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Conference to Develop a Management Agenda for Nebraska's Water Future

by Steve Ress

Nebraska Water Conference participants will have a personal stake in preparing a water management agenda to be presented to the Nebraska Legislature’s Agriculture and Natural Resources Committees.

The 29th annual Nebraska Water Conference concludes a three-year look at challenges, concerns and opportunities in Nebraska’s water future under the theme of “Nebraska Water 2000.” This year’s emphasis is on issues in managing the state’s water.

The conference will be at Lincoln’s Cornhusker Hotel and Burnham Yates Conference Center March 6-8, 2000.

“This water conference presents a unique opportunity for a wide variety of Nebraskans to gather and discuss water management issues.

“Further, the conference attendees will take part in developing a prioritized list of water management issues to be presented to Nebraska’s leaders. This list will represent the attendees’ combined thoughts and priorities on water management issues at this starting point in the next millennium,” said conference co-organizer Bob Kuzelka, Assistant to the Director of NU’s Water Center / Environmental Programs.

1998 and 1999 conferences were in Kearney and respectively focused on information for the future and planning for the future.

“A list from attendees which proposes and prioritizes issues will be presented to the (Nebraska) legislature as a logical conclusion to this three-year conference series on the future of Nebraska’s water,” Kuzelka said.

University of Nebraska President L. Dennis Smith has been invited to open the conference on Tuesday, March 7. Conference sessions will focus on management challenges, management issues and prioritizing water management issues.

In the first plenary presentation, on Tuesday morning, Groundwater Foundation President Susan Seacrest will explore “Leadership and Involvement: Who should manage Nebraska’s water?” She will be followed by Steve Oltmans, General Manager of the Papio-Missouri Natural Resources District, on “Organization and Structure: How should Nebraska be organized to manage its water?” and “Policy and Decision Making: Fundamental Consideration” by W. Don Nelson, former Chief of Staff to former Nebraska Governor Bob Kerrey.

The Nebraska Water Conference Council’s annual Pioneer and Progress Awards and The Groundwater Foundation’s annual Kremer Award will be presented at Tuesday’s luncheon at the Cornhusker Hotel.

Tuesday afternoon’s session on management issues focuses on three panels that will look at “Leadership and involvement,” moderated by Seacrest; “Organization structure,” moderated by Oltmans; and “Policy and decision making” moderated by Nelson.

Management issues such as higher education, grassroots education and partnerships will be explored in the first panel. The second panel will look at federal primacy, state reorganization and state versus local.

(Continued on page 5)
We Have Come A Long Way, But We Need To Go Further; Water Center Recognized as “Groundwater Guardian” Partner

from the DIRECTOR
Edward F. Vitzthum

By the time you read this, we will be within days of beginning the year 2000. (I chose those words carefully! The “Beginning-of-the-End” vs “Beginning-of-the-Beginning” debate that seems to have become popular, can take place at another time and in another forum!)

Regardless of which it is, the start of the year 2000 provides an excellent opportunity to look back at how far we've come this century with respect to our water resources...and how far we still have to go.

By 1900 irrigation was an established tool of many Nebraska crop producers, but the emergence of irrigation technology - pivot systems, efficient pumps and the like - was still about half a century away. Many wells were still being dug by hand, and hand pumps were a familiar sight not only in farmyards, but in homes. In some instances water for cattle and water for the farm home came from the same well, and it wasn’t unusual to have that pump in close proximity to a cattle pen. (My grandfather’s farm in Illinois was a perfect example of this. To make matters worse, they had a privy within about 200 feet of that well. The book had yet to be written on groundwater contamination!) Of course, drinking water standards would not be formulated for several decades.

But let’s fast forward to the late 1960’s and early 70’s. There was Rachel Carson and her Silent Spring, the first Earth Day, establishment of the U.S. Environmental Protection Agency, Congress passing the Clean Water Act, the Safe Drinking Water Act and other related legislation. States all across the nation established their own EPA equivalent agencies and legislatures put statutes on the books to address a wide range of water issues. Nebraska created Natural Resources Districts to help address water and related issues locally.

