6-1996

Water Current, Volume 28, No. 3, June 1996

Water Current

Water Resources Tour to explore Republican River Basin

Groundwater and surface water management in the Republican River Basin will be the focus of this year's Nebraska Water Resources Tour.

Participants will spend July 22-24 in southwestern Nebraska. On July 22, the tour will leave from Lincoln. The first stop will be at the Crane Meadow Nature Center near Alda. A lunch and presentation by the Central Nebraska Public Power District will await the tour at Johnson Lake. In the afternoon, the tour will travel to the Nebraska College of Technical Agriculture at Curtis with visits to irrigation demonstration sites on the way.

Speakers from the Middle Republican Natural Resources District (NRD) and the UNL West Central Research and Extension Center will address local water issues and water-related research. At Hugh Butler Lake, the U.S. Bureau of Reclamation will give a presentation.

Tour participants will stay at the Best Western Chief Motel in McCook July 22 and 23. Plans call for a visit with famous McCook native sons one night and a an introduction to the Kansas perspective on water conflicts in the Republican River basin the other night.

Tour stops on July 23 include Swanson and Enders reservoirs, a Maximum Economic Yield agricultural production operation west of Imperial, a limited irrigation field trial site in northeast Chase County and a terrace and ecofallow site near Wauneta. Speakers from the Upper Republican NRD and the U.S. Bureau of Reclamation will address the tour.

On July 24, the tour will travel to Harlan County Reservoir. Representatives of the Frenchman-Cambridge Irrigation District and the Lower Republican NRD will join the tour.

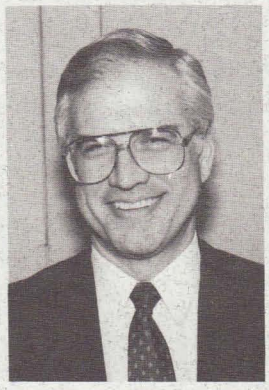
The tour will stop at the High Point Shelter on Harlan County Reservoir near Republican City for a visit with an U.S. Army Corps of Engineers representative, then travel to Red Cloud. An overview of the Lower Republican/Little Blue Special Groundwater Protection Area will be given on the bus. In Red Cloud, the tour will have lunch and visit the Elm Creek Hydrologic Unit Area before heading back to Lincoln.

The tour is sponsored by the Nebraska Water Conference Council, the Conservation and Survey Division and the Water Center/Environmental Programs unit and the Institute of Agriculture and Natural Resources at the University of Nebraska-Lincoln and the Nebraska Natural Resources Commission.

All subscribers to the Water Current will receive a registration flier for the water tour in the mail this month. Tour cost is $200 per individual, which includes transportation, hotel and meals. For more information, contact Karen Stork, Nebraska Water Conference Council, 113 Nebraska Hall, University of Nebraska-Lincoln, Lincoln, NE 68588-0517, (402) 472-7530.

Vol. 28 No. 3
June 1996

Summer brings flurry of grant-related activities



Bob G. Volk

from the DIRECTOR

The Water Center/Environmental Programs unit has assumed responsibility for organizing a 13-state regional competition for U.S. Geological Survey grant funds.

Approximately $800,000 is available in this competition. We are currently selecting research proposal reviewers with the final selection scheduled for July. Receiving the research proposals from other states has been very interesting in that many of the proposed projects are similar to what we are researching in Nebraska.

Topics such as groundwater/surface water interaction, groundwater and surface water contamination by atrazine and nitrates and riparian buffer strips for stream protection are common topics of interest.

The National Water Resources Association, which is based in California, will be awarding Nebraska another $100,000 grant. This grant will be matched by the Nebraska Research Initiative.

We have announced this grant to University of Nebraska faculty and expect to receive a number of research proposals. The research funded will help us better understand and protect our water resources.

Please be aware of the Nebraska Water Resources Tour set for July 22-24 (see cover story). There has been much media coverage of the water rights and water quality conflicts associated with the Republican River Basin and Harlan County Reservoir. This tour is designed to help participants learn more about water quantity and quality issues in the area.

Graduate fellowships in the water sciences are still available at the University of Nebraska-Lincoln through the USDA National Needs Ph.D. Graduate Fellowship Program.

Strong research programs are available in water resources engineering, hydrologic engineering, solute transport, fate of agricultural chemicals, groundwater quality, waste management, global climate change, water and carbon exchange and land use exchange.

