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Water Center, The

6-2000

Water Current, Volume 32, No. 3, June 2000

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"Water Current, Volume 32, No. 3, June 2000" (2000). *Water Current Newsletter*. 228.

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Water Current

UNL's National Drought Mitigation Center Focused on Current Drought Conditions, Offers Variety of Information

by **Steve Ress**

The current drought is likely to stay around for awhile, which means staying informed.

"There are lots of factors contributing to drought and one of them is an accumulated deficiency in precipitation. I don't think anyone in Nebraska would argue that we began to accumulate those deficiencies last fall,"

said the director of the National Drought Mitigation Center (NDMC) and International Drought Information Center (IDIC) at the University of Nebraska's Institute of Agriculture and Natural Resources in Lincoln. Compared to relatively wet years in 1998 and 1999, precipitation over the eastern part of Nebraska has been roughly 50 to 60 percent of normal in most areas of the state since last September.

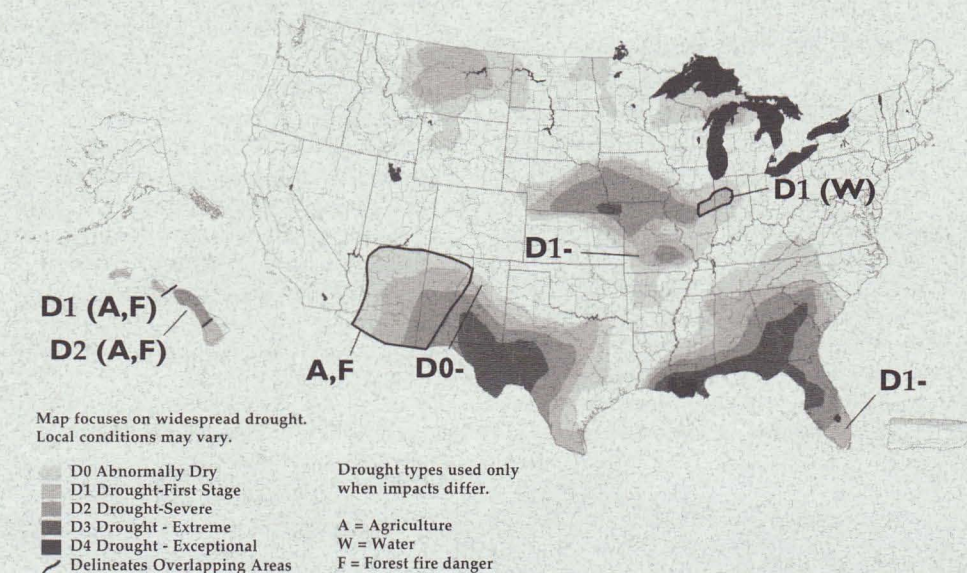
Those steadily accumulating shortfalls are already beginning to cause problems for crop and livestock producers in many parts of the state, as well as for municipal water systems, some of which have begun or are considering rationing or watering curtailment plans.

"We pretty much missed the fall recharge period last year, had a warm and dry winter and are very close to missing the spring recharge season right now," Don Wilhite said (when interviewed in mid-May). These abnormal deficiencies in moisture are showing their impacts in predictable phases, he said.

First in low soil moisture levels and in below normal stream flows in parts of the state, he said. Ultimately,

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U.S. Drought Monitor



The "U.S. Drought Monitor" map is the result of a partnership between the U.S. Department of Agriculture, the National Oceanic and Atmospheric Administration and the National Drought Mitigation Center at UNL. The map is being used by such notable media sources as *CNN*, *USA Today* and *The New York Times* (courtesy IANR).

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Summer Water Tour Leaves Kearney July 24; Internal Search Close to Naming New Permanent Water Center Director

from the DIRECTOR

Edward F. Vitzthum

As you read this we are completing preparations for another fun and educational water and natural resources tour. This year's tour is July 24-26, beginning and ending in Kearney. Primary focus will be transfer and marketing of water rights, a controversial topic that will be examined from perspectives both in our own state and neighboring Colorado.