Federal and state governments and private foundations devoted major resources during the 1980’s and 90’s to solving long-standing water related problems and questions. Here in Nebraska we had a Model Implementation Project, Rural Clean Water Project, Demonstration Projects, two Hydrologic Unit Area projects, a Management System Evaluation Area project, the Burlington Northern Foundation Project, and more.

Push fast forward again and, where are we presently?

To answer the question: we have made much progress in some ways, but we still have a lot of work ahead of us. It’s difficult to pick up a newspaper or news magazine without finding at least one article on erosion control, hypoxia in the Gulf of Mexico, consolidated animal feedlot operations, E-coli bacterial contamination of ground water (yes, it happened in the state of New York), total maximum daily loads, conjunctive use, endangered and/or threatened species, ...and the list goes on.

So, what needs to happen?

Let me answer that this way. We have researched water issues intensively — and more work still needs to be done. We’ve implemented educational programs and demonstrated responsible use practices. One of the most productive things that could happen would be for people to take ACTION!!

Many people make New Year’s resolutions. I’d suggest that all of us make a resolution to be more responsible in using our water resources. Think before we dump our hazardous material into a sink or toilet bowl or sewer. Reduce our consumption. Don’t throw “button” batteries into household waste; they contain mercury which persists in the environment. The possibilities are nearly endless.

Another century from now another generation will be looking back and asking themselves what progress has been made with respect to water resources. What we do as we go forward into the year 2000 will dictate what they will be saying.

Short Takes

The Water Center has been recognized by The Groundwater Foundation as one of 21 Groundwater Guardian National Partners for 1999. The honor was given in Atlanta, GA, where 150 communities and 40 affiliates from the U.S. and Canada were designated as 1999 Groundwater Guardian National Partners. (Continued on page 6)
NU Research Faculty Voice Desires for Strong Water Center Leadership

by Steve Ress

More than two dozen University of Nebraska researchers and state and federal agency representatives voiced support for strong leadership to help guide the UNL Water Center/Environmental Programs unit and its water-related research into the next century.

These opinions were shared when faculty from all NU campuses gathered at a day-long water research forum at Gretna’s Ak-Sar-Ben Aquarium on Tuesday, Oct. 5. The forum, traditionally an annual event for the Water Center, was the first held in nearly five years.

Darrell W. Nelson, Dean and Director of UNL’s Agricultural Research Division, charged attending faculty with “Mapping a course for NU water research in the coming millennium.”

Talented and diverse NU water research and education efforts increasingly need to work together for the common good in an era of increasingly difficult funding challenges, Nelson said.

He and UNL Vice Chancellor for Research Marsha Torr stressed that an ever-increasing share of university research dollars will come through competitive grants and that if NU is to stay competitive as a research institution, it must get its fair share of those dollars.

The nation’s top 100 research Universities currently receive 70 percent of their research funding from the federal government, while at NU, that figure is presently about 62 percent. State, industry and foundation/organizational funding sources must also be vigorously pursued, Torr said.

Barriers must be brought down, research teams must be formed and “horizontal collaboration” should be the rules in helping make NU more competitive among the nation’s research Universities. Research efforts must be of high quality and value, she stressed.

Three state and federal governmental representatives and five NU faculty members then presented viewpoints on the central theme of “Looking Ahead: Future Needs, Future Opportunities, Future Directions” in water research and educational programming.

These points of view came from Pat Rice, Nebraska Department of Environmental Quality; Rice said government and researchers must find new ways to pool resources, coordinate, communicate and reduce duplication. Leroy W. Sievers of the Nebraska Department of Water Resources and Mike Slifer of the U.S. Geological Survey echoed many of these comments, with Slifer noting that the USGS has particularly close and strong ties with NU research efforts. He commented that the agency would again like to be located on the UNL East Campus.

Faculty members Kyle D. Hoagland, J. Michael Jess, Peter Longo, John Stansbury and Raymond J. Supalla presented views of the current and possible future directions of NU research and educational efforts.

Many noted the need for funding student intern and graduate students, relevant research and inter-campus/inter-department cooperation. Faculty researchers also must keep the needs of stakeholders in mind, as well as emerging challenges in groundwater, surface water and soil contamination.

