator. ($?)
Identification of Optimum Soil Physical Properties for Crop Production. BARD, Principal Investigator. ($?)
An Economic and Resource Analysis of Deep Tillage to Reduce Soil Compaction for Soybean Production, Soybean
Board, Co-principal Investigator. ($?)
Evaluation of the Thermal Conductivity of the Soil Parent Materials, Omaha Public Power District, Consultant ($?)
A fiberoptic probe to simultaneously determine soil water content and soil temperature, Small Business Innovation
Research (USDA), Consultant ($?)
Evaluating Teaching, Teaching Council, University of Nebraska, Principal Investigator ($?)

SELECTED PUBLICATIONS
Education.
67:107-111.


DANIEL D. SNOW. Research Associate Professor, 5% Teaching, 50% Research, 45% Service
Areas of Interest: Environmental Analytical Chemistry, Emerging Contaminants, Isotope Analysis, Bioremediation
Contact: dsnow1@unl.edu, 402/472-7539

EDUCATION
B.S. Geology, Missouri State University (1982)
M.S. Geochemistry, Louisiana State University (1988)
Ph.D. Geochemistry, University of Nebraska-Lincoln (1996).

PROFESSIONAL EXPERIENCE
2007-present Laboratory Director/Research Associate Professor, School of Natural Resources/Water Center
2003-2007 Laboratory Director/Research Assistant Professor, School of Natural Resources/Water Center
1998-2003 Chemist/Research Assistant Professor, Water Sciences Laboratory, University of Nebraska
1990-1998 Laboratory Manager, Water, Center/Water Sciences Laboratory, University of Nebraska

HONORS AND AWARDS
Certificate of Merit, National Meeting Presentation, American Chemical Society (2002)
Graduate Faculty Member, Institute of Agriculture and Natural Resources (IANR) (2000)
IANR Team Effort Award, MSEA Water Quality Project (1997)

TEACHING
Guest Lecturer – UNMC ENV 892 Public Health Environment and Society
GEOL 442/842, GEOL 816, NRES 851, NRES 481/881, NRES 419/819, SOIL 361, UNO/UNK/UNMC Department Seminars.
NDEQ Groundwater Monitoring for Livestock Producers

Graduate Students
Teyona Damon (M.S. Natural Resources expected 2009)
Gyanendra Prasai (M.S. Engineering 2008)

RESEARCH
I developed and published analytical methods for determination of steroids, cyanotoxins, explosives, antibiotics, pesticides, and stable isotopes using state-of-the-art extraction and instrumental technologies. These methods have been applied to field research studies to investigate the fate and transport of specific synthetic organics in the environment.

SERVICE
I served as manager for the UNL Water Sciences Laboratory for over 15 years, providing technical support and supervising all analyses conducted at the facility. I developed and implemented extensive quality assurance program, conducted tours of the facility, and answered a wide variety of water quality questions from the public and educators. I served as water faculty program leader and Safety Committee Chair in School of Natural Resources, and IANR Nominating Committee member and chair.

SELECTED GRANTS AND CONTRACTS
Chemical Fingerprinting of Contaminant Sources Using Passive Samplers (with S. Bartelt-Hunt), Nebraska Department of Environmental Quality, $72,073; August 2008-July 2010.
Fate of Micro-contaminants in Streams Augmented by Wastewater Treatment Plant Effluent (with S. Bartelt-Hunt), USGS 104b Program, $15,300; March 2008-February 2009.
Evaluation of Lewis and Clark Lake Sediments: Mercury and Selenium Sequestration, Release, and Potential Influence on Ancient Fishes (with M. Pegg), $10,000; UNL Grant in Aid.
Geographic Trends in Contamination of Nebraska’s Surface Waters as Indicated by Sex Steroids of Common Carp (with K. Pope and A. Kolok), USGS 104b program, $14,440; March 2008-February 2009.
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Monitoring Nebraska Lakes for Neurotoxins, Nebraska Department of Environmental Quality, $60,000; November 2006–December 2009.

Contaminants from wastewater treatment plants: Occurrence and potential effects to local fish populations (with A. Kolok), Nebraska Department of Environmental Quality, $40,000; August 2006–December 2007.

Groundwater monitoring at selected livestock waste control facilities: Antibiotics and Hormones (with S. Bartelt-Hunt), Nebraska Department of Environmental Quality, $15,000; August 2006–December 2007.


Androgenic Growth Promoters in Nebraska Rivers: Detection and Toxicity (with A. Kolok), USGS 104b FY2005 Grant Program, $10,000; and NE Game and Parks Commission, $10,000; March 2005–February 2006.

Emerging Contaminants in Agricultural Watersheds (with D. Hage and M. Morley), Strategic Research Cluster Grant, UNL Office of Sponsored Programs, $50,000; July 2004–June 2005.

SELECTED PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES

Member, Water Environment Federation Literature Review Committee.

Reviewer, Analytical Chemistry, Talanta, Environmental Science and Technology, Journal of Chromatography A.


Member, American Chemical Society, American Geophysical Union, Association of Ground Water Scientists and Engineers, Society of Environmental Toxicologists and Chemists.

Certification and Training, Hazardous Waste Site Worker Protection and Supervisor’s Training, Supervisor’s Training, UNL Environmental Health and Safety Authorized Radioactive Materials User, UNL Radiation Safety Office - 40 hours, Supervisor’s Training, UNL Human Resources Department.
MARY EXNER SPALDING, Professor, 58% Scholarly Service, 2% University Service, 40% Research

Areas of Interest: Groundwater Quality: Agrichemical Contamination, Effects of Mitigation Practices
Contact: mspalding1@unl.edu, 402/472-7547

EDUCATION
B.S.  Chemistry, Chestnut Hill College (1970)
M.S.  Oceanography, Texas A&M University (1972)

PROFESSIONAL EXPERIENCE
1997 to present  Professor & Research Chemist, School of Natural Resources, University of Nebraska-Lincoln
1994 - 1997  Professor & Research Chemist, Conservation & Survey Div., University of Nebraska-Lincoln
1983 - 1994  Associate Professor & Research Chemist, Conservation & Survey Div., U. of Nebraska-Lincoln
1976 - 1983  Assistant Professor & Research Chemist, Conservation & Survey Div., U. of Nebraska-Lincoln
1974 - 1976  Chemist, Conservation & Survey Division, University of Nebraska-Lincoln
1973 - 1974  Research Associate, Dept. of Environmental Chemistry & Engineering, Texas A&M University
1973  Chemist, Ichthyological Associates, Drumore, PA

HONORS AND AWARDS
Outstanding Contributions to groundwater research in Nebraska, Lower Platte South Natural Resources District (1992)
Special Merit Award, Nebraska Groundwater Foundation (1991)
Meritorious Service to Conservation Award, Central Platte Natural Resources District (1977)

RESEARCH
I am interpreting nineteen years of soil, nutrient and water data to determine the impact of management practices on groundwater nitrate concentrations in a 227-square mile regulated management area. Our findings, to date, show that the rate of decrease is small but significant. However, 30-40% of the decrease is attributable to increased removal of N in grain as a result of increased yields. The fate and transport of gasoline-denatured ethanol has been under investigation at three derailment sites for three years. There appears to be minimal immediate threat to groundwater when releases of ethanol at concentrations greater than 50% are above the water table. High concentrations of hydrogen and methane, however, accumulate in the unsaturated zone for years after a spill.

SURVEY
Since 1996 the focus of my survey activities has been coordination of the building and maintenance of the “Quality-Assessed Agrichemical Contaminant Database for Nebraska Groundwater” and assessment of the quality of the data entered into the database. The comprehensive database contains more than 81,000 nitrate and 288,000 pesticide analyses for more than 21,000 wells sampled since 1974. This is a secondary use of data collected by university researchers and federal, state and local agencies for other purposes. The unique aspect of the clearinghouse is that the quality of submitted data is reviewed with respect to accepted sampling, preservation and analytical protocols and field and laboratory quality assurance practices and each analytical result assigned a quality ranking. Nebraska is the only state to maintain a publicly accessible groundwater quality database.

SELECTED GRANTS AND CONTRACTS
Ground water data management through the statewide clearinghouse-2009, Nebraska Department of Environmental Quality, $62,176; October 2008–September 2010.
Effectiveness of irrigated crop management practices in reducing groundwater nitrate concentrations, USDA-CREES Conservation Effects Assessment Program, $450,000; September 2007–August 2009.
Effectiveness of irrigated crop management practices in reducing groundwater nitrate concentrations, USDA-CREES Conservation Effects Assessment Program, $180,768; September 2006–August 2007.
Ground water data management through the statewide clearinghouse, Nebraska Department of Environmental Quality, $229,000; October 2000–September 2008.


Sprinkler irrigation as a remedial technique for VOC-contaminated ground water, Cooperative States Research Service, $147,250; September 1993–August 1996.