Fellows will receive an annual stipend of $17,000. Tuition will be waived. Funding is available for three years. Applicants must be U.S. citizens and should have strong academic credentials. Interest in a career devoted to food and agricultural science is essential. Contact Dr. Derrel Martin, 231 L.W. Chase Hall, University of Nebraska, Lincoln, NE 68583-0726, (402) 472-1586.

Water Current

Water Center/
Environmental Programs
103 Natural Resources Hall
Lincoln, NE 68583-0844
Phone: (402) 472-3305
Fax: (402) 472-3574
E-mail: bhurst@unlinfo.unl.edu
http://ianrwww.unl.edu/ianr/waterctr/wchome.html

Bob G. Volk — Director
Roy F. Spalding — Associate Director, Water Sciences Laboratory Director
Edward F. Vitzthum — Coordinator of Environmental Programs
Robert D. Kuzelka — Assistant to the Director
Bettina Heinz — Editor

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.

Of groundwater, surface water and fish — the 94th Nebraska Legislature adjourns

April 18 saw the 49 Nebraska state senators head home with at least a few more water-related issues addressed, if not totally resolved. The second session of the 94th Nebraska Legislature established in law a means to manage the interrelationship between surface water and groundwater, a.k.a. integrated management or conjunctive use.

Legislative Bill (LB) 108, which had been introduced in 1995, was passed after debates and amendments which some say left it too "watered down" to have any impact. Feeling otherwise, its opponents mounted an unsuccessful 11th hour campaign to have Governor Ben Nelson veto the bill. Nelson signed the bill, which had been generated by the Nebraska Water Council he had appointed.

The final bill affirms Nebraska's doctrine of local control to the point that the Nebraska Department of Water Resources, the state water regulating authority, until 1999 can only use the bill in the Republican River basin or in the case of interstate disputes. The real authority to use the bill is permissive and rests almost solely with Nebraska's 23 natural resources districts (NRDs).

As passed, LB 108 significantly reorganizes the Nebraska Ground Water Management and Protection Act. NRDs now will be able to manage groundwater for quantity and quality purposes *and* when it is hydrologically connected to surface water if use of that groundwater is affecting or likely to affect surface water supplies.

It will probably be a few years before the dust settles and the bill is used and challenged in the courts.

Many bills before the legislature were held up due to extensive and intensive debate and work on the state's property tax system. One final bill in this area, LB 1114, may cause some NRDs to think twice about using LB 108. LB 1114 removed their separate taxing authority when managing groundwater, effective July 1, 1998. Thus the legislature again seemed to continue its tendency to give NRDs more

duties with less funds or capability to raise funds to carry them out.

In another water-related fiscal move through LB 1322 the senators did expand the uses of the Nebraska Investment Finance Authority Act to assist municipalities in providing safe drinking water facilities. This change is in anticipation of similar actions by the federal government.

The Nebraska Game and Parks Commission is authorized through LB 584 to raise funds through an aquatic habitat stamp. The money will be used to maintain, restore and enhance existing aquatic habitat.

On the other hand, LB 923 requires that the commission establish a free fishing day annually between March 15 and October 15.

The commission did not lose an important power due to the failure of LB 1127 to advance. The bill would have removed the commission's ability to apply for instream flow appropriations. This is a power it now shares with the NRDs.

The commission's pending application for an instream appropriation in the Platte River was probably a factor behind the bill's introduction.

In a less controversial and perhaps more productive vein, LB 1241 passed, which tightened licensing requirements under the state's Water Well Contractors Licensing Act. The bill also allows NRDs to cost-share at a reduced rate in their efforts to decommission water wells (abandoned wells).

Although the senators have now returned to their districts, they did approve some water topics for interim studies. Legislative Resolution (LR) 427 looks at how the Nebraska Department of Water Resources establishes acceptable levels for instream flows and LR 450 explores integrated management.

— by Robert D. Kuzelka, assistant to the director, Water Center/Environmental Programs, UNL

Water 2010: New report challenges conventional wisdom

What scenarios can water managers look forward to in 2010? By offering four different but equally plausible scenarios, the report *Water 2010* intends to challenge readers' assumptions about the future of municipal water services. The research and preparation of *Water 2010* was supported by the U.S. EPA. The report is available for $9, plus $2.50 shipping and handling, from the Rocky Mountain Institute, 1739 Snowmass Creek Road, Snowmass, CO 81654-9199, (970) 927-3851, e-mail <orders@rmi.org>.