Forum participants divided into four groups at lunch to discuss the future of the UNL Water Center. Their conclusions and recommendations, delivered that afternoon, included the following:

— The need for aggressive leadership and better coordination of research funding and programming. The Water Center director should facilitate and organize faculty and research efforts as a system-wide center directly under the guidance of the UNL Vice Chancellor for Research.

— The Water Center director should facilitate both long-term and immediate goals and funding of water-related research at NU. One of the top priorities would be the allocation of funds to researchers. The Water Center director should facilitate lateral interchange between the center and researchers.

— The UNL Water Center director should facilitate and actively pursue water research funding. Other important duties include the dissemination of information, both to the public and to research faculty, staff and students. The Water Center should be part of the office of the UNL Vice Chancellor for Research or Institute for Agriculture and Natural Resources (IANR). The Water Center should have no salaried faculty members other than the director. The Water Center director needs to act as a communicator, cheerleader, lobbyist and activist for research faculty.

— The UNL Water Center needs to act as a data clearinghouse for researchers. Focuses need to be on both short and long term research and programming. The director should be both technically proficient, but also a communicator, facilitator and public relations leader for associated faculty. The director’s position should be full-time.
With increased public concern about contamination of drinking water and changes in the way we view natural resources, comes the demand for a localized study to address groundwater quality and quantity in northwest Nebraska.

Historic records and data from the recent Nebraska Department of Environmental Quality study of groundwater quality in Box Butte County and Mirage Flats show a greater potential for groundwater contamination in the area around Alliance and Mirage Flats.

Many domestic wells in the Alliance and Mirage Flats area are showing an increase in nitrate levels; with some of these levels exceeding the 10 ppm Environmental Protection Agency (EPA) safety guidelines for drinking water. In response to these findings and increased public concern, the Upper Niobrara White Natural Resources District (UNWNRD) has introduced a program designed to assist producers in these target areas in implementing Irrigation and Nutrient Best Management Practices (BMPs) to reduce the potential for contamination of our groundwater supply by nutrients, nitrates, and other agricultural chemicals.

The Box Butte / Mirage Flats Groundwater Quality (GWQ) Project, which is supported by local, state, and federal funding, will focus on three primary objectives:

- Increase cropland acres where nitrogen management BMPs are utilized. Increase cropland acres where irrigation management BMPs are utilized.
- Inform and educate city residents, agricultural producers, other rural residents and school children about water quality and nonpoint source (NPS) pollution issues. Improving communication between the agricul-
Fourth Water Tabloid
Now Available from NU

The fourth in a series of water-related newspaper tabloids is now available from the University of Nebraska’s Water Center/Environmental Programs.

"Drinking Water - Understanding a Resource" is a 16-page tabloid addressing a wide range of state and regional drinking water issues and concerns. Both public and private supply, distribution and contamination issues are addressed.

"Primary purposes of the tabloid are to give people a better understanding of this abundant yet precious resource and to help them find the proper help if they need assistance with contamination problems, siting and constructing a domestic well and many other issues," said Edward F. Vitzthum, interim director of the NU Water Center/Environmental Programs.

The tabloid contains information on the new consumer confidence reports being used by public water systems; causes for public concern such as nitrates, bacteria and atrazine; how public water supplies are treated; proper construction and abandoning of water wells; source water, wellhead and groundwater protection programs; agencies and organizations to go to for help and information; a youth page; drinking water-related internet sites and lots of other useful information.

Copies of the tabloid were inserted in the Sunday, Dec. 5 statewide edition of the Omaha World-Herald newspaper. Additional copies are available free from the NU Water Center/Environmental Programs as long as they last. Remaining copies may be requested for educational program use.

The tabloid was funded through grants from the U.S. Environmental Protection Agency, Region VII and the Nebraska Department of Environmental Quality. Others assisting in its design and publication were the Nebraska Department of Health and Human Services System, Nebraska Association of Resources Districts, The Groundwater Foundation and NUs Institute of Agriculture and Natural Resources, Cooperative Extension Division, School of Natural Resource Sciences, Water Center/Environmental Programs and Biological Systems Engineering.