SELECTED PUBLICATIONS


ANDREW E. SUYKER, Research Assistant Professor, 60% Research, 40% Scholarly Service

Areas of interest: Carbon dioxide, methane, and water vapor exchange in natural and managed ecosystems, carbon sequestration, water use efficiency, eddy covariance instrumentation

Contact: asuyker@unl.edu, 402/472-2168

EDUCATION

B.S.  Meteorology, University of Alberta, Edmonton, Alberta, Canada (1988)
M.S.  Agricultural Meteorology (Micrometeorology), University of Nebraska (1992)
Ph.D.  Agricultural Meteorology (Micrometeorology), University of Nebraska (2000)

PROFESSIONAL EXPERIENCE

2004-present  Research Asst. Prof., School of Natural Resources, University of Nebraska-Lincoln
2001-2004  Post Doc. Research. Assoc., School of Natural Resources, University of Nebraska-Lincoln
1996-2001  Research Tech., School of Natural Resources Sciences, University of Nebraska-Lincoln
1989-1996  Graduate Research Asst., Dept. of Agricultural Meteorology, University of Nebraska-Lincoln

HONORS AND AWARDS

Widaman Distinguished Graduate Student (1991)
Sue Wilson Fellowship (1993)

RESEARCH

My research emphasis has been quantifying the exchange of carbon dioxide, methane, and energy in natural and agricultural ecosystems and understanding ecophysiological processes that control this exchange. I have conducted studies in grasslands in Kansas and Oklahoma, wetlands in Minnesota and Saskatchewan (Canada), and agro-ecosystems in Nebraska and Oklahoma. In the wetland research, in addition to quantifying CO₂ exchange, I have also quantified methane emissions and linked these fluxes to environmental controls. The most recent project involves using efficient agricultural management (i.e., no-till, scheduled irrigation) to determine if maize or maize/soybean crops are able to sequester a significant amount of carbon from the atmosphere. As part of my Masters research, I developed and tested a method to measure turbulent CO₂ fluxes using a closed-path infrared gas analyzer, which previously had never been applied using the eddy correlation technique. This new technique published in Boundary Layer Meteorology (1993), is now used in several long-term CO₂ exchange measurements around the world.

SCHOLARLY SERVICE

The focus of my scholarly service is as follows: a) conduct regional/national intercomparisons of tower flux and key micrometeorological sensors, b) continue to collaborate with other scientific groups to measure high resolution CO₂ concentrations needed for inversion modeling of the regional CO₂ carbon budget, c) provide data to other scientists and graduate students at UNL as well as national and international researchers, and d) provide data to the national archive of Ameriflux (network of carbon flux stations in North America).

SELECTED GRANTS AND CONTRACTS

A Satellite-Based Quantification of Carbon Exchange of the Dominant Ecosystems (Maize-Soybean) in the NACP Mid-Continent Intensive (MCI) Region (with A. Gitelson and S.B. Verma), National Aeronautics and Space Administration, $599,483; 04/10/2008 - 03/31/2011.


SELECTED PUBLICATIONS

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**OTHER PROFESSIONAL ACTIVITIES**

*Peer Review*, manuscripts submitted to Global Change Biology; Agricultural and Forest Meteorology; JGR–Atmospheres, JGR-Biogeosciences

*Member*, American Meteorological Society – February 2005

*Member*, American Geophysical Union – May 2004
MARK D. SVOBODA, Associate Geoscientist, 75% Scholarly Service, 25% Research
Areas of Interest: drought monitoring and early warning systems, planning and preparedness, indices and impacts; soil moisture and its role in drought monitoring; water issues; and GIS and remote sensing applications
Contact: msvoboda2@unl.edu, 402/472-8238

EDUCATION
B. S. Geography, University of Nebraska-Lincoln (1989)
M. A. Geography, University of Nebraska-Lincoln (1992)

PROFESSIONAL EXPERIENCE
2006-present  Associate Geoscientist/Climatologist, National Drought Mitigation Center (NDMC)/UNL/SNR
2004-2006  Assistant Geoscientist/Climatologist, NDMC/UNL/SNR
1993-1995  Geographic Information Specialist, USDA-Soil Conservation Service, Lincoln, NE

HONORS AND AWARDS
Reviewer, Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (two chapters)
Technical Coordinator (delegated), 2005, U.S.-China Bilateral Drought Workshop, Beijing, China

RESEARCH
The research topics I cover include looking at drought indicators, historical and return frequency of droughts, indices and monitoring (early warning) systems and decision support tools. I am also studying climate change and its potential role on drought and impacts on society and the natural environment. Other research has focused on developing new tools utilizing GIS and remote sensing to better monitor drought and vegetation conditions.

OUTREACH/SCHOLARLY SERVICE
I have organized, participated, or been invited to present at over 40 workshops in the U.S. and around the world over the past 5 years. I have also given approximately 140 invited presentations nationally and internationally over the past five years as well. I sit on the National Integrated Drought Information System (NIDIS) Implementation Team and co-chair the NIDIS Drought Portal development at drought.gov. My job also requires a constant interface with local, regional and national media in all mediums, and I have conducted well over 500 interviews during the past five years alone. I am, also, a member of Nebraska Water Availability and Outlook Committee (WAOC) since 1995. I provide annual state drought assessments and briefings to the Nebraska Governor’s Climate Assessment and Response Committee. I helped design and develop the U.S. Drought Monitor (http://drought.unl.edu/dm) and have served as one of the principal authors of the weekly product since its inception in 1999, which is produced through the joint efforts of the USDA, NOAA’s Climate Prediction Center and National Climatic Data Center, and the NDMC (http://drought.unl.edu). Also, serve as one of the primary authors for the monthly North American Drought Monitor involving scientists in Canada, Mexico and the United States. This year we reached our 500 map milestone, and this map is featured regularly on CNN, the Weather Channel, national news networks, and all major newspapers and internet media outlets.

GRANTS AND CONTRACTS
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**SELECTED PUBLICATIONS**


**OTHER PROFESSIONAL ACTIVITIES**

**Member,** American Meteorological Society; American Association of State Climatologists; National Hydrologic Warning Council 2006-present, NOAA-National Integrated Drought Information System (NIDIS) Implementation Team

**Co-Chair,** 2001-2005, Monitoring and Prediction Task Group, Interim National Drought Council

**Co-Chair,** 1999-2000, Monitoring and Prediction Working Group, National Drought Policy Commission

**Co-author,** 1999-present, U.S. Drought Monitor (http://drought.unl.edu/dm)

**Co-author,** 2002-present, North American Drought Monitor

**Invited delegate,** 2008, Canberra, Australia, representing U.S. delegation in a bilateral drought workshop between Australia and the United States hosted by the Australian Bureau of Rural Sciences

**Invited Expert Evaluator and Rapporteur,** 2007, European Commission in Brussels for research proposal reviews

**Invited roundtable expert and plenary speaker,** 2006, Mediterranean: Water and Drought Forum, in Zaragoza, Spain sponsored by the Spanish Ministry of Environment

**Consultant,** 2007, USAID/Chemonics on assessing the status of the Moroccan Drought Observatory in Rabat
JAMES B. SWINEHART, Professor, 6% Teaching, 69% Research, 23% Scholarly Service, 2% University Service
Areas of Interest: Great Plains Cenozoic Stratigraphy and Sedimentology, Eolian Sedimentation and Paleoclimates
Contact: jswinehart1@unl.edu, 402/472-7529

EDUCATION
B.A. Geology, University of California-Riverside (1965)
Geology, Pennsylvania State University (1965-1970)
M.S. Geology, University of Nebraska-Lincoln (1979)

PROFESSIONAL EXPERIENCE
1997- present Professor, School of Natural Resources, Conservation and Survey Division, University of Nebraska-Lincoln
1986-1997 Associate Professor, Conservation and Survey Division, University of Nebraska-Lincoln
1979-1986 Assistant Professor/Research Geologist, Conservation and Survey Division, University of Nebraska-Lincoln-L
1970-1979 Research Geologist, Conservation and Survey Division, University of Nebraska-Lincoln

HONORS AND AWARDS
Charles E. Bessey Award for best paper (with co-author David Loope) in natural sciences, Great Plains Research (2000)
Charles E. Bessey Award for best paper (with co-author Barbara Nicholson) in natural sciences, Great Plains Research (2005)

TEACHING Courses Taught (Fall, Spring)
Geol 106 Environmental Geology, 3 cr (S 02, S 04)
Geol 869 Regional Field Geology, 1 cr (one of two instructors) (F 02, F03, F04, F05, F06)

Masters Students Advised
Claire C. Larson (M.S. Geology 2002)
Kimberly Roberts (M.S. Geology 2004)

RESEARCH AND SURVEY
I have established basic and applied programs focusing on the stratigraphy, sedimentology, and sedimentary petrology of the Cenozoic strata of Nebraska and their relationship to similar strata in adjacent states. I have made investigations of the surface and subsurface to gain an understanding of alluvial, eolian and lacustrine depositional systems in the evolution of Great Plains landscapes. This information, in the form of over 65 geologic maps, test hole reports, and open file publications is an important data set for the evaluation of Nebraska’s geologic natural resources, including its groundwater. Collaborative research on the Nebraska Sand Hills has demonstrated this region has experienced several significant mega-droughts during the last 20,000 years.