A number of conservation measures that are either in place, or being planned, will be explored on the tour. They will have a direct bearing on instream flows in the South Platte River as part of the Three State Cooperative Agreement to augment river flows for threatened and endangered wildlife species.

There also will be discussions with central Nebraska irrigators who are marketing and trading irrigation allocation rights.

Stops in the Denver area will include the Coors brewing company at Golden for presentations on corporate water operations and water rights acquisitions, hybrid crop development and a tour of the brewery. Baseball fans will have a chance to spend an evening at a Colorado Rocky's/L.A. Dodgers game.

Later, there will be discussions with property owners who have sold water rights to Denver or its suburbs and looks at what Colorado water districts are doing to cope with changes brought about from off-setting demands for additional flows to support wildlife habitat in downstream Nebraska. Groundwater augmentation plans in nearby Greeley and a visit to Tamarack Ranch State Wildlife Area are on the itinerary, as well.

As always, the cooperation among tour co-sponsors has been wonderful in terms of creating an agenda and working together to secure partnerships and funding that make the tour possible. Co-sponsors include the Kearney Area Chamber of Commerce, Central Nebraska Public Power and Irrigation District, Nebraska Public Power District, Gateway Farm Expo, the Nebraska Water Conference Council and UNL's Institute of Agriculture and Natural Resources, School of Natural Resource Sciences, Conservation and Survey Division and Water Center/Environmental Programs.

In This Edition

I want to call your attention to several articles appearing in this edition of the *Water Current*:

NU water and agricultural law specialist J. David Aiken presents a summary and commentary of what did (and did not) occur in regards to proposed water and environmental legislation during the recently completed session of the Nebraska Unicameral. This was not an intensive year for legislative action on water

and environmental fronts, making Aiken's recap and commentary perhaps that much more poignant.

There also is a rundown on the radioactive element radium, which is present naturally in varying amounts, in most groundwater sources of drinking water. It is but one of many potential drinking water contaminants that we frequently receive questions about. We plan to profile other potential drinking water contaminants in future issues of the *Water Current*.

Jo Ann Wagner of the Nebraska Department of Health and Human Services Regulation and Licensure helps explain some of the new rules the U.S. Environmental Protection Agency is imposing on public water systems in the areas of capacity development, surface water treatment, disinfectants and disinfection byproducts, and water system operator certification.

Don Wilhite, director of the National Drought Mitigation Center and International Drought Information Center at UNL, was interviewed about a topic that is on just about all of our minds these days.....drought. His centers offer some of the most comprehensive and up-to-date information on drought, drought planning and drought conditions available anywhere in the world. Drought condition maps being generated by the NDMC, in cooperation with other entities, are being circulated to the media and are being used by such notable sources as CNN and the *New York Times*.

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Water Current

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This newsletter is published with partial financial support from the Department of the Interior; U.S. Geological Survey. The content does not necessarily reflect the views and policies of the Department of the Interior, nor does mention of trade names or commercial products constitute endorsement by the U.S. Government.

New Rules for Public Drinking Water

by Jo Ann Wagner,
Nebraska Department of Health and Human Services
Regulation and Licensure

Public water supply systems are being faced with many new rules by the U.S. Environmental Protection Agency (EPA).

Some that will be coming soon include:

1. Capacity Development Strategy for existing systems (technically not a rule, but a requirement of the Safe Drinking Water Act Amendments of 1996).
2. Interim Enhanced Surface Water Treatment Rule.
3. Disinfectants/Disinfection ByProducts Rule.
4. Operator Certification Rule.