The NU Water Center/Environmental Programs published previous tabloids on water issues in 1994 and 1995 and on wetlands in 1998.

For a copy of this latest tabloid, contact NU Water Center/Environmental Programs at (402)472-3305 or e-mail sress1@unl.edu.

Laura Brady of Hastings looks over a display of NU Water Center/Environmental Programs publications and brochures at last month's Nebraska Water Resources Association/Nebraska State Irrigation Association annual conference in Kearney. (photo: Steve Ress).
Water News Briefs

Sixth Annual Undergrad Research Conference

The sixth annual University of Nebraska-Lincoln Undergraduate Research Conference will be held March 24 and 25.

“This is an excellent time to introduce promising students to the excitement of sharing their research and their observations,” said Karen Lyons, Honors Program assistant director and conference coordinator. This year’s conference coincides with the Centennial Research Fair.

For more information on the conference, contact Lyons at (402)472-2456 or e-mail klyons2@unl.edu. The conference is Friday afternoon, March 24 and Saturday morning, March 25.

Publications

Use of Constructed Wetlands for Stormwater Runoff (video), produced by Gary Goff, Rebecca Schneider, Paul Curtis and Glen Palmer. This video shows developers, natural resource managers, community planners, educators and others how properly constructed wetlands moderate flow extremes and improve water quality. Available from Cornell University Resource Center, 7 BTP, Ithaca, NY 14850 ($19.95).

The Quality of Our Nation’s Waters, U.S. Geological Survey. USGS reports some of the major findings of the National Water Quality Assessment Program on water quality issues of both regional and national concern. For a copy of the report contact the USGS at (703)648-5716 or e-mail nawqa_info@usgs.gov.

National Geographic Society Awarding Science Grants

The National Geographic Society is awarding grants ranging from $15,000 to $20,000 for scientific field research and exploration.

Of particular interest are multidisciplinary projects involving environmental issues such as biodiversity and habitat and the effect that human population have on them.

Candidates should possess a Ph.D. or equivalent and a minimum of three articles published in peer-reviewed professional journals. Doctoral candidates are occasionally considered.

For information contact Committee for Research and Exploration, National Geographic Society, P.O. Box 98249, Washington, DC 20090-8249; phone (800)647-5463 or e-mail jfiintel@ngs.org.

Call for Papers: Spatial Symposium in Reno, NV

Papers are invited for a symposium on “spatial methods for solution of environmental and hydrologic problems: science, policy and standardization — implications for environmental decisions.” The symposium will be held Jan. 25-26, 2001 in Reno, NV.

The symposium will provide a forum for the presentation of recent applications of spatial methods for solving environmental and hydrologic problems at the regional and local level. It will assist professionals, community groups and others in understanding applying spatial analysis methods to address environmental and hydrologic problems.

Papers will be presented as oral presentations, computer demonstrations or poster sessions. A variety of topic areas are being solicited. A 250-300 word preliminary abstract must be submitted no later than Jan. 31, 2000.

For more information, contact Dr. A. Ivan Johnson, 7474 Upham Court, Arvada, CO 80003-2758; phone (303)425-5610 or e-mail vern.singhroy@ccrs.nrcan.gc.ca.

Call for Papers: 11th Platte River Basin Symposium

Scientists, managers, educators, administrators and others interested in the unique ecosystem of the Platte River are invited to attend the 11th Platte River Basin Ecosystem Symposium set for Feb. 27-28 at the Kearney Holiday Inn.

“Managing the Platte River Basin ecosystem continues to be one of the most challenging and controversial topics in Nebraska,” said Gary Lingle, Platte Watershed Program coordinator at the University of Nebraska-Lincoln. “This symposium gives us an opportunity to discuss perspectives covering the research and management of the entire basin ecosystem.”

Symposium sponsors also invite reports on completed research. Progress reports on ongoing research or programming may also be considered. Presenters will have about 20 minutes to deliver their talks and posters will be accepted for dedicated poster sessions.

Paper and poster presentations will deal with the study, management and administration of ecological resources throughout the Platte River basin. Titles of presentations or poster topics and an abstract are due no later than Dec. 17 and should be sent to Lingle at Platte Watershed Program, 1400 E 34th St., Kearney, NE 68847.