SELECTED GRANTS AND CONTRACTS
Collaborative Research: Mechanisms Producing Variation in Lake Salinity in Dune Environments: Nebraska Sand Hills, National Science Foundation; Vitaly Zlotnik is the PI, I am a CO-PI along with and Sheri Fritz, $219,958; September 06-August 09.
Rural and Urban Geologic Mapping of NE: Detailed Surficial and Geological Stack Mapping in Urbanizing Reaches of the Platte River Valley: The Columbus and Columbus SW 7.5 Minute Quadrangles, U.S. Geological Survey, I was Co-PI with Paul Hanson and Matt Joecckel, $46,431; May 06-April 07
Dunefield Records of Late Quaternary Climactic Change, Northern China,. National Science Foundation, I am Co-PI on this grant along with Dr. Ron Goble of UNL Geosciences, $87,581; June 05- May 09.
Sand Hills Biocomplexity: Integrating Biogeophysical Processes Across Space and Time, National Science Foundation, I was one of 15 project team scientists from across UNL on this four-year grant, David Wedin was the Project Coordinator, $1,794,236; Sept 03- Aug 07.
Rural and Urban Geologic Mapping of NE- Subprojects 2 and #3, Mapping and Digitizing in the Alliance Quadrangle, with H. LaGarry, U.S. Geological Survey, $87,485; May 05-April 06.
Hydrogeological controls on salinity patterns in the Sand Hill lakes, NE, the PI was Vitaly Zlotnik and I was one of three Co-PI’s, U.S. Geological Survey, $19,975; May 04-August 05.

Collaborative Research: Resolving the Enigma of Late Quaternary Loess on the Great Plains, National Science Foundation, with Co-PI’s, Ron Goble and Dave Loope. $114,022; March 03-April 06.


Rural and Urban Geologic Mapping of NE- Subprojects 3 and #4, Mapping and Digitizing in the Alliance and Crawford Quadrangle, with H. LaGarry, U.S. Geological Survey, $124,980, May 02-August 03.

REFEREED PUBLICATIONS


Harvey, F.E., J.B. Swinehart and T.M. Kurtz. 2007, Ground Water Sustenance of Unique Ecosystems: Nebraska’s Sand Hills Peatland Fens, Ground Water.


OTHER PROFESSIONAL ACTIVITIES

Faculty Development Leave, learning optically stimulated luminescence dating techniques, July-Dec, 2002
Field Trip Co-Chair, 7th International Conference on Fluvial Sedimentology Lincoln, NE (2001)
Technical Session Co Chair (T98) Evolution of the Great Plains Landscape at the 2004 Geological Society of America Annual Meeting in Denver, CO.
Treasurer, Nebraska Geological Society, (2001-2007)
Chair, Yatkola-Edwards Grants Committee, Nebraska Geological Society; (1979-present)
Registered Professional Geologist, State of Nebraska. (1999–present)
JOZSEF SZILAGYI, Associate Professor, 100% Research (.33 FTE appointment)
Areas of Interest: Hydrologic Science, Applied Climate Science, Ecology
Contact: jszilagyi1@unl.edu, 472-9667

EDUCATION
M.S. Meteorology with an emphasis in Hydrology, Eotvos Lorand University, Budapest, Hungary (1989).
M.S. Hydrology, University of New Hampshire (1994)
Ph.D. Hydrologic Sciences, University of California, Davis (1997)

PROFESSIONAL EXPERIENCE
2004–present  Associate Professor, School of Natural Resources, University of Nebraska-Lincoln
2003-2004  Visiting Scientist, Hungarian Hydrological Forecasting Service
2000-2001  Visiting Scientist, Water Resources Research Group of the Hungarian Academy of Sciences
1997-2004  Assistant Professor, School of Natural Resources, University of Nebraska-Lincoln
1994-1997  Postgraduate Researcher, University of California-Davis, Hydrologic Sciences
1992-1994  Research Assistant, Institute for the Study of Earth, Oceans and Space, Complex Systems
Research Center, University of New Hampshire
1989-1992  Junior Research Associate, Hungarian Hydrological Forecasting Service

HONORS AND AWARDS
Doctor of Science Degree, Hungarian Academy of Sciences (2005)
Janos Bolyai Research Fellowship, Hungarian Academy of Sciences (2001)
University of California Tuition Fellowship (1995, 1996)
The Alfred Hille Prize, Hungarian Meteorological Society (1989)

RESEARCH
My research involves watershed hydrology; application of GIS to watershed/regional scale problems in hydrology;
nonlinear models in surface soil moisture-groundwater interactions; coupling of remotely sensed data with
GIS in catchment/aquifer parameterization; regional evapotranspiration mapping; linear models of hydrology;
hydrological forecasting.

SELECTED GRANTS AND CONTRACTS
Estimation of long-term evaporation rates from large lakes of Hungary under climate change scenarios and their
comparison with historical estimates, as part of the European Union’s “Climate Change and Variability:
Impact on Central and Eastern Europe (CLAVIER)” project, $80,000; 2006-2010.
A new technique for mapping recharge fluxes to groundwater at a regional scale, National Science Foundation,
$15,120; 2003.
Equipment grant for modeling subsurface unsaturated/saturated zone interactions, University of Nebraska Water
Center, $11,320; 2002.
Mapping groundwater recharge in Nebraska, Research Council of the University of Nebraska, $3,000, 2002.
Modeling capture zones in wellhead protection areas, Nebraska Department of Environmental Quality, $25,241;

SELECTED PUBLICATIONS
Hydrologic Engineering, 14(6), 1-6.
transformations of MODIS daytime land surface temperature data, Hydrology and Earth System
Science, Discussion, 6, 1433-1462.
Szilagyi, J. and J. Jozsa. 2009. An evaporation estimation method based on the 2-D turbulent heat and vapor


**OTHER PROFESSIONAL ACTIVITIES**

*Associate Editor* of Water Resources Research (2008-present)

*Associate Editor* of the Journal of Hydrology (2005-2007)

*Member*, American Geophysical Union (1997-present)

*Member*, European Geophysical Union (2003-present)

*Member*, Hydrological Society of Hungary (1991-present)

*Member*, Public Body of the Hungarian Academy of Sciences (2004-present)
TSEGA YE TADASSE, Research Assistant Professor, 50% Research, 48% Scholarly Service, 2% University Service

Areas of Interest: Drought Monitoring, Remote sensing, Data mining, Climate change & variability
Contact: ttadesse2@unl.edu, 402/472-3383

EDUCATION
B.S. Physics, Addis Ababa University, Ethiopia (1982)
M.S. Space Studies, International Space University, Strasbourg, France (1998)
Ph.D. Agro-meteorology, University of Nebraska-Lincoln (2002)

PROFESSIONAL EXPERIENCE
2008-present  Research Assistant Professor, School National Drought Mitigation Center, School of Natural Resources, University of Nebraska-Lincoln
2005-2008  Assistant Geoscientist, National Drought Mitigation Center, School of Natural Resources, University of Nebraska-Lincoln
2002-2005  Research Associate, National Drought Mitigation Center, School of Natural Resources, University of Nebraska-Lincoln
1998-2002  Graduate Research Assistant, Department of Agronomy & Horticulture, University of Nebraska-Lincoln
1984-1997  Meteorologist & Team Leader, National Meteorological Services, Ethiopia
1982-1984  Instructor, Ethiopian Air Force Academy

HONORS AND AWARDS
Madison Who’s Who for outstanding work for professionals & executives (2005)

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 299  Climate in Crisis (as a guest lecturer)
NRES 452/852  Climate society (as guest lecturer)
NRES 103  Introduction to Agriculture & Natural Resources Systems (as guest lecturer)

Masters and Doctoral Students Committees

RESEARCH
I am involved in drought monitoring research focused on the development of new drought monitoring tools integrating climate, satellite, oceanic observations with biophysical parameters such as land use/land cover in assessing and predicting large-area vegetation stress by using data mining techniques. As a result, we have developed operational monitoring tools such as the Vegetation Response Drought Index (VegDRI), as well as predictive tools such as the Vegetation Outlook (VegOut). Research is undergoing to model & evaluate the prediction tool (i.e., VegOut) to be operational in the near future. Additional research is underway that includes investigation of the use of thermal data and microwave sensors for estimating evapotranspiration and soil moisture to monitor drought in collaboration with scientists who are working at USGS Earth Resources Observation & Science (EROS) and NASA Jet Propulsion Laboratory (JPL).

EXTENSION/OUTREACH
I presented climate and remote sensing-based drought monitoring research and applications at several national and international professional meetings and workshops. I conducted numerous workshops nationally to introduce agricultural producers and other decision makers to new drought monitoring tools being developed at the NDMC and educate them on the use of information from these tools for specific applications.

UNIVERSITY SERVICE
I served as a member on the Chancellor’s commission on the status of people of color from April 2008 to present. I serve on the School of natural resources Research Committee since 2006. I serve on the graduate committee as a
member for one Ph.D. student. I, also, served on the search committees in hiring different faculty and staff members within the School of Natural Resources including for the position of the Director of High Plains Regional Climate Center.