The Nebraska Department of Health and Human Services Regulation and Licensure formed a stakeholders committee that met over the past year to develop a strategy to help water systems improve their technical, managerial and financial capacity. A "Report of Findings" identifies factors that can enhance or impair water system capacity development, recommendations on how the department can help systems improve their capacity, ways of measuring the success of the strategy, and public involvement in the process of preparing the report.

Copies of the report are available at www.hhs.state.ne.us/enh/enhindex.htm or by calling Janell at (402)471-6435. The department will begin implementing the strategy in August.

The Interim Enhanced Surface Water Treatment Rule applies to systems using surface water and groundwater under the direct influence of surface water. For systems with a population of 10,000 or more the rule goes into effect on January 1, 2002. For systems with a population of fewer than 10,000 the rule takes effect January 1, 2004. The rule strengthens turbidity (cloudiness and/or dirtiness in the water) requirements in order to improve *Cryptosporidium* removal. It requires individual filter turbidity monitoring provisions and more frequent sanitary surveys. These surveys are on-site inspections of public water systems where inspectors look at the components of the system, records, etc.

The Disinfectants/Disinfection ByProducts Rule affects community and nontransient noncommunity public water systems that include a disinfectant in their water. Transient systems are affected only if they use chlorine dioxide. This rule was developed because disinfectants can react with naturally-occurring materials in water to form byproducts that may pose health risks. These byproducts can include total trihalomethanes, haloacetic acids, bromate and chlorite, for example.

Disinfectants kill pathogens. This rule is designed to balance the risks between microbial pathogens and disinfection byproducts (DBPs). The rule establishes maximum residual disinfectant levels (MRDLs) for chlorine, chloramine and chlorine dioxide. It also establishes maximum contaminant levels (MCLs) for total trihalomethanes, haloacetic acids, chlorite and bromate.

Water systems using surface water or groundwater under the direct influence of surface water and that also use conventional filtration treatment are required to remove specified percentages of organic materials, measured as total organic carbon that may react with disinfectants to form DBPs.

*Public water supply systems
are being faced with many
new rules by the U.S.
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Agency (EPA).*

The Operator Certification Rule is expected to take effect early next year. Because Nebraska has had an operator certification program for many years, the changes will be relatively minor. New requirements include: exams for certification must be validated, an ongoing stakeholders group must be established for the purpose of making revisions to the rules and the certification program must be reviewed periodically by internal and occasionally by an external/peer source. Nebraska must also develop a process for recertification of individuals whose certification has expired for a period exceeding two years.

(Editor's Note: Nebraska has 1,231 public water systems relying on groundwater sources and five using surface sources. These new EPA rules require states to survey drinking water systems to determine whether there is contamination and correct it (if necessary). Disinfectants such as chlorine may be used, but other options may also be explored. EPA estimates that the new rules will cost households less than \$5 per year and will prevent more than 115,000 illnesses per year).

Radium and It's Potential Effects on Drinking Water

Radium (Ra) is a naturally occurring radioactive element present in varying amounts in rocks and soil that, at high concentrations, has potential for creating health problems in drinking water.

Deep bedrock aquifers used for drinking water can sometimes contain radium above regulatory standards, however most aquifers do not contain high concentrations of radium. Radium cannot be seen, tasted or smelled in drinking water.

Immediate health risks from drinking water containing low radioactivity levels are small, but consuming this water for a lifetime may increase potential health risks.

Radium sources include storm-water runoff from mining operations, discharges from industrial and medical activities and fallout from nuclear weapons detonation or accidental discharge from nuclear power facilities.

Radium in groundwater primarily occurs as two radioactive isotopes, each having a different half-life. These are Ra 226 and Ra 228.

Defining the Risk

The U.S. Environmental Protection Agency (EPA) has established maximum contaminant levels (MCLs) for combined Ra 226 and 228 and for gross alpha radiation in drinking water.