Water rights key issue for Missouri Basin tribes

ANNUAL NEBRASKA WATER CONFERENCE

"The Indian Nations of the Missouri River basin possess extensive land and water rights, which should enable them to be self-sufficient and to control their destiny. Yet their land and water have been developed by various agencies of the United States government for the benefit of others."

— Richard Bad Moccasin

A significant change in Native American water rights issues has occurred, and many may not be aware of the extent of the change, says Richard Bad Moccasin.

"There is a revolution in tribal infrastructure," said Bad Moccasin, executive director of the Mni Sose Intertribal Water Rights Coalition in Rapid City, S.D.

Modern technology and education, especially at the community college level, have made a difference in the Native American approach to water rights issues, he said.

Bad Moccasin spoke on Native American historical perspectives at the 25th Annual Nebraska Water Conference March 12 in Omaha.

The Mni Sose Coalition consists of 24 of the 28 Indian Nations located in the Missouri River basin. The population of 100,000 tribal members is located between the headwaters in Montana to the mouth of the Missouri River in Kansas and Missouri.

The Indian nations of the Missouri River basin rely on the river itself for economic development and for cultural and spiritual purposes, Bad Moccasin said.

"The free-flowing river has been completely destroyed above Sioux City, Iowa, by the U.S. Army Corps of Engineers' construction of six massive earthen dams, which turned the main stem of the Missouri into a series of reservoirs," he said, referring to the Missouri River basin Pick-Sloan project.

Pick-Sloan caused more damage to Indian land and resources than any other public works project in American history, he said.

Although the federal government promised irrigation development for the tribes and participation in the generation of electricity by the tribes, the tribes have not received these benefits.

Negative consequences of the Pick-Sloan project include fluctuations in the reservoir levels that impact tribal environmental and wildlife habitat, and the threat of erosion and inundation to native burial grounds and ceremonial sites.

The Mni Sose Coalition is working toward revisions in the operation of the Pick-Sloan project by the U.S. Army Corps of Engineers, to protect the environmental and cultural resources of the Missouri River basin and to ensure that they receive some of the benefits. The operation of the Missouri River dams contributes $1.3 billion to the national economy, annually. Of that figure, one-half is derived from the sale of hydroelectricity by the U.S. Department of Energy. The tribes, however, still pay the highest electrical rates in the nation even though the reservation populations in the area are the poorest in the nation, Bad Moccasin said. But tribal efforts have been paying off. Up to six tribes will have their own self-governed utilities in place by the year 2000, and tribal water rights have been acknowledged in the Corps of Engineers' Master Manual for the Missouri River management.

"Ultimately, the approach of the larger non-Indian society toward the Indian Nations and their rights must change dramatically. Treaties must be respected. Instead, the tribes are perceived as an inconvenience," Bad Moccasin said. By continuing to emphasize treaty rights to land and water, the Indian nations will undertake sustainable development and create the permanent homelands guaranteed in the treaties, he said.

Thorson defines challenge for Missouri River basin

ANNUAL NEBRASKA WATER CONFERENCE

John E. Thorson, special master of Arizona General Stream Adjudication, identified major changes and challenges related to the Missouri River Basin at the 25th Annual Nebraska Water Conference March 12 in Omaha.

Five major changes are affecting the Missouri River Basin , he said.

1. The Native American tribes in the basin have become organized. Many tribes are now part of the Missouri River Basin Association, and two tribes have negotiated water allocations with states. There is direct communication between the tribes and the U.S. Army Corps of Engineers and negotiation with the U.S. Department of Energy in regard to power rights.

2. A decade ago, the drought had a strong impact. However, major floods have taken place in the basin in 1993 and 1995, leading basin residents to recognize the need for flood control.

3. Scientists and the U.S. Fish and Wildlife Service have brought the need for habitat and fish run protection to the forefront of attention.

4. A decade ago, the Corps of Engineers ran the river by the master manual in an autocratic fashion; since then, the corps has sought public opinion and input from the states and tribes and is revising the manual.

5. Today, everyone in the basin is more knowledgeable. This is both a positive and a negative change, according to Thorson. Since basin leaders know more and are aware of the complexity of issues, they are more reluctant to act. In the past, leaders had a narrow set of values and were not aware of the complexity of the issues, but now they have become almost paralyzed, he noted.