SELECTED GRANTS AND CONTRACTS


Rangeland and Forage Geospatial Decision Support System for Drought Risk Management (with D.A. Wilhite and other four investigators), U.S. Department of Agriculture Risk Management Agency (RMA), $1,023,038; October 2005 to September 2010.


SELECTED PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES

Representative and coordinator of North America, Ethiopian Meteorological Society (2008-present)

Member, International Editorial Advisory Board (EAB) of the Advances in Knowledge Communities & Social Networks (AKCSN) Book Series (2006-present)

Member, American Meteorological Society (2002-present)

Member, National Geographic Society (2002-present)
STEVEN A THOMAS, Assistant Professor, 20% Teaching, 78% Research, 2% University Service
Areas of Interest: Stream ecology, biogeochemistry, ecosystem ecology
Contact: sthomas5@unl.edu, 402/472-4030

EDUCATION
B.S. Botany, University of New Hampshire (1987)
M.S. Zoology, University of Wyoming (1991)

PROFESSIONAL EXPERIENCE
2006-present Assistant Professor, School of Natural Resources, University of Nebraska-Lincoln
2005-2006 Postdoctoral Fellow, Ecology and Evolutionary Biology, Cornell University
2003-2004 Senior Hydrologist, Eco-metrics, Inc.
2000-2002 Postdoctoral Fellow, Department of Biological Sciences, Virginia Tech

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 496/896 Advanced Stream and River Ecology (F07, F08)
NRES 896 Graduate Seminar: Ecological Readings (F08)

Masters and Doctoral Students Advised
Christopher Prachiel (M.S. Aquatic Ecology 2009) Ecological affects of bank stabilization in the Cedar River, NE.
Tyler Kohler (M.S. Aquatic Ecology 2010) The influence of season and relative nutrient availability on periphyton in tropical streams.

RESEARCH
My research focuses on the functional attributes of aquatic ecosystems, the influence of community composition on these processes, and how ecosystem and evolutionary processes interact. Much of my research focuses on the transport dynamics of various ecological entities (e.g. fine organic particles, nitrogen, and phosphorus) and the potential for transport to longitudinally link ecosystems. More recently, my research has expanded to consider community and evolutionary topics and to understand the functional consequences of management activities (e.g. stream bank restoration). Although my research has focused on streams, I seek an understanding of these principles as generic processes active in all aquatic ecosystems.

UNIVERSITY SERVICE
Member of the CASNR international studies Task Forces overseeing international study programs for CASNR undergraduates

SELECTED GRANTS AND CONTRACTS
The ecological consequences of nutrient loading to stream ecosystems, Nebraska Department of Environmental Quality (pending), $252,230.
From genes to ecosystems: How do ecological and evolutionary processes interact in nature?, NSF-FIBR award number 0623632, Thomas subcontract $307,000, total funds $5,000,002; 2006-2011.
Ecological responses to stream bank stabilization in the Cedar River, Nebraska Department of Environmental Quality, $153,000; 2006-2009.
Coupling consumer-resource interactions and nutrient spiraling in a stream network, NSF-Ecosystems 0543363, Thomas subcontract, $119,000, total $625,000; 2006-2009.

The Fate of Nitrate Entering a Coupled Terrestrial-Aquatic Ecosystem in the Upper Susquehanna Basin: a Pilot Tracer Experiment, Agricultural Ecology Program of Cornell University, $60,000; 2005-2008.


Geomorphic, Hydrologic, and Microbiological Networks in Integrated Terrestrial/Aquatic Biological Systems, NSF-FIBR Incubation Grant, $50,000; 2004-2005.

Nutrient and pesticide flux within a floodplain aquifer, USEPA through the Confederated Tribes of the Umatilla Indian Reservation, $50,000.

SELECTED PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES

*Panel Member*, National Science Foundation DEB-Ecosystems, Fall 2007 and Fall 2009.
ANDREW J. TYRE, Assistant Professor, 40% Teaching, 58% Research, 2% University Service
Contact: antyre2@unl.edu, 402/472-4054

EDUCATION
B.S. (Honours) Zoology, University of Alberta (1991)
M.S. Behavioral Ecology, Simon Fraser University (1994)
Ph.D. Agriculture and Natural Resources, University of Adelaide (1999)

PROFESSIONAL EXPERIENCE
2003-present Assistant Professor, School of Natural Resources, University of Nebraska-Lincoln
2002 - 2003 Research Scientist, CSIRO Marine Research, Cleveland, Queensland, Australia
1999 - 2001 Postdoctoral Fellow with Prof. Hugh Possingham, University of Queensland

HONORS AND AWARDS
IANR Junior Faculty Award for Research Excellence (2006)

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 450/850 Biology of Wildlife Populations (S04, S05, S06, S07, S08, S09)
NRES 101 Orientation to Natural Resources (F04, F05, F06, F07, F08)
NRES 404 Senior Seminar (F04, F05, F08)
NRES 896 Ecological Statistics (F04, F05, F06, F07, F08)

Masters and Doctoral Students Advised
Brenda Woodward (M.S. Natural Resources, 2008) Testing the Textural Discontinuity Hypothesis and Indices of Biological Integrity using Missouri River Fish Communities
Max Post van der Burg (Ph.D. Natural Resource Sciences, 2008) Pseudorandom walks in ecological analysis: capturing uncertainty for better estimation and decision making

RESEARCH
My main area of interest revolves around helping people to make good wildlife management decisions, especially when very little is known about the wildlife population. We often know particularly little about threatened and endangered species, and we must make many decisions about such species. I like to try and frame these problems to identify “robust” decisions that ensure good outcomes even when we use inaccurate information. Right now, I’m working on using very simple, “prototype” models of habitat and population dynamics to guide decisions about habitat management for Interior Least Terns, Piping Plovers, and other threatened and endangered species. I build these models together with small groups of managers and stakeholders to directly incorporate their objectives into the modeling process. By involving the decision makers in the process of predicting the consequences of their decisions, they accept the recommendations emerging from the decision support process much more readily.

SELECTED GRANTS AND CONTRACTS
Quantifying uncertainty in Missouri River Adaptive Management processes, USACE, $254098; April, 2009–December, 2010.
An adaptive management approach for selecting habitat improvement targets in the shortgrass prairie ecosystem, Nebraska Game and Parks Commission, $62,747.97; 2006.
Western Nebraska grassland bird conservation: closing the adaptive loop with population monitoring and implementation of field clearing, State Wildlife Grants, Nebraska Game and Parks Commission, $129,990; 2006-2008.
SELECTED PUBLICATIONS
Aly Deines, Ellen Peterson, Derek Boeckner, James Boyle, Amy Keighley, Joy Kogut, Joan Lubben, Richard Rebarber, Richard Ryan, Brigitte Tenhumberg, Stuart Townley, and Andrew J. Tyre. 2007. Robust population management under uncertainty for structured population models, Ecological Applications, 17(8), 2175-2138.

OTHER PROFESSIONAL ACTIVITIES
Member of Science Team, Nebraska's Natural Legacy Project, developing a comprehensive, science based conservation plan for Nebraska wildlife.
Writing a science blog on Adaptive management: aminpractice.blogspot.com
SHASHI B. VERMA, Professor, 15% Teaching, 83% Research, 2% University Service
Areas of Interest: Carbon Sequestration, Evapotranspiration, Micrometeorology
Contact: sverma1@unl.edu, 402/472-6702

EDUCATION
B.S. Ranchi University, Ranchi, India (1965)
M.S. University of Colorado, Boulder, Colorado (1967)
Ph.D. Colorado State University, Fort Collins, Colorado (1971)

PROFESSIONAL EXPERIENCE
2002-Present Charles Bessey Professor of Natural Resource Sciences, School of Natural Resources, University of Nebraska-Lincoln
1997-Present Director, Great Plains Regional Center for Global Environmental Change
1984-Present Professor, School of Natural Resources (formerly, School of Natural Resource Sciences, Department of Agricultural Meteorology, Center for Agricultural Meteorology and Climatology), University of Nebraska-Lincoln

HONORS AND AWARDS
Distinguished Professor, University of Nebraska, Lincoln, NE (2002-present)
University of Nebraska Institute of Agriculture and Natural Resources 2004 Team Award for the Carbon Sequestration Program (2004)
Fellow, American Society of Agronomy (2004)
The Award for Outstanding Achievement in Biometeorology, American Meteorological Society (2006)

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 208 Introduction to Bio-Atmospheric Resources (F05, F06)
NRES 408-808 Microclimate: The Biological Environment (F04, F05, F07)
NRES 954 Turbulent Transfer in the Atmospheric Surface Layer (S04, S07)

Masters and Doctoral Students Advised

RESEARCH
I lead an interdisciplinary research program (2000-present) on carbon and water exchanges involving ten faculty members from five departments at the University of Nebraska-Lincoln (School of Natural Resources, School of Biological Sciences, Departments of Agronomy and Horticulture, Biological Systems Engineering, and Biochemistry). The research effort has quantified carbon sequestration and evapotranspiration in dryland and irrigated agroecosystems and has helped improve understanding of relevant biophysical controlling factors. Collaborating with scientists in North America and Europe to help synthesize results on CO₂ and energy fluxes from a variety of ecosystems (e.g., agricultural crops, grasslands, forests). These studies, using data from national and international carbon flux networks (AmeriFlux, CarboEurope, Fluxnet), have allowed development of relevant comparative information on processes controlling carbon, water and energy exchanges of terrestrial vegetation.