The MCL for combined radium 226 and 228 is 15 pCi/l (picocuries per liter). This MCL is well below levels at which health effects have been observed. The estimated health risks from low levels of radium are

small and short-term exposures pose extremely small levels of risk. The risk associated with consuming water containing 5 pCi/l of radium for one year is comparable to one chest X-ray. There are no health risks associated with bathing, washing dishes or doing laundry in water containing radium since the skin blocks the alpha radiation.

Radium levels in groundwater in Nebraska are generally about 1 pCi/l, though some areas can exhibit significantly lower or higher concentrations.

Ra

Radium is known to cause bone cancer if consumed in high doses. It enters the body naturally with water and food. Internally deposited radium emits radiation as alpha particles that may then damage surrounding tissues. It is chemically and structurally similar to calcium and the body absorbs it into bones.

Countering a Radium Problem

In dealing with a radium problem in drinking water, potential solutions include a new water source, blending water from more than one source, or removing the radium by treatment.

A fairly inexpensive treatment method is ion exchange, which is used in home water softeners. This process can remove approximately 90 percent of the radium.

Another possible treatment method is lime-soda ash softening which has demonstrated an average 80 percent removal success. In this process, lime and soda are added to water and combine chemically with radium to convert it into an insoluble compound.

Reverse osmosis (RO) can remove about 90 percent of radium. With RO, contaminated water is forced through a semipermeable membrane that will not allow dissolved substances to pass through.

When selecting a treatment process, the concentrations of radium in both the untreated and finished water should be taken into account.

Treating Private Wells

Of the treatment methods described earlier, ion exchange using zeolite softening is effective for home use. Radium, however can break through an improperly maintained softener. Users need to monitor softeners periodically to assure they are operating properly.

Small RO and distillation units may be effective in radium removal in home systems, but the units have limited capacity and restrict water flow. The devices can only be used to treat water from a single faucet, rather than the entire water supply.

Additionally, other water quality problems such as high iron and manganese, may interfere with these treatment methods.

(Editor's Note: Taken in part from the National Drinking Water Clearinghouse "On Tap," Fall 1999, Vol. 8, Issue 3 and from "The Aquifer," the journal of The Groundwater Foundation, Dec. 1999, Vol. 14, No. 3).

From the Director (continued from page 2)

New Director

As many of you are aware, an internal search has been in progress for a permanent director for the NU Water Center. Two candidates have interviewed for the half-time administrative position. The other half of the new director's time will be spent on research, teaching, extension or service activities. We expect that the new director will be named in the near term.

In addition, there will be changes in the administrative structure of the Water Center. The Water Center Director will no longer report to the Director of the School of Natural Resource Sciences, but jointly to the Deans of the Agricultural Research Division and Cooperative Extension Division.

The Environmental Programs component of the unit will be dissolved. Pesticide applicator certification training will be absorbed into UNL's

Agronomy Department and chemigation training will be administered through Biological Systems Engineering. End users can expect to see little difference in the delivery of these programs.

The future of the Water Center is assured, but in these financially challenging times, it is certain that the new director will be reaching out in new directions to secure needed research, extension and educational funding and partnerships.

Festival of Color Given IANR Team Effort Award

by Molly Klocksinn,
IANR news writer

Festival of Color, an annual turfgrass and landscape display and open house, won a top award from NU's Institute of Agriculture and Natural Resources in April.

The 15-member coordinating team earned IANR's "2000 Team Effort Award" and received \$10,000 to continue the program, which showcases environmentally compatible landscapes. The annual award honors an IANR faculty and staff team that produces results in research, teaching, extension, service or international programs. The award was presented during the annual IANR Conference at the UNL East Campus.