Thorson also outlined five major trends in the basin that present opportunities for the future:

1. Power is being returned to the states, tribes and regions.

2. Litigation is becoming less desirable because of its cost and the amount of time involved.

3. There has been a series of successful, sophisticated lawsuit settlements in the West. This has solved some of the big Western water disputes. Many of these settlements produce win-win solutions for all parties involved, but all require large federal support, he stressed.

4. Water management has become more sophisticated. Regional water banks, groundwater recharge projects and water conservation requirements will become increasingly important management tools.

5. Changes in the electric power industry are leading toward deregulation and hydropower marketing. In particular, Thorson referred to efforts by Congress to privatize the authority that markets hydropower generated on the river. Much of the power generated on the Missouri is sold at low cost and goes outside the basin, he said. He estimated that up to $200 million in revenue could be generated per year if power was sold at full price, and that revenue could be used to compensate the tribes and restore habitat, according to Thorson.

Basin residents need to get ahead of these changes, not resist them, Thorson said. The principal challenge facing the Missouri River Basin is to develop a consensus on the functions, goals and strategies for the Missouri River, he said.

The other challenges consist of the need to better understand the Missouri hydrologic system and the need to bring adequate amounts of potable water to rural and urban areas. Basin residents need to develop innovative institutions to manage the river.

"You can't manage this river by a rigid set of regulations," Thorson said.

Missouri River endangered

The Missouri River has been listed for the third year in a row among the nation's 10 most endangered rivers. It was ranked fourth.

According to American Rivers, a Washington-based environmental group, the river was included because of the management for navigation and because of drainage of agricultural and industrial chemicals into the river.

The group also released a list of 20 threatened rivers. This year's list did not include the Platte River, which was included last year. For a complete report, see American Rivers' WWW page at http://www.amrivers.org/amrivers/

New video features runoff pollution

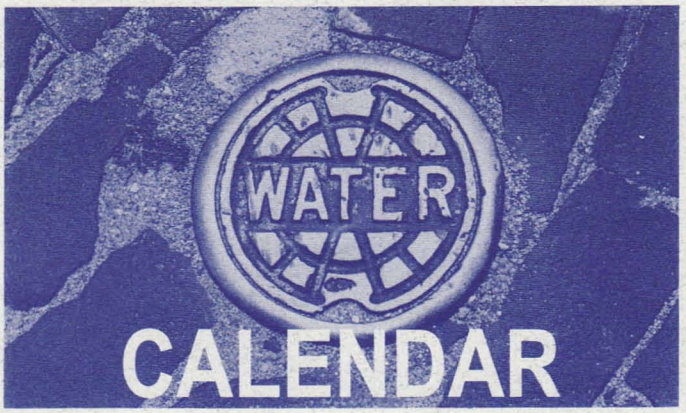
Nonpoint source pollution is documented in a new half-hour educational video released by the Oregon State Extension Service.

"We All Live Downstream" examines urban and rural runoff and the problems it creates for surface and groundwater. Nonpoint source pollution is carried by rain, snowmelt and irrigation that moves across the landscape. It flows from a variety of sources including farms, forests, city streets, construction sites, mines and septic systems.

The tape uses footage primarily from Oregon's Tualatin River basin, but Ron Miner, OSU extension water quality specialist, said the program has implications for most every watershed.

"The video's message is easy to understand and should interest anyone who is concerned about healthy watersheds and clean water supplies," Miner said.

The video (VTP 021) costs $30 (including shipping) and may be ordered from Publications Orders, Agricultural Communications Office, Oregon State University, A422, Administrative Services Building, Corvallis, OR 97331-2119.



JUNE

June 8-12: "Watershed '96: Looking Ahead Together." Water Environment Federation (WEF) Conference and Exhibition, Baltimore, Md. Cosponsored with 15 U.S. agencies. Contact WEF, 1-800-666-0206.

June 10-14: Society of Wetland Scientists 17th Annual National Meeting, Kansas City Marriott Downtown, Kansas City, Mo. Contact Tom Taylor, (913) 551-7226.

June 14: Groundwater University Orientation, Student Union, University of Nebraska at Kearney, Kearney. Contact The Groundwater Foundation, 1-800-858-4844.

June 19: 21st Annual Turfgrass Field Day, Agricultural Research and Development Center, University of Nebraska-Lincoln, Ithaca. Contact Roch Gaussoin, (402) 472-8619.

June 20-21: Nebraska Water Law Conference. Lincoln, Nebraska Center for Continuing Education. Sponsored by CLE International. Call 1-800-873-7130 for more information.