UNIVERSITY SERVICE
I am a member of the Integration Advisory Team, School of Natural Resources (2007-present), the Agronomy and Horticulture Farm Ad Hoc Committee (2008), the School of Natural Resources Research Committee (2002-present), the University of Nebraska Agricultural Research and Development Center Advisory Committee (1984-present), a Steering Committee member for the Energy Sciences Minor Steering Committee (2007-present) and member of the School of Natural Resources Promotion and Tenure Committee (2007-present). I am the Leader of the SNR Applied Climate Sciences Faculty (2009-2010).
Appendix V – Faculty CVs - 148

SELECTED GRANTS AND CONTRACTS
U.S. Department of Agriculture, CSREES-CASMGS, $1,139,462; 2002-06.
National Aeronautics and Space Administration, $599,485; 2008-11.

SELECTED PUBLICATIONS

OTHER PROFESSIONAL ACTIVITIES
Board of Editors, Agricultural and Forest Meteorology (1994-present)
Nebraska Representative on the Executive Committee, Consortium for Agric. Soils Mitigation of Greenhouse Gases (2002-present)
Member, Steering Committee, AmeriFlux: US National Flux Network (1996-present)
Nebraska Representative, National Atmospheric Deposition Program (1978-present)
Member, Task Force of the NACP (North American Carbon Program) Mid-Continental Intensive Field Campaign (2000-present)
Member, State of Nebraska Carbon Sequestration Advisory Committee (2000-present)
ELIZABETH A. WALTER-SHEA, Professor, 35% Teaching, 40% Research, 25% University Service as Teaching Coordinator

Areas of Interest: Environmental Biophysics, Remote Sensing
Contact: ewalter-shea1@unl.edu, 402/472-1553

EDUCATION
B.S. Geography, University of Central Arkansas (1978)
M.S. Geography, Texas A&M University (1981)
Ph.D. Agronomy (Agricultural Meteorology emphasis), University of Nebraska (1987)

PROFESSIONAL EXPERIENCE
2003—present Professor, School of Natural Resources, University of Nebraska - Lincoln
1997—2003 Associate Professor, School of Natural Resources, University of Nebraska - Lincoln
1995—1997 Associate Professor, Department of Agricultural Meteorology, University of Nebraska - Lincoln
1989—1995 Assistant Professor, Department of Agricultural Meteorology, University of Nebraska - Lincoln
1987—1989 Research Assistant Professor, Department of Agronomy, University of Nebraska - Lincoln

HONORS AND AWARDS
IANR Team Award, Carbon Sequestration (2004)
CASNR Service Award, University of Nebraska-Lincoln (2006)

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 208 Applied Climate Sciences (team taught) (S04, S09)
NRES 312 Introduction to Geospatial Information Sciences (S06, S08)
NRES 408/808 Microclimate: The Biological Environment (team-taught) (F04, F05, F06, F07, F08)
NRES 908 Solar Radiation Interactions at the Earth’s Surface (S05, S07)
NRES 891 Seminar in Natural Resource Sciences (team-taught) (S05, S09)

Masters and Doctoral Students Advised
Kham Noam Nang (Ph.D. Natural Resource Sciences, withdrew 2007) Understanding the fraction of PAR utilized by vegetation and its relation to remotely-sensed data

RESEARCH
I am involved in remote sensing techniques applied to carbon flux from vegetative canopies; relation between PAR absorbed by photosynthetically active vegetation and vegetative canopy reflectance; effects of shortwave and longwave forcings on surface temperature and evapotranspiration from various surfaces; ultraviolet radiation interactions in vegetative canopies.

UNIVERSITY SERVICE
I am the SNRS Teaching Coordinator, August 2000-2004 and August 2007-present.

SELECTED GRANTS AND CONTRACTS
UV-B climatological network site at the University of Nebraska Agricultural Research and Development Center, (with K. Hubbard), UV-B Monitoring Program (USDA), Colorado State University, $3,000 annually; 1996-ongoing.

SELECTED PUBLICATIONS


**OTHER PROFESSIONAL ACTIVITIES**


*Graduate Faculty Fellow, University of Nebraska, 1993-present*

*Chair, Natural Resources Undergraduate Curriculum Committee, 2008-present*

*Member, CASNR Curriculum Committee, 2007 to present; Life Sciences Core Curriculum Sub-Committee*

*Ex-officio member, SNR Curriculum and Graduate Committees, 2007 to present*

*Co-chair, Natural Resource Sciences Graduate Specialization (Bio-Atmospheric Interactions), ongoing Member, CASNR Teaching and Learning Improvement Council, 2007-present*

*Member and Program Leader, Program Excellence through Assessment, Research and Learning (PEARL), 2005-present*

*Courtesy appointment, Agronomy and Horticulture Search Committees, Mead Laboratory Manager, SNR undergraduate advisor, GIS positions*

*Member, professional societies: American Association for the Advancement of Science, American Society of Agronomy, American Society for Photogrammetry and Remote Sensing, Ecological Society of America, American Meteorological Society, Gamma Sigma Delta*
Appendix V – Faculty CVs - 151

TIEJUN WANG, Postdoc Research Associate, 100% Research
Areas of Interest: Catchment Hydrology, Groundwater Hydrology, and Ecohydrology
Contact: twang3@unl.edu, 402-472-6275

EDUCATION
B.S. Hydrogeology and Engineering Geology, minor in International Finance, Ocean University of China (2001)
M.S. Environmental Engineering, Ocean University of China (2004)
Ph.D. Geosciences with specialization in Hydrogeology, University of Nebraska-Lincoln (2008)

PROFESSIONAL EXPERIENCE
2008-present Post Doctoral Research Associate, University of Nebraska-Lincoln

RESEARCH
I have been working closely with my colleagues on issues, such as interactions between groundwater and surface water on catchment scales, groundwater recharge, soil physics, and land surface processes. We found that the Nebraska Sand Hills plays a very important role in controlling the regional water balance on both long-term mean annual and annual time scales.

SELECTED PUBLICATIONS
Wang, T.J., D. Wedin, and V.A. Zlotnik. Field Evidence of a Negative Correlation between Saturated Hydraulic Conductivity and Soil Carbon in a Sandy Soil, Water Resources Research, in press.
Appendix V – Faculty CVs - 153

BRIAN D. WARDLOW, Assistant Research Professor, 60% Research, 38% Scholarly Service, 2% University Service
Areas of Interest: Remote Sensing, Geographic Information Systems (GIS), Natural Hazards (Drought), Land Use/Land Cover Characterization
Contact: bwardlow2@unl.edu, 402/472-6729

EDUCATION
B.S. Geography, Northwest Missouri State University (1994)
M.S. Geography, Kansas State University (1996)
Ph.D. Geography, University of Kansas (2005)

PROFESSIONAL EXPERIENCE
2006–present  Assistant Research Professor, National Drought Mitigation Center, School of Natural Resources, University of Nebraska-Lincoln
1999–2001  Graduate Research Assistant, Kansas Applied Remote Sensing Program, University of Kansas
1994–1996  Graduate Teaching Assistant, Department of Geography, Kansas State University

HONORS AND AWARDS
John I. Davidson President’s Award for best practical paper in remote sensing, American Society of Photogrammetry and Remote Sensing (2007)
NASA Earth System Science Graduate Research Fellowship (2002)
U.S. Geological Survey’s Group Achievement Award for the National Land Cover Data Set (2000)
Distinguished Graduate Assistantship Award, Department of Geography, Kansas State University (1996)

TEACHING AND ADVISEMENT
Masters and Doctoral Students Advised

Masters and Doctoral Student Committees
Sandra Jones (M.S. Natural Resources Sciences, expected 2009) Coursework completed.
Nicole Wall (Ph.D. Natural Resources Science, expected 2012) Coursework in progress.

RESEARCH
I am involved in drought monitoring research focused on the development of new remote sensing-based approaches for characterizing and predicting large-area vegetation stress, which has led to the creation of operational monitoring tools such as the Vegetation Response Drought Index (VegDRI), as well as predictive tools such as the Vegetation Outlook (VegOut). Additional research has investigated the use of thermal data and microwave sensors for estimating evapotranspiration and soil moisture. I am also involved in several land use/land cover (LULC) characterization investigations using time-series, satellite-based vegetation index observations for LULC mapping, phenological monitoring, and estimation of biophysical vegetation measures.

EXTENSION/OUTREACH
I conducted numerous workshops nationally to introduce agricultural producers and other decision makers to new drought monitoring tools being developed at the NDMC and educate them on the use of information from these
tools for specific applications. I presented remote sensing-based drought monitoring research and applications at several national and international professional meetings and workshops.

UNIVERSITY SERVICE
I serve as the advisor for two Ph.D. students and, also serve on the committees for five graduate students, who are pursuing degrees in either Geography or Natural Resources.

