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Water Current

Conference brings water officials, of expertise to debate

LINCOLN — Federal and state legislation took center stage at the annual Nebraska Water Conference here March 13-15. About 250 individuals attended the event.

The issues of private property rights and definition of wetlands will play a pivotal role in reauthorization of the Safe Drinking Water and Clean Water acts, said David Bowman, Platte River coordinator for the U.S. Fish and Wildlife Service, Denver.

Bowman predicted the 1995 Farm Bill will serve as a test and will have to be approved before the two acts will be reauthorized. It is unlikely that reauthorization will occur before the 1996 election, he said. In the meantime, Bowman suggested, agencies are likely to continue revising policy.

Water and other environmental problems of the future will be more complicated than such problems in the past, said Robert Perciasepe, assistant administrator with the U.S. Environmental Protection Agency in Washington, D.C.

For example, sources of water contamination now include urban and agricultural runoff and underground storage tanks as well as the traditionally recognized sources of sewage and industrial effluent. Today's complex problems require non-traditional approaches.

"This is a time of great change in Washington, and it's really happening," Perciasepe said.

The EPA is undergoing a process of "reinventing EPA bottom-up," he said. Streamlining and flexibility are key concepts in this process. Flexibility is needed to vary approaches depending on regional, state and local needs, rather than a "one size fits all" approach, he said.

The EPA is currently defying court orders to declare maximum contaminant levels for an additional 25 contaminants every three years, according to Perciasepe. Rather, he said, the EPA is trying to follow a common-sense approach that would have it concentrate on microbial



Former Nebraska Governor Robert Crosby pumps water into a conjunctive use model and shares a laugh with Mike Eason, a North Bend agricultural producer, at the annual Nebraska Water Conference.

problems, which seem to pose a greater immediate health risk.

The main problems with environmental legislation are the lack of peer review and health risk assessments,

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Funding for water resources research institutes threatened



Bob G. Volk

from the DIRECTOR

At our annual Water Conference, federal environmental legislation was a key topic of discussion. The Farm Bill, Safe Drinking and Clean Water Acts are all up for reauthorization and the direction that this legislation is headed is quite unclear. The issues of private property rights, wetlands, risk assessment, and unfunded federal mandates were primary topics of the conference presenters. Luncheon speaker Roger Marzulla, chair of the board of directors of Defenders of Property Rights in Washington, D.C., addressed the issue of takings or property rights. Marzulla calls for full and fair compensation of property owners' losses.

The Water Conference started with a very successful electronic information fair highlighting federal and local agencies' electronic data bases and how the public can access this information. Conference evaluation forms indicated that this electronics fair was an eye opener and should be continued.

Personally, Governor Nelson's speech on unfunded mandates and the presentation of the check from the Environmental Trust Fund to our Center to support publishing the water tabloid was a highlight.

Once again, the Federal Administration and USGS has proposed the

elimination of funding for the Water Resources Research Institutes program. I realize that the federal budgetary situation is extremely difficult, but the documented productivity of this program and the critical importance of federal support justifies continuation of federal funding for this program. The grant provides the core resources for a network of 54 Water Resources Research Institutes at the land grant colleges in each of the 50 states, three trust territories and the District of Columbia all authorized by the Water Resources Act.

The USGS itself has called this a worthwhile program that funds over 200 research projects. At the same time, the USGS wants these funds for its own budget and proposes to meet the nations needs for water resources research and education on its own. I would argue that the states know their local needs in water resources far better than USGS. The USGS is not using this program elimination as a budget reduction. In fact, they are requesting approximately \$15 million in new funds for themselves.

We are able to use these funds annually to support five to seven research programs in a variety of water related areas. We target these funds to newer faculty and graduate students working with these faculty. Some dollars are provided to support this *Water Current* newsletter.

Water Current

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New lake manual readable, practical

A do-it-yourself guide to solving lake maintenance and improvement problems is now available.

LakeSmarts by Steve McComas was produced by the Terrene Institute in cooperation with the U.S. Environmental Protection Agency in 1993. McComas is an aquatic scientist specializing in lake and watershed management and owner of Blue Water Science in St. Paul, Minn.

This is an exceptionally good user's handbook intended for lake owner associations, lake managers and fishers, as well as water resource agency professionals.

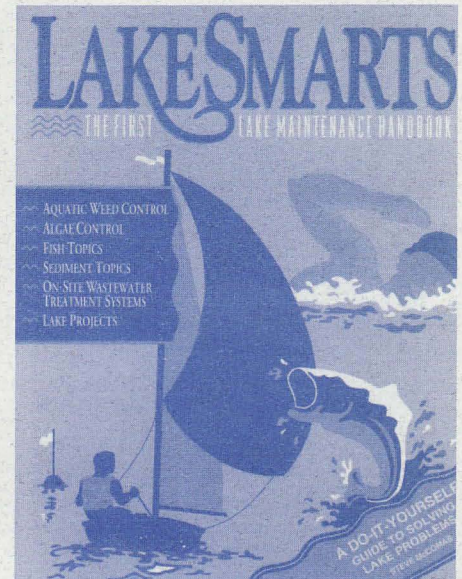
For a modest price (\$18.95 plus \$3 shipping), it addresses a wide range of lake problems such as aquatic weeds, muddy waters, undesirable

fish or waterfowl, algae control, sedimentation, erosion and wastewater treatment.

This 228-page book is very well written and illustrated with numerous diagrams and photographs, and it contains a wealth of practical, up-to-date information on both identifying the problem and selecting the most effective treatment method.