JULY

July 7-10: Soil and Water Conservation Society Annual Conference, Keystone Resort, Colo. Call 1-800-THE-SOIL for more information.

July 22-24: Annual Nebraska Water Resources Tour. Focus: Republican River Basin. Contact Water Center/Environmental Programs, University of Nebraska-Lincoln, (402) 472-3305.

July 30-Aug. 2: Universities Council on Water Resources meeting, San Antonio, Texas. "Integrated Management of Surface and Groundwater." Contact Wayne Jordan, (409) 845-1851.

AUGUST

Aug. 3-8: Promoting Watershed Stewardship, 5th National Volunteer Monitoring Conference, Madison, Wis. Contact Celeste Moen, Wisconsin DNR, WR2, P.O. Box 7921, Madison, WI 53707. Fax: (608) 267-2800. E-mail: moenc@dnr.state.wi.us

SEPTEMBER

Sept. 5-6: The Groundwater Foundation's 12th Annual Fall Symposium. "Under the Microscope: Examining Microbes in Groundwater." Boston, Mass. Contact The Groundwater Foundation, 1-800-858-4844.

Sept. 9-12: Husker Harvest Days, Grand Island.

Sept. 14: Festival of Color. Lawn and Garden Open House sponsored by the UNL Department of Horticulture. University of Nebraska Research and Development Center, Ithaca.

Sept. 19-20: 41st Annual New Mexico Water Conference, San Juan College, Farmington, N.M. "Integrated Water Resources Management: Northwestern New Mexico as a Case Study." Sponsored by New Mexico Water Resources Research Institute. Web page: http://wrri.nmsu.edu.

Sept. 22-25: Rivertech '96. First International Conference on New/Emerging Concepts for Rivers. Chicago. International Water Resources Association. Contact Rivertech '96, IWRA, University of Illinois, 1101 West Peabody Drive, Urbana, IL 61801-4273. Fax: (217) 333-9561.

Sept. 22-25: Ground Water Protection Council Annual Forum, St. Paul, Minn. Sponsored by the Ground Water Protection Council and the U.S. EPA. Contact (405) 848-0690.

Nebraska Water News

Platte Seminar video tapes available

Video tapes of the 1996 Water Resources Seminar Series at the University of Nebraska-Lincoln are available for check-out. The series focused on Platte River management goals.

To check out a copy of a particular seminar, contact Betty Castan, Communications and Information Technology, (402) 472-3035.

Directory lists Nebraska contacts

A 1996 Water Resources Directory for Nebraska has been produced by the Water Center/Environmental Programs unit at the University of Nebraska-Lincoln.

The directory includes federal, state and local agencies as well as water experts within the University of Nebraska system.

Individuals may access the directory on the Water Center's web page at http://ianrwww.unl.edu/ianr/waterctr/wcdir.html. A search tool will be added to the page soon.

The 60-page directory is also available in hard copy for $5 from the Water Center/Environmental Programs unit, 103 Natural Resources Hall, Lincoln, NE 68583-0844, (402) 472-3305. However, individuals are encouraged to access the directory on the web site to save resources.

Kuzelka recognized for groundwater efforts

Robert D. Kuzelka, assistant to the director in the Water Center/Environmental Programs unit at the University of Nebraska-Lincoln, was honored by the Lincoln-Lancaster County Health Department April 22.

Kuzelka received the Bruce Baugh Memorial Award for Individual Environmental Efforts during the health department's environmental awards ceremony at the Plaza Conference Center in Lincoln.

Through a cooperative agreement with the Lincoln-based Groundwater Foundation, Kuzelka directs the Groundwater Guardian program.

Three respondents win water bottles

Thanks to all the respondents who sent back the Water Current survey. The three lucky winners of the squeezable water bottles are Pete Green, Kansas City, Kan.; Nancy Scott, Omaha; and Tom Larson, Saint Edward.

Web site expanded

Check out the Water Center/Environmental Programs unit web page at http://ianrwww.unl.edu/ianr/waterctr/wchome.html. New items are added each month to this page.

Wetlands hotline operated by EPA

The U.S. Environmental Protection Agency has a Wetlands Information Hotline. Interested individuals can call 1-800-832-7828, Monday through Friday, from 9 a.m. to 5:30 p.m. EST for information on wetlands. Information specialists will respond to requests for information about the values and functions of wetlands, options for the protection and the protection efforts of EPA and other organizations. They also can direct callers to appropriate agencies or additional sources of information.