SELECTED GRANTS AND CONTRACTS
Integrating Enhanced GRACE Water Storage Data into the U.S. and North American Drought Monitor (with M. Svoboda and seven investigators), NASA, $597,000; October 2008-October 2011.

SELECTED PUBLICATIONS

OTHER PROFESSIONAL ACTIVITIES
Associate Editor, agricultural and remote sensing sections of Earthzine (2009)
Member, National Phenology Network (NPN) Remote Sensing Working Group (2008 – present)
Member, NASA Soil Moisture Active Passive (SMAP) Satellite Applications Working Group (2008 – present)
Courtesy Faculty, Geography Program, University of Nebraska-Lincoln (2007 – present)
Faculty Research Fellow, Center for Advanced Land Management Information Technologies (CALMIT), University of Nebraska-Lincoln (2006 – present)
DAVID A. WEDIN, Professor, 40% Teaching, 55% Research, 5% University Service
Areas of Interest: Ecosystem Science, Grassland/woodland ecology
Contact: dwedin1@unl.edu, 402/472-9608

EDUCATION
B.A. Paracollege and Biology, St. Olaf College (1981)
Ph.D. Ecology, University of Minnesota (1990)

PROFESSIONAL EXPERIENCE
2008-present Professor, School of Natural Resources, University of Nebraska-Lincoln
2000-2008 Associate Professor, School of Natural Resources, University of Nebraska-Lincoln
1998-2000 Assistant Professor, School of Natural Resources, University of Nebraska-Lincoln
1997-1998 Associate Professor, Dept. of Botany, University of Toronto
1992-1997 Assistant Professor, Dept. of Botany, University of Toronto
1990-1992 Post-doctoral Research Assoc., NRRI, University of Minnesota-Duluth

HONORS AND AWARDS
Certificate of Recognition for Contributions to Students, University of Nebraska (1999, 2007, 2009)
Junior Faculty Excellence in Research Award, Agriculture Research Division, University of Nebraska (1999)
National Science Foundation Graduate Fellow, University of Minnesota (1983-1987)

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 220/222 Principles of Ecology (F04-09)
NRES 424/824 Forest Ecology (S04, S05, S07, S08)
NRES 492 Study Tours (Su04, Su06, Su08)
NRES 404 Senior Seminar (S09)

Masters and Doctoral Students Advised
Phillip A. Dobesh (M.S. Natural Resource Sciences 2007) Carrion Beetle (Coleoptera: Silphidae) Community Ecology in Relation to the Land Cover on the Nebraska National Forest (Bessey Ranger District)
Cullen R. Robbins (M.S. Natural Resource Sciences 2005) Analyses of high resolution hyperspectral imagery for characterization of ponderosa pine woodlands.

RESEARCH
From 2000-2007 I coordinated the Sand Hills Biocomplexity project (NSF). This interdisciplinary team studied the interactions of grassland ecology, dune geomorphology, hydrology and climate to understand the stability of the Nebraska Sand Hills over the last 2000 years. An ongoing major field experiment at University of Nebraska-Lincoln’s Barta Brothers Ranch measures the ecohydrologic consequences of grassland loss and recovery, and the impacts of belowground ecological processes on dune stability and erosion. Related research at the Nebraska National Forest examines the impacts of woody species encroachment in the Sand Hills.

EXTENSION/OUTREACH
The Sand Hills Biocomplexity project had an active research program. We have partnered for 5 years with the Sand Hills Discovery Experience, a community-based science education program in Ainsworth NE that hosts an annual summer event and field trips. In addition, I have given over a dozen public seminars on our biocomplexity research.

UNIVERSITY SERVICE
From 2000 – 2008 I chaired, or co-chaired, the Natural Resources Undergraduate Curriculum Committee, which coordinates curriculum revision, recruiting and scholarships for SNR. Since 2007, I have been Director of Nine Mile Prairie, a 230-acre tallgrass prairie remnant managed for research and education by UNL. At the request of University of Nebraska-Lincoln's administration, in 2008-2009 I led a five university proposal to NSF for a major Science and Technology Center (Center for Integration of Climate and Landscape Dynamics)......we didn’t get it.
SELECTED GRANTS AND CONTRACTS

ELECTED PUBLICATIONS (list up to 10, emphasize last five years)

OTHER PROFESSIONAL ACTIVITIES
Ecosystems Panel Member (2008-2009), National Science Foundation (2008-2009)
Reviewer for “Ecological Impacts of Climate Change”, National Research Council
ALBERT WEISS, Professor, 15% Teaching, 83% Research, 2% University Service
Areas of Interest: Crop Simulation Modeling, Agricultural Climatology
Contact: aweiss1@unl.edu, 402/472-6761

EDUCATION
B.S. Meteorology, City College of New York (1962)
M. S. Climatology, Rutgers University (1969)
Ph. D. Micrometeorology, Cornell University (1975)

PROFESSIONAL EXPERIENCE
1997-present Professor, School of Natural Resources, University of Nebraska-Lincoln
1992-1997 Professor, Department of Agricultural Meteorology
1985-1992 Associate Professor, Department of Agricultural Meteorology
1981-1985 Associate Professor, Panhandle Research and Extension Center
1974-1981 Assistant Professor, Panhandle Research and Extension Center

TEACHING (last five years)
Courses Taught (Fall, Spring)
NRES 906 Crop Growth and Yield Modeling (S04, S06, S08)
NRES 907 Agricultural Meteorology (S05, S07, S09)

RESEARCH
Research efforts are devoted to two areas of crop simulation modeling. The first area is to develop or improve “simple,” robust models of crops for managerial decisions. Examples of this effort are a recently developed model of switchgrass and soybean. The second area focuses on phenotypic plasticity. An example of this area is efforts to incorporate genetic information into crop simulation models using plant height as a prototype system. Plant height is influenced by major genes that are discrete and well characterized genetically and phenotypically. Our goal of simulating final plant height for different height classes across environments was successful.

UNIVERSITY SERVICE
I am a member of the Department of Agronomy and Horticulture Graduate Committee representing the area of Agricultural Meteorology. I have been on this committee for the past five years. I have been on the SNR Nominating Committee for the past two years. I was the chair of the Search Committee for the Applied Climate Scientist/Director, High Plains Regional Climate Center position, March and April 2009.

SELECTED PUBLICATIONS


**OTHER PROFESSIONAL ACTIVITIES**


*Co-author* of the second edition of *Principles of Ecology in Plant Production*, which is currently being revised.
DONALD A. WILHITE, Director and Professor, 100% Administration
Areas of Interest: Drought monitoring, mitigation, and policy; climate change
Contact: dwilhite2@unl.edu, 402/472-4270

EDUCATION
B.S. Geography, Central Missouri State University (1967)  
M.A. Geography and Climatology, Arizona State University (1969)  
Ph.D. Geography (Climatology), University of Nebraska-Lincoln (1975)

PROFESSIONAL EXPERIENCE
2007-present Director, School of Natural Resources, University of Nebraska-Lincoln
1995-2007 Director, National Drought Mitigation Center and Professor, School of Natural Resources, University of Nebraska-Lincoln
1979-1995 Assistant/Associate/Professor, Department of Agricultural Meteorology, University of Nebraska-Lincoln
1977-1979 Water Management Specialist, Water Resources Center, University of Nebraska-Lincoln

HONORS AND AWARDS
Recipient, Omtvedt Innovation Award in recognition of exceptional service, Institute of Agriculture and Natural Resources, University of Nebraska (2005)

TEACHING
Courses Taught (Spring)
NRES 452/852 Climate and Society (S02, S04, S06)

Masters and Doctoral Students Advised
Jeffrey Nothwehr (M.S. Natural Resource Sciences, Climate Assessment and Impacts 2007) Regional Evaluation of the Decile Method as a Drought Index for the United States.
Melissa Melvin (M.S. Natural Resource Sciences, Climate Assessment and Impacts 2006) Collecting and Reporting Drought Impacts at the State Level: Experiences, Lessons Learned, and Guidelines for Improvement.
Tsegaye Tadesse (Ph.D. Natural Resource Sciences, Climate Assessment and Impacts 2002) Identifying Drought and Its Associations with Climatic and Oceanic Parameters Using Data Mining Techniques.

RESEARCH
My research program has focused on drought monitoring, impact assessment, and mitigation/planning/policy aspects of drought. I founded the National Drought Mitigation Center in 1995 and provided administrative leadership for the development of this center until August 2007 when I was appointed Director, School of Natural Resources.

SCHOLARLY SERVICE
An important aspect of my appointment prior to 2007 was the dissemination of information on drought management, planning, and policy to state, national, and international clientele.

SELECTED GRANTS AND CONTRACTS (2002-2007)
National Drought Mitigation Center, Funding received from the USDA, $495,300; 2005-2007.
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Climate and Soil Risk Information System (with S. Goddard and K. Hubbard), USDA FCIC/RMA. $1,212,055; 2005-2008.