Team members are: **Fred Baxendale**, entomology specialist; **Kathy Bennetch**, secretary, horticulture; **Elbert Dickey**, extension interim dean; **John Fech**, extension educator, horticulture; **Roch Gaussion**, turfgrass specialist; **Bob Gilmore**, master gardener; **Deloris Harder**, outreach education programming assistant, NU Agricultural Research and Development Center; **Steve Ress**, communication specialist, Water

Center/Environmental Programs; **Steve Rodie**, landscape horticulture specialist; **Bob Shearman**, turfgrass specialist; **Don Steinegger**, horticulture specialist; **Anne Streich**, horticulture assistant; **Elbert Trayler**, coordinator, non-point source pollution program, Nebraska Department of Environmental Quality; **John Watkins**, plant pathologist and **Lannie Wit**, unit manager, John Seaton Anderson Turfgrass and Ornamental Research Area.

Festival of Color began in 1993 as a venue for university specialists to share research findings on water conservation and maintaining water quality in home and commercial landscapes. The festival has grown from 850 visitors in that first year, to an average of more than 9,000 people annually the last three years. Festival organizers say no other University of Nebraska event besides Husker football consistently draws more people. At least two other states, Illinois and Ohio, have created similar events.

Festival talks, demonstrations and guided tours highlight IANR research and teach consumers to protect water quality as they design and maintain home landscapes.

UNL's National Drought Mitigation Center Focused on Current Drought Conditions

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groundwater supplies and reservoir levels will be affected if the drought continues.

"Right now, the forecast is for below normal precipitation and above normal temperatures to continue at least through the summer," said Wilhite.

The beginning of a change in those trends could come if the current "La Nina" weather pattern begins to break-up this summer or fall, he said. "It's also possible that the La Nina trends could continue a bit longer than that."

Types of Drought

Wilhite also cautioned that there are different ways of measuring or perceiving droughts: Meteorological drought is based on an accumulated deficiency of rainfall over an extended period of time and is usually region-specific. Normally this is the first manifestation of drought. Agricultural drought occurs when there isn't enough soil moisture to meet the needs of a particular crop at a particular time. Agricultural drought typically is evident after meteorological drought but before hydrological drought.

Hydrological drought refers to deficiencies in surface and subsurface water supplies. It is measured in streamflow and in lake, reservoir and groundwater levels. Hydrological drought can take a year or more to become apparent and these components typically take months or years to recover once precipitation returns to normal levels.

Some of the most comprehensive and up-to-date information on drought planning, types of drought and current drought conditions is available from Wilhite's NDMC. For those with internet access, go to <http://enso.unl.edu/ndmc>. There you will find a clearinghouse of

(Continued on page 6)



University of Nebraska Soil and Water Resources Club members, consisting of both undergraduate and graduate students, toured irrigation and hydropower projects from Ogallala to Holdrege in the Central Nebraska Public Power and Irrigation District in early April. The group stopped for a picture in front of Kingsley Dam at Lake McConaughy (photo: Steve Ress)



Water News Briefs

Free Tabloids Still Available

Copies of "Drinking Water - Understanding a Resource" remain available from the University of Nebraska Water Center/Environmental Programs.

The tabloid contains information on understanding 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 other useful information.

Copies of 1998's "Wetlands - Understanding a Resource," which explores state and regional wetland issues, are also available. For copies of either tabloid, contact NU Water Center Environmental Programs at (402)472-3305 or e-mail sress1@unl.edu.

2000 Groundwater Foundation Fall Conference

The Groundwater Foundation's fall Groundwater Guardian designation and conference, "Asking the right Questions: Evaluating the Impact of Groundwater Education" will be at the Lied Conference Center, Nebraska City Nov. 13-15.

Contact: info@groundwater.org or phone (800)858-4844 or (402)434-2740 (in Lincoln).

New Water Resource List-Serve

The Water Forum is a free and open forum for discussion of water resources issues, including groundwater, surface water, drinking water, wastewater, and other relevant water resource topics. The list is moderated by Ken Bannister, founder of Groundwater-Digest, currently the world's largest groundwater discussion forum. To join this group, visit <http://www.egroups.com/list/waterforum/info.html>

List-Serve on the Human Right to Water

The Institute for Agriculture and Trade Policy has initiated a list-serve for people interested in obtaining information on forwarding the human right to water. The list will include information on water trade, privatization, pricing, and full cost accounting. Those that are interested can send a message to Mark Ritchie at mritchie@iatp.org.