The hotline maintains a list of publications on wetlands and wetland regulations and can send these to callers upon request.

Sheffield selected to Achievement Hall

Leslie Sheffield of Lincoln has been selected as the 101st honoree of the Nebraska Hall of Agricultural Achievement. A former coordinator of outreach programs for the Water Center/Environmental Programs unit, Sheffield was recognized for his contributions to the development of Nebraska's water resources.

Report examines pesticides in stream

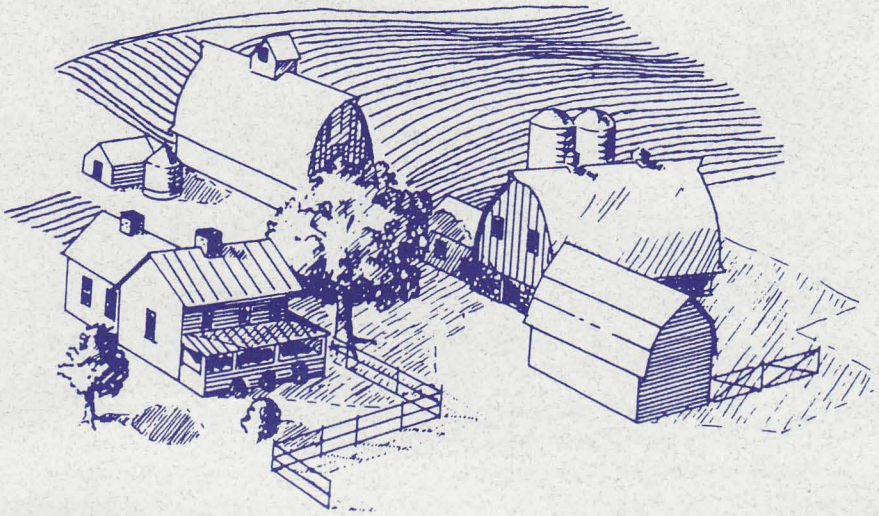
A Fact Sheet (FS-232-95) produced by the U.S. Department of the Interior-U.S. Geological Survey in October 1995 reports data on pesticide use in Nebraska.

The four-page report "Pesticides in Streams in Central Nebraska" focuses on the Central Nebraska Basins study area, which is predominantly agricultural.

Atrazine was the most extensively applied pesticide (1991) in central Nebraska. Of 46 pesticides analyzed, it appears that alachlor, atrazine and cyanazine pose potential problems to public water supplies, according to the fact sheet.

To obtain a copy of the fact sheet, contact the Water Center/Environmental Programs unit, 103 Natural Resources Hall, University of Nebraska, Lincoln, NE 68583-0844, (402) 472-3305.

31 counties to offer pesticide container recycling



Producers in 31 Nebraska counties may take their pesticide containers to a recycling site this year.

Now in its fifth year, the program has been steadily increasing. Sites in Clay, Colfax, Gosper and Phelps counties have been added this year, bringing the number of total available sites to 50.

Last year, more than 100,000 containers were recycled, according to Larry Schulze, pesticide coordinator in the Water Center/Environmental Programs unit at the University of Nebraska-Lincoln.

"The growth and success of this program have been incredible," Schulze said. The project is now self-supported.

Of the 50 sites, eight are available year-long, 11 will be available season-long, and 31 will be available only at specific dates and times. Local Cooperative Extension personnel can provide exact dates and location.

The containers are inspected and recycled into new ones or pesticide shipping pallets. Before they can be accepted for recycling, containers must be inspected to determine if they have been properly rinsed. They may be either triple-rinsed or pressure-rinsed to remove any pesticide residues. Lids and plastic wrap labels must be removed. Guidelines are available from extension offices.

The Agricultural Container Research council, a national coalition of agri-chemical manufacturers, inspects containers a second time and supports the cost of grinding and transporting the containers and reusing the plastic.

For a list of available sites and dates, contact your local extension office.

WATER CENTER/ENVIRONMENTAL PROGRAMS
103 Natural Resources Hall
University of Nebraska
P.O. Box 830844
Lincoln, NE 68583-0844

NON-PROFIT ORG.
U.S. POSTAGE
PAID
Lincoln, Nebr.
Permit No. 46

ADDRESS CORRECTION REQUESTED

Printed with soy ink on
15% post-consumer recycled paper