For more information on the symposium or call for papers, contact Lingle at (308)236-1235 or e-mail g mingle@unl.edu.

From the Director

(Continued from page 2)

Guardians. This is the second year we have been so recognized and our appreciation goes to Foundation President Susan Seacrest and her staff for this special honor.

Our latest tabloid newspaper supplement is on drinking water. It was distributed with December 5 editions of the Omaha World-Herald. I want to publicly thank our editor Steve Ress and all those who contributed articles to this special publication.
DECEMBER

15-17: Conservation 2000: Agricultural TMDL Workshop, New Orleans, L.A. Contact (765)494-9555 or ctc@ctic.purdue.edu or http://www.ctic.purdue.edu

JANUARY

12: Water Resources Seminar, J. Michael Jess, 3 p.m., Room 116, L.W. Chase Hall, UNL East Campus, Lincoln. Open to the public. For information, phone (402)472-3305 or e-mail sress1@unl.edu.

12-15: Small Drinking Water and Wastewater Systems: Technology for the 21st Century, Phoenix, AZ. Sponsored by NSF National and Rural Water Research and Education Foundation. For information, contact Joseph Cotruvo at NSF International (202)289-2140 or e-mail cotruvo@nsf.org or H. Diane Snyder at RWREF (505)843-9119 or e-mail rwref@nm.net.

16-20: Fourth International Conference on Diffuse Pollution, Bangkok, Thailand. For information, contact Nitiyaporn Tomanee at (662)579-0111 ext. 1386 or e-mail ldd@mozart.inet.co.th.

19: Water Resources Seminar, 3 p.m., Room 116, L.W. Chase Hall, UNL East Campus, Lincoln. Open to the public. For information, phone (402)472-3305 or e-mail sress1@unl.edu.

23-26: Tailings and Mine Waste '00, Fort Collins, CO. Contact Linda I. Hinshaw at (970)491-6081, FAX (970)491-3584 or e-mail lhinshaw@engr.colostate.edu.

26: Water Resources Seminar, 3 p.m., Room 116, L.W. Chase Hall, UNL East Campus, Lincoln. Open to the public. For information, phone (402)472-3305 or e-mail sress1@unl.edu.

27-28: UV 2000: A Technical Symposium, The Double Tree Hotel, Costa Mesa, CA. Sponsored by the National Water Research Institute in collaboration with the California Department of Health Services. For information, contact the NWRI, F.O. Box 20865, Fountain Valley, CA 92728-0865 or phone (714)378-3278.

30-Feb: Water Reuse 2000 conference and exhibition, San Antonio, TX, cosponsored by the Water Environment Federation (WEF) and American Water Works Association (AWWA). For information, or to register, phone (800)926-7337 or register online at www.awwa.org/00reuse/regsfm.htm.

FEBRUARY

1-4: Aquaculture America 2000, the national aquatic conference and exposition, Marriott Hotel, New Orleans, Louisiana. For information, contact the World Aquaculture Society, 143 J.M. Parker Coliseum, Louisiana State University, Baton Rouge, LA 70803, phone (225)388-3137 or e-mail wasmas@aol.com.

MARCH

1: Water Resources Seminar, 3 p.m., Room 116, L.W. Chase Hall, UNL East Campus, Lincoln. Open to the public. For information, phone (402)472-3305 or e-mail sress1@unl.edu.


9: Water Resources Seminar, 3 p.m., Room 116, L.W. Chase Hall, UNL East Campus, Lincoln. Open to the public. For information, phone (402)472-3305 or e-mail sress1@unl.edu.

14: North Plate Basin Water Policy Conference, NU Panhandle Research and Extension Center, Scottsbluff. For more information, contact C. Dean Young at (308)632-1246 or e-mail cyoung@unl.edu.

16: Water Resources Seminar, 3 p.m., Room 116, L.W. Chase Hall, UNL East Campus, Lincoln. Open to the public. For information, phone (402)472-3305 or e-mail sress1@unl.edu.