Adopt-A-Watershed Leadership Institute

The Leadership Institute is designed to help educators and community leaders build sustainable, successful service learning, community-based, watershed education programs that improve student achievement. Participants receive intensive training, follow-up support, curriculum training, instructional supplies, and a stipend. Contact Adopt-A-Watershed, phone: (530) 628-5334, email:

aaw@Adopt-A-Watershed.org, Web: <http://www.Adopt-A-Watershed.org>

Friends of the Rivers of California has released a report on dam removal titled "Rivers Reborn - Removing Dams and Restoring Rivers in California." The 20-page report identifies the two-dozen dams around the state that have been considered for removal or decommissioning. The report is available on Friends of the Rivers' web site at <http://www.friendsoftheriver.org>.

UNL's National Drought Mitigation Center Focused on Current Drought Conditions

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information that includes science and research findings, historical data, climate trends, forecasts, public policy and planning issues and resources for teachers and members of the media.

A new product from the NDMC is the "Drought Monitor" resulting from a partnership formed last year between the Joint Agricultural Weather Facility of the U.S.

Department of Agriculture, the Climate Prediction Center of the National Oceanic and Atmospheric Administration and the NDMC. The monitor integrates climate information and information from a variety of indices to determine drought severity across the U.S. The result is updated weekly and appears as a map that has been widely publicized by media sources that include *USA Today*, the *New York Times* and CNN.

Also available are free subscriptions to the NDMC/IDIC's *Drought Network News*. Contact Kim Klemsz at *Drought Network News*, IDIC/NDMC, 239 L.W. Chase Hall, University of Nebraska, P.O. Box 830749, Lincoln, NE 68583-0749 or phone (402)472-6707. The newsletter may be accessed on-line at <http://enso.unl.edu/ndmc/center/publish.htm>.

JULY

9-12: Watershed 2000, Vancouver, British Columbia. The Water Environment Federation and others are sponsoring this international conference to explore national and international challenges of managing watersheds. For information, contact the WEF at (703)684-2400.

24-26: Nebraska Summer Water Tour to Western Nebraska and Northern Colorado. Sponsored by the UNL Water Center, Kearney Area Chamber of Commerce and others. For information, phone (402)472-3305 or e-mail sress1@unl.edu.

AUGUST

1-4: Universities Council on Water Resources, "Living Downstream in the Next Millennium: Reconciling Watershed Concerns with Basin Management," Hilton Orleans Riverside Hotel, New Orleans, LA. For information, phone (618)536-7571 or e-mail ucowr@uwin.siu.edu.

6-11: Quebec 2000: 11th International Wetland/Peatland Meeting, Quebec, Canada. Contact Elizabeth MacKay at (418)657-3853 or e-mail cqvb@cqvb.qc.ca.

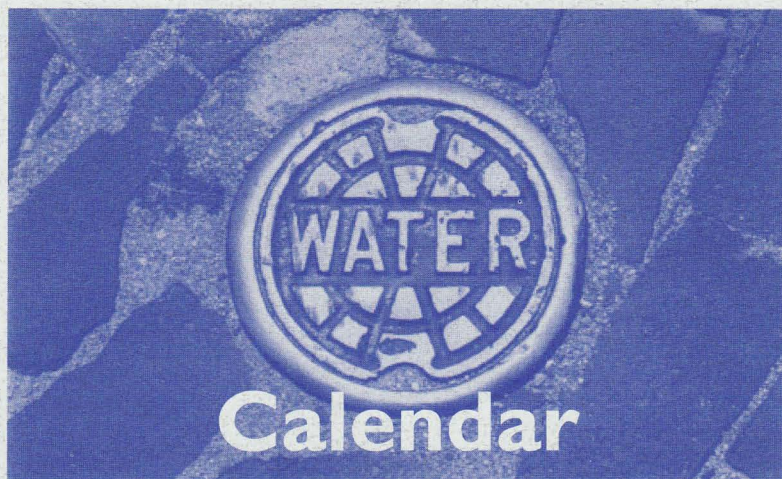
9-11: National Water Resources Association, Western Water Seminar, Sun Valley, Idaho.