SELECTED PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES


DAVID J. WISHART, Professor, 60% Teaching, 30% Research, 10% Service
Areas of Interest: Historical Geography, Great Plains, Dispossession of Indigenous Peoples, Epistemology of Geography and History.
Contact: egp@unl.edu, 402/472-3576

EDUCATION
B.A. University of Sheffield, England (1967)
M.A. University of Nebraska-Lincoln (1968)
Ph.D. University of Nebraska-Lincoln (1971)

PROFESSIONAL EXPERIENCE
2008-present  Professor, Faculty of Geography, University of Nebraska-Lincoln
2002–2008  Professor and Chair, Department of Anthropology and Geography, University of Nebraska-Lincoln
1986–2002  Professor, Department of Geography, University of Nebraska-Lincoln
1978–1986  Associate Professor, Department of Geography, University of Nebraska-Lincoln
1974–1978  Assistant Professor, Department of Geography, University of Nebraska-Lincoln
1972–1974  Assistant Professor, Department of Geography, University of Nebraska-Lincoln

HONORS AND AWARDS
Invited to give the Chancellor’s Distinguished Lecture (2004)
Distinguished Teaching Award, University of Nebraska-Lincoln, College of Arts and Sciences (1978)

TEACHING
Courses Taught  (Fall, Spring)
Geog 140  Introductory Human Geography (F08)
Geog 334  Historical Geography of the Great Plains (F03, F04, F05, F06, F07, F08)
Geog 402  Undergraduate Seminar (S04, S06, F08)
Geog 903  History and Philosophy of Geography (S05, S07)
Geog 935  Seminar in Historical Geography (S06)

Master’s and Doctoral Students Advised
Rebecca A. Buller (M.A. Geography, 2004). “Settlements of Holt County, Nebraska”
Cody L. Knutson (Ph.D. Geography, 2004). “Rural Water Development for Marginal Regions with a Case Study of South Dakota’s Mni Wiconi Project”

RESEARCH

UNIVERSITY SERVICE
University service includes six years (2002-2008) as Chair of the Department of Anthropology and Geography,
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and thirty-five years as Geography Undergraduate Advisor Service. Beyond the University service includes being a Trustee of the Board of the Nebraska State Historical Society (2006-present) and lectures to the Lincoln Public Schools History Teachers’ Workshops every summer since 2000.

GRANTS
I have held no grants in the last five years. I was previously co-principal investigator on $400,000 worth of grants to support the *Encyclopedia of the Great Plains* from 1995-2002.

SELECTED PUBLICATIONS

OTHER PROFESSIONAL ACTIVITIES
Associate Editor, *Great Plains Quarterly* (1982–present)
WAYNE E. WOLDT, Associate Professor, 25% Extension, 75% School of Biological Sciences
(15% Teaching, 35% Research, 25% Extension)
Areas of Interest: Water Resources and Environmental Engineering, Modeling, Hydrologic Information Systems
Contact: wwoldt1@unl.edu, 402-472-8656

EDUCATION
B.S. Civil Engineering, Colorado State University (1978)
M.S. Civil Engineering, University of Nebraska – Lincoln (1986)
Ph.D. Civil Engineering, University of Nebraska – Lincoln (1990)

PROFESSIONAL EXPERIENCE
1997 to present Associate Professor, Dept. of Biological Systems Engineering and School of Natural Resources, University of Nebraska-Lincoln
1991 to 1997 Assistant Professor, Depts. of Biological Systems Engineering and Civil Engineering, University of Nebraska-Lincoln
1990 - 1991 Visiting Assistant Professor, Dept of Civil Engineering, University of Nebraska-Lincoln

TEACHING
Courses Taught (Fall, Spring, Summer)
BSEN/CIVE 458/858 Groundwater Engineering (S05, S06, S07, S08, S09)
BSEN/CIVE 498/496/898/896 GIS in Water Resources (F06)
CIVE 498 Pollution Prevention (Su05, Su06, Su07)

Master and Doctoral Students Advised
Ram Marahatta (Ph.D. Engineering 2005) Multi-scale Modeling of a Submerged Vegetative Bed Wastewater Treatment System
Krishan Ginige (M.S. Environmental Engineering 2006) Protection of Community Water Supply in Agricultural Watershed
Mahesh Pun (M.S. Environmental Engineering 2008) Implementing an Integrated Surface-Groundwater Model in Multiple Computational Environments

RESEARCH
I am involved in adaptive infrastructure management for environmental and water resources systems, model-based control systems for water environment infrastructure, simulation modeling of watershed systems with emphasis on surface/groundwater interaction, watershed simulation using high performance computing, multi-scale modeling of water environment systems.

EXTENSION
I am involved in advancing the onsite wastewater (i.e., septic system) industry in Nebraska through targeted curriculum development, extension workshops, education, training and evaluation. Additional extension efforts include development of private water supply educational resources.

SERVICE
I have served as Chair for the Modeling Committee for the National Science Foundation initiative WATERS Network, with a charge to develop a vision for modeling advances within the water environment. Also served on the Cyberinfrastructure Committee.

SELECTED GRANTS AND CONTRACTS
Research Leading Toward a Great Plains Environmental and Hydrologic Observatory, UNL Office of Research, total funding $5,000; 2007-2008.
**SELECTED PUBLICATIONS**


**OTHER PROFESSIONAL ACTIVITIES**

*University of Nebraska Designated representative* for the Consortium of Universities for the Advancement of Hydrologic Sciences, Incorporated (CUAHSI).

*Active member* of ASCE Groundwater Management technical committee.
DONNA L. WOUDENBERG, Postdoctoral Research Associate, 70% Research, 30% Scholarly Service

Areas of Interest: Human Interactions with the Environment; Perception of the Drought Hazard; Social Impacts of Drought and Climate Change; Bridging the Gap between Science and Decision-Making; Education and Outreach; Women’s, Children’s & Minority Issues as related to the Environment; Global Sustainability and Equity

Contact: dwoudenberg2@unl.edu, 402/472-8287

EDUCATION
B.S. University of Nebraska-Lincoln, Natural Resources/Environmental Studies (2000)
M.S. University of Nebraska-Lincoln, Natural Resources/Climatology Focus (2002)
Ph.D. University of Nebraska-Lincoln, Natural Resources/Human Dimensions (2006)

PROFESSIONAL EXPERIENCE

01/07–Present Postdoctoral Research Associate, Natl. Drought Mitigation Ctr., University of Nebraska-Lincoln
09/03–12/06 Graduate Research Assistant, Natl. Drought Mitigation Ctr., University of Nebraska-Lincoln
01/03–08/03 Staff, High Plains Regional Climate Center, University of Nebraska-Lincoln
01/01–12/02 Graduate Research Assistant, High Plains Regional Climate Center, University of Nebraska-Lincoln

HONORS AND AWARDS
Fellow, Center for Great Plains Studies, 2008

TEACHING
Courses Taught (Fall, Spring, Summer)
NRES 498/898 Gender and Cultural Perspectives on the Environment (S 09)
NRES 496/896 Gender and Cultural Perspectives on the Environment (F 07, S 08)
AGRI 103 Food, Agriculture and Natural Resource Systems; Recitation Section 124 (F 07)

Courses Taught in the role of Teaching Assistant
AECN 896 Ecological Economics (S 06)
NRES 323 Natural Resources Policy (S 03)

RESEARCH

Research is focused on identifying the social impacts of drought and determining effective ways to mitigate those impacts, and/or to assist individuals/agencies & organizations/municipalities/state & tribal governments in planning for and mitigating against drought. Particular interest is given to the differential impacts on women, children, minorities, and indigenous groups.

EXTENSION/OUTREACH

I initiated a collaboration between NDMC and Project WET International to develop K-12 educational materials and an educator’s guide related to 1) water (50,000 copies pending), and 2) climate (soliciting funding). Active in NDMC and SNR education and outreach activities, particularly those aimed at grade school children.

UNIVERSITY SERVICE

The following is University service in which I am currently or have been involved:
Center for Great Plains Studies Board of Governors, UNL, Lincoln, NE, 04/09–present; will serve a three-year term as board member beginning in September 2009.

SNR Human Dimensions Faculty Group, School of Natural Resources, Lincoln, NE, 01/09–present, co-leader of faculty group.

Building Sustainable Partnerships, School of Natural Resources & City of Lincoln, Fall 08–present; organizer of forum to facilitate university and community collaboration: first forum, 02/09; planning next.
Committee Member, Environmental Studies Coordinating Committee, 09/08–present.
Committee Member, Center for Great Plains Studies Planning & Program Committee, UNL, Lincoln, NE, 08/08–present.
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SNR 2009 Five-Year Review, School of Natural Resources, Lincoln, NE, 07/08–present; Physical Infrastructure, Human Dimensions & Applied Climate Sciences Teams.
Committee Member, School of Natural Resources Sustainability Committee, UNL, Lincoln, NE, 05/08–present.
Postdoctoral Advisory Council, UNL, Lincoln, NE, 04/08–present; Secretary to the Council.
Faculty Advisor to Sigma Alpha Sorority, CASNR, Lincoln, NE, 4/07–present; Advisor to the CASNR Agricultural Sorority.
Women and Natural Resources Group, 01/07–present; & EcoEco Interest Group, 09/06–present, UNL; Co-founder of both informal networking groups.
Nebraska Symposium on Interdisciplinary Graduate Science Research, 04/05–09/05, University of Nebraska-Lincoln, Steering Committee; 1st Annual Symposium.
School of Natural Resources External Advisory Committee, 09/04–6/07, University of Nebraska-Lincoln; Graduate Student Representative.
School of Natural Resources Graduate Committee, 05/04–05/06, University of Nebraska-Lincoln Graduate Committee; Graduate Student Representative.
School of Natural Resources Graduate Student Association Board, 05/04–05/06, University of Nebraska-Lincoln; Student Representative to Graduate Committee.
SNR 2003 Five-Year Review Team, School of Natural Resources, Lincoln, NE, Fall 03, Review team member, SNR Graduate Student Representative.