19: Water Resources Seminar, 3 p.m., Room 116, L.W. Chase Hall, UNL East Campus, Lincoln. Open to the public. For information, phone (402)472-3305 or e-mail sress1@unl.edu.

23: Water Resources Seminar, 3 p.m., Room 116, L.W. Chase Hall, UNL East Campus, Lincoln. Open to the public. For information, phone (402)472-3305 or e-mail sress1@unl.edu.

24: Conservation Law Conference, Lincoln. For more information, contact the Nebraska Environmental Bar Association at 402-472-1965 or e-mail nebraska@nebraska.org.

APRIL

5: Water Resources Seminar, 3 p.m., Room 116, L.W. Chase Hall, UNL East Campus, Lincoln. Open to the public. For information, phone (402)472-3305 or e-mail sress1@unl.edu.

12: Water Resources Seminar, 3 p.m., Room 116, L.W. Chase Hall, UNL East Campus, Lincoln. Open to the public. For information, phone (402)472-3305 or e-mail sress1@unl.edu.

19: Water Resources Seminar, 3 p.m., Room 116, L.W. Chase Hall, UNL East Campus, Lincoln. Open to the public. For information, phone (402)472-3305 or e-mail sress1@unl.edu.

25-26: The Eleventh Global Warming International Conference and Expo, Boston, M.A. Advanced registration deadline is Jan. 15, 2000. For information, write to GWXI Expo Coordinator, P.O. Box 5275, Woodridge, IL 60517-0275 or FAX (630)910-1561 or at www.GlobalWarming.net
"Cooperation and Tension: The History, Reality and Future of Nebraska’s Interstate Agreements"

For more than 75 years, Nebraska’s interstate agreements on water and natural resources have been filled with intrigue, tension, court battles and sometimes cooperation.

The past, present and future of these agreements will be explored in a series of 13 public lectures on the University of Nebraska-Lincoln East Campus beginning next month. The weekly seminars will explore the following topic areas:

An overview of and common reasons states enter into agreements and the legalities of interstate agreements.

Helping to deliver this overview will be University of Nevada-Las Vegas professor Douglas Grant, an expert in “Interstate compacts and related court decrees,” according to seminar co-organizer Mike Jess of the NU Conservation and Survey Division.

Other seminar speakers will delve into Nebraska’s first interstate compacts: The South Platte River Compact of 1923; The Wyoming-Nebraska Compact on the Upper Niobrara River of 1962; and The Kansas-Nebraska Big Blue River Compact of 1968.

Chief among this group of speakers will be James Sherow, professor of history at Kansas State University. Sherow has researched and written extensively on the topic of western water law and is considered an authority on the Arkansas River lawsuit between Kansas and Colorado.

“His seminar should provide some interesting background in relation to the current dispute between Kansas and Nebraska on the Republican River,” said Jess.

Other featured speakers will be Richard Opper, executive director of the Missouri River Basin Association; and Nebraska native Clayton Lukow, presidential-appointed chair of the Blue River Compact Committee.

Also to be examined during the seminar series are resources states have if negotiations fail to yield a compact; and the status of litigation between Nebraska, Wyoming, Colorado and the U.S. government.

Commitments made in the Republican River Compact of 1943 and recent complaints and counter-claims made relating to it will be the subject of two separate seminars.

Additional seminars will present perspectives on interstate tensions on the Missouri River and the Central Interstate Low-Level Radioactive Waste Compact of 1983.

Weekly lectures begin Wednesday, Jan. 12 and continue each Wednesday afternoon through April 19 (except March 8 and 15). Lectures will be presented in Room 116 L.W. Chase Hall on the UNL East Campus.

The seminar series may be viewed as a free public lecture or taken for graduate or undergraduate student credit in Agronomy; Forestry, Fisheries and Wildlife; Geography; Geology; and Natural Resources. Seminars are organized and presented by the School of Natural Resource Sciences, Water Center/Environmental Programs, Conservation and Survey Division, Institute of Agriculture and Natural Resources, College of Law, and the University of Nebraska-Lincoln. Partial funding for the seminar is provided by the Williams Trust.

For more information on taking the lecture series for credit, or on the seminar itself, phone (402)472-3305 or e-mail sressl@unl.edu.