28-31: American Water Resources Association Annual Specialty Conference, "Riparian Ecology and Management in Multi-Land Use Watershed," Doubletree Hotel, Lloyd Center, Portland, OR. For information, phone (540)687-8390 or e-mail info@awra.org.

29-31: "Carbon: Exploring the Benefits to Farmers and Society," Des Moines, IA. Registrations due Aug. 8. For information, contact Alice Vinsand at (515)225-1051 or e-mail avinsand@aol.com

SEPTEMBER

2-8: Fourth International Conference on Integrating Geographic Information Systems (GIS) and Environmental Modeling, Banff



Centre for Conferences, Banff, Alberta, Canada. For information, phone (303) 497-6330 or e-mail bpartners@colorado.edu.

17-22: International Conference on Coastal Zone Management, Saint John, New Brunswick, Canada. For information, phone (506)462-5961 or e-mail czczcc2000@gov.nb.ca.

22-24: Environmental Problem Solving with GIS, Cincinnati, OH. Contact Lisa Enderle at (412)741-5462 or e-mail lisa.e.enderle@cpmx.saic.com.

27-29: Alliance for Environmental Conservation: A Comprehensive Approach (to Nutrient Management), St. Louis, MO. Contact Wanda Linker at (334)265-2732 or e-mail wanda@apea.the-link.net.

OCTOBER

12-15: National Small Farm Conference, St. Louis, MO. Contact Cyremple Marsh at (573)682-5550.

17-21: Spanning Cultural and Ecological Diversity Through Environmental Education: The 29th Annual Conference of the North American Association for Environmental Education, South Padre Island, TX. Information is on the internet at www.naaee.org.

26-28: National Carbon Sequestration Conference, Missoula, MT. Contact Karen Reiter or Ted Dodge at (406)587-6965 or e-mail kreiter@mt.nrcs.usda.gov.

31-Nov. 4: Combined Conferences of the American Society of Agronomy, Crop Science Society of America and Soil Science Society of America, Salt Lake City, UT. Information on the internet at www.asa-cssa-sssa.org/olr99/.

NOVEMBER

6-9: Annual Water Resources Conference presented by the American Water Works Association, Miami, FL. For information, contact Michael J. Kowalski, AWRA director of operations at (540)687-8390 or e-mail mike@awra.org.

13-15: "Asking the Right Questions: Evaluating the Impact of Groundwater Education," / The Groundwater Foundation fall conference and Groundwater Guardian designation, Lied Conference Center, Nebraska City. For information, e-mail info@groundwater.org or phone (800)858-4844 or (402)434-2740.

28-Dec. 1: National Water Resources Association, Annual Conference, San Diego, CA.

Recapping 2000 Nebraska Water Legislation

by **J. David Aiken**,
**UNL Water and
Agricultural Law Specialist**

Two important water bills were enacted in 2000: LB900, which merged the Natural Resources Commission (NRC) and the Department of Water Resources (DWR), and LB1234, which primarily dealt with the Niobrara River Scenic River Council.

DWR-NRC merger. LB900 merged the NRC and DWR into the new Nebraska Department of Natural Resources (DNR). The merger is

effective July 1, 2000. Roger Patterson, the current DWR director, will be the DNR director. The 16-member NRC will continue to be responsible for the state natural resource funds the NRC currently administers. The current NRC staff, however, will become DNR staff answerable to the DNR director rather than to the NRC. The DNR director will be appointed by the Governor. The DNR will also assume the flood plain management responsibilities from the NRC.