SELECTED GRANTS AND CONTRACTS

**Funded:**
Low-flow Impacts Database Project for the Upper Colorado River Basin, $87,000; 10/01/08-09/30/09; Co-PI.
Low-flow Impacts Database Project for the Alabama, Coosa, & Tallapoosa (ACT) and Apalachicola, Chattahoochee, & Flint (ACF) River Basins, $24,999; 09/15/08-09/14/09; Co-PI.
Discover the Waters of Nebraska, $85,000; 10/31/07-11/01/2009; Co-PI.
Development of a “Drought Ready Communities” Program, $288,670; 07/01/08-06/30/2010; Co-PI.

**Pending:**
Discover Climate Education Program, $220,000; Co-PI.
UNL Initiative for Teaching and Learning Excellence: Course Development: Sustainable Societies Great Plains, $20,000; Co-PI.

SELECTED PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES

Invited keynote speaker, Lincoln-Lancaster County Environmental Leadership Awards Luncheon, Lincoln, NE, 06/08.
Mayor’s Environmental Task Force, Lincoln, NE, 07/08 to present.
Member, Education & Communication Sub-committee.
Conference Planning Committee Changing Natural Landscapes: Ecological and Human Dimensions, Lincoln, NE, 06/04–09/05.
JINSHENG YOU, Research Assistant Professor, 90% Research, 8% Scholarly Service, 2% University Service

Areas of Interest: Climatology, Hydrology, Geographic Information Systems
Contact: jyou2@unl.edu, 402/472-8765

EDUCATION
B.S. Hydrology and Water Resources, Hohai University, China (1993)
M.S. Hydrology and Water Resources, Hohai University, China (1996)
Ph.D. Civil Engineering, Utah State University (2004)

PROFESSIONAL EXPERIENCE
2006-present Research Assistant Professor, University of Nebraska, School of Natural Resources
2003-2006 Postdoctoral Research Associate, University of Nebraska, School of Natural Resources
1996-1999 Water Resources Engineer, Nanjing Institute of Hydrology and Water Resources, China

HONORS AND AWARDS
Layman Award, University of Nebraska, 2008.
Prize of National Science and Technology Advances by State Council of China (Second place) for Long Term Planning of Water Supply in China, 2001. 
Prize of Science and Technology Advances in Water Sciences by China Water Resources Ministry (First place) for Long Term Planning of Water Supply in China, 1999.

TEACHING
Masters and Doctoral Students Advised
Deming Wang (M.S. Hydrology 2008)

RESEARCH
My recent research was mainly on the quality control of weather data, through which a quality control system has been developed to automatically review the weather data such as air temperature, precipitation, and soil moisture. The system has been in operation in the Applied Climate Information System (ACIS) and the data review procedures in the Automated Weather Data Network in Nebraska. Efforts were also placed to develop the serially complete data for multiple purposes, e.g., provide data support to the National Agricultural Decision Support System (NADSS).

UNIVERSITY SERVICE
I have been called upon to serve on different committees, such as the search committees for several hirings in the High Plains Regional Climate Center. As a member, I also worked with 9 other members to explore the cooperation between the School of Natural Resources and the Department of Statistics. I was also called upon to review research proposals submitted to the Office of Research of UNL.

SELECTED GRANTS AND CONTRACTS
Refinements to ACIS Quality Assurance Techniques (PI: Kenneth G. Hubbard, CO-PI: Jinsheng You), $25,000; April 1, 2007–March 31, 2008.
SELECTED PUBLICATIONS

OTHER PROFESSIONAL ACTIVITIES
Associate Editor: American Association of State Climatologists Journal of Service Climatology
Committee member: HPRCC search committee member
SNR Advising committee member: interdisciplinary graduate program with Department of Statistics
Organizer: The 25th Anniversary of Automated Weather Date Network or Nebraska, May 2007; The Central Plains Severe Weather Symposium, 2005; Lincoln, Nebraska, USA, March 2005
Reviewer: Grant proposals submitted for funding from National Oceanic and Atmospheric Administration
XINHUA ZHOU, Research Assistant Professor, 98% Research, 2% University Service
Areas of Interests: Bio-hydrology, Boundary Meteorology, Meteorological Instrumentation, Shelterbelt Ecology
Contact: xzhou2@unl.edu, 402/472-9889

EDUCATION
B.S. Forestry, Northeast Forestry University, China (1982)
M.S. Forest Meteorology, Northeast Forestry University, China (1987)
Ph.D. Horticulture and Forestry, University of Nebraska, USA (1999)

PROFESSIONAL EXPERIENCE
2002-present Research Assistant Professor, University of Nebraska-Lincoln
1999-2002 Postdoctoral Fellow, University of Nebraska-Lincoln
1992-1993 Research Associate Professor, Institute of Applied Ecology, Chinese Academy of Sciences
1987-1992 Research Assistant Professor Institute of Applied Ecology, Chinese Academy of Sciences
1982-1984 Course Instructor, Zhalantun Forestry College

HONORS AND AWARDS
Graduate Student Research Award, Nebraska Statewide Arboretum (1994)
Young Scientist Prize, Chinese Academy of Sciences (1993)
State Special Honorarium, State Council of the People's Republic of China (1993)
National Award, for progress in sciences and technologies, to “Sustained Yield and Regeneration of Farmland Shelterbelts”. State Committee of Sciences and Technologies, China (1993)

TEACHING
Course Invited to Lecturer
NRES 406/806 Plant Ecophysiology: Theory and Practice

Master and Doctoral Students Advised as a Member of Advisory Committees
Kathy Eggemeyer (M.S. Tree Physiology, 2005) Ecophysiology of Trees and Warm Season Grasses in the Nebraska Sandhills.

RESEARCH
Shelterbelt aerodynamics: Defined the three-dimensional (3D) aerodynamic structure, developed a method to describe the 3D structure, and modeled the aerodynamic influence of the 3D structure.
Carbon sequestration of shelterbelt: Evaluated the use of forest-derived biomass equations for open-grown trees and developed a biomass equation for open-grown multiple-stemmed tree species.
Ecological impacts of tree invasive species on grassland: Described ecophysiology of native invasive woody species and warm season grass in Nebraska Sandhills.
Evapotranspiration as influenced by land management options: Three long-term eddy covariance systems were established in west of Nebraska, and three systems to monitor the water use by invasive tree species along the Republican River were established.

EXTENSION/OUTREACH
I provide landowners with data of water use as influenced by land management. Evapotranspiration over native grassland and non-irrigated cropland has been reported to landowners every year.

UNIVERSITY SERVICE
I serve as a member of the Research Committee, School of Natural Resources (2005–2008) and as a member of the Search Committee (2008, 2009).
SELECTED GRANTS AND CONTRACTS

Estimation of evapotranspiration from riparian and invasive species using remote sensing, modeling and in situ measurements in the Republican River Basin, Nebraska Department of Natural Resources (Investigator, PI: Dr. D. Martin), $1,101,925; October 2007-October 2011.

Effects of eastern redcedar invasion on the hydrology of cottonwood stands in the Republic Basin, Burlington Northern Endowment (Co-PI with Dr. J. Huddle), $20,000; June 2008-June 2010.

Establishing integrated agricultural systems in western Nebraska, IANR, University of Nebraska (co-PI with T. Awada), $9,570; June 2007–June 2008.

Measuring turbulent flows as influenced by shelterbelts and forests, IANR, University of Nebraska (co-PI with Dr. J.R. Brandle), $6,791; June 2004–June 2005.

Woody species expansion in the Nebraska Sandhills: Ecological and socio-economic consequences, Interdisciplinary Research Grant, University of Nebraska Agricultural Research Division (co-PI with Dr. T. Awada), $40,000; June 2004–June 2006.

Biomass in Montana windbreak species, Montana Department of Natural Resources (co-PI with Dr. J.R. Brandle), $14,500; June 2004–June 2005.

SELECTED PUBLICATIONS


OTHER PROFESSIONAL ACTIVITIES

Member of an editorial advisory board of Acta Ecologica Sinica (2000–present)

Member of an editorial advisory board of Chinese Journal of Ecology (2006-present)

Member of an editorial advisor board of Forest Studies in China (2007- present)


Reviewer of an international journal: Agriculture, Ecosystems and Environment (2009)