The NRC-DWR merger is significant. The NRC has represented the

natural resource district (NRD) local-control philosophy in resource management at the state level, while the DWR has been primarily responsible for administration of surface water rights with some additional ground water management responsibilities. The merger may result in better coordination of state and local surface and ground water management policies in the future.

LB900 also broadens the cost-share program for water measuring devices in the Republican River

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basin, extending it from alluvial wells to also include surface diversions. LB900 grandfathers wells drilled between September 9, 1993 and July 1, 2000 that would otherwise be subject to regulations as surface water uses because they are located within 50 feet of a stream bank. This change exempts the owners of eight Platte basin island wells from DNR surface water regulations. Finally, LB 900 grants more flexibility to surface water users whose irrigation appropriations are so small that compliance with the statutory 1 cubic-foot-per-second (cfs) per 70 acres diversion rate is difficult. These users are now allowed to divert at a greater instantaneous rate so long as the volume of water used in a 7-day Monday through Sunday period does not exceed the amount of water otherwise allowable at the normal 1 cfs per 70 acres diversion rate.

Niobrara council. A portion of the Niobrara River in north central Nebraska was included in the federal wild and scenic river program in 1991. In 1998 the Nebraska Unicameral authorized the Niobrara Scenic River Management Council to help coordinate zoning activities within the corridor area in Cherry, Brown, Rock and Keya Paha counties. The Council included representatives from the counties and NRDs located in the Niobrara river corridor, the Nebraska Game & Parks Commission, the U.S. Fish & Wildlife Service, and the U.S. National Park Service (NPS). State funding was provided to fund Council activities contingent upon the affected counties adopting zoning regulations consistent with the scenic river designation.

The NPS, which is responsible for administering the Niobrara River scenic river, chose to allow the Niobrara Council to assume most of the management responsibility for the scenic river corridor. A federal court ruled in June 1999 that this delegation of authority violated federal law, and that the NPS needed to have primary scenic river management authority. The LB1234 Niobrara Council was reconstituted to satisfy the federal court ruling. The council is larger, including representatives of private landowners, recreational operators, timber interests and environmental interests, all appointed by the Governor. The legislation clarifies that the NPS has

primary management responsibility for the scenic river corridor. The new council also has expanded zoning authorities within the scenic river corridor.

LB 1234 also directs the Nebraska Department of Environmental Quality to prepare a comprehensive two-year review of water quality monitoring activities in Nebraska.

Water marketing and banking. The major water issue not addressed in 2000 (and consequently to be considered in 2001) is water banking. The initiative for the water banking and leasing proposals comes from efforts to implement a state-federal basin-wide endangered species recovery program for the Platte River. Water banking proposals would have allowed NRDs and other political subdivisions to jointly create water banks in which "conserved water" could be used to offset the effects of new water depletions, in order to satisfy state or federal environmental laws. The DNR would have served as a technical advisor for water banking, and would have determined the amount of water banked. Water banking would allow e.g. Platte valley communities (and other new Platte valley water uses) to offset those new water uses if they interfered with endangered species water needs. Water leasing would allow surface appropriators to temporarily lease their surface water for endangered species flow enhancement. Water leases would have been authorized for up to five years and could have been extended, subject to DNR approval. Water banking is necessary to allow new water uses to develop in the Platte, and water marketing (or leasing) will be necessary to meet even the first increment of increased water flows (130-150 thousand acre-feet per year) for endangered species under the Platte River cooperative agreement. Without water banking it will be extremely difficult to develop new water uses, even small municipal uses, within the Lexington-Chapman reach of the Platte. Similarly, without water marketing or leasing, it will be extremely difficult to meet endangered species target flows, and would likely result in the failure of the cooperative agreement.

WATER CENTER/ENVIRONMENTAL PROGRAMS

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