It includes the names, addresses and phone numbers of companies which produce the needed equipment or chemical (with cost estimates) as well as in some cases instructions for constructing a homemade version.

Perhaps the book's most attractive features are its readability and its "you decide which technique to



use" approach, rather than dictating solutions.

LakeSmarts can be obtained from the Terrene Institute, 1717 K Street, Suite 801, Washington, D.C. 20006-1504, (202) 833-8317 (phone), (202) 296-4071 (fax). I highly recommend it!

— **Kyle Hoagland, aquatic ecologist, University of Nebraska-Lincoln**

Conference. Continued from Front.

said Bill Head, policy advisor for Gov. Ben Nelson.

"We need to determine what the important health risks are," Head said.

State Sen. Chris Beutler, who chairs the state Legislature's Natural Resources Committee, gave an update on LB108, a conjunctive use bill.

The bill is now in the Natural Resources Committee, and Beutler said he has made a commitment to ask the committee to hold the bill until January 1996 to allow for greater political consensus and maximum public input.

"I sense an ever-broadening consensus on the bill, so I'm optimistic," Beutler said.

The conference was sponsored by the Nebraska Water Conference Council, the Conservation and Survey Division, the Water Center/



Mary Harding, executive director of the Nebraska Environmental Trust Fund, looks on as Bob Volk, director of the Water Center/Environmental Programs unit at UNL, receives a ceremonial check for \$7,500 from Gov. Ben Nelson at the Water Conference. The grant funds, generated by the Nebraska Lottery, were awarded to the Water Center/Environmental Programs unit for the production of an educational insert on water.

Environmental Programs unit, the Institute of Agriculture and Natural Resources, the College of Law,

University of Nebraska-Lincoln; Valmont Irrigation and Lindsay Manufacturing.

Platte Watershed Program

*Unique position coordinates education;
Symposium identifies priorities*

LINCOLN — A unique position in the University of Nebraska Cooperative Extension program promotes information and education throughout the Platte River Watershed.

Mike Eckert of Scottsbluff joined the extension staff in 1994 as coordinator of the Platte Watershed Program. Eckert's job is to coordinate information and education activities of the Platte Watershed Program.

The goal is to bring about communication and information exchange among agencies, groups, managers and individuals who have a stake in managing and sustaining the watershed's natural resources and economic viability.

"A main part of my job is to disseminate information among groups and to get them involved in the watershed management process," Eckert said. "This position is about information exchange and coalition building."

The position is unique because it is the first in Cooperative Extension based on a river basin, Eckert said.

The U.S. Environmental Protection Agency provides funding for the position through a cooperative agreement with the University of Nebraska-Lincoln but it does not dictate programming, said Tom Franti, UNL surface water management specialist and program manager.

"UNL is developing the focus and direction for the program," Franti said.

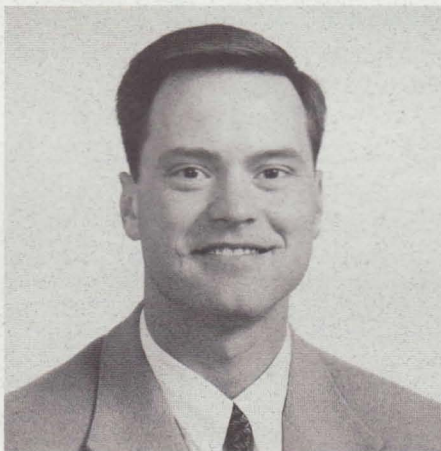
Platte River Basin Symposium

Eckert's first responsibility was to organize the Platte River Basin Ecosystem Symposium Feb. 28-March 1 in Kearney. About 100 individuals attended the symposium and identified four key areas of concern: flow quantity requirements,

riparian habitat, aquatic habitat and wet meadows.

In small group forums, participants identified priorities for each of these research areas as follows:

- 1) flow requirements to restore the desired ecosystem, including threatened and endangered species;
- 2) identification of goals and management objectives for riparian habitat;
- 3) establishment of existing status of communities across temporal and spatial scales; and
- 4) identification and classification, historical distribution and long-term succession needs of wet meadows.



Mike Eckert

Symposium participants also discussed the idea of establishing a Platte River Research Foundation which would focus capital on specific research needs and the creation of a Platte River Journal to publicize research efforts.

Future Programming

After conducting more than 30 outreach interviews with shareholders in the Platte Watershed, Eckert and Franti are currently formulating their workplan. "Although many shareholders are yet to be interviewed, we have a strong basis for our efforts," Eckert said.

Eckert and Franti plan to develop an annotated database of information which would include ecological, agricultural and policy related research that has been done in the Platte Watershed. They are also planning to develop and distribute educational materials on natural resource management issues in the watershed.

Sponsorship of the Platte River Basin Ecosystem Symposium will continue under the workplan. Another key component of the workplan will be continued work with the University of Nebraska system, other academic institutions, governmental agencies and private organizations to promote cooperative research efforts in priority areas.

The Platte Watershed Program is a joint effort of EPA Region VII and Cooperative Extension, the Department of Biological Systems Engineering, the Water Center/Environmental Programs unit, the Agricultural Research Division and the Institute of Agriculture and Natural Resources, UNL.

Future Platte Watershed Program Activities

Research Database

Resource Management Education

Annual Symposium

Promotion of Cooperative Research



Nebraska Water News

Water specialist position available

The Department of Agricultural Meteorology at the University of Nebraska-Lincoln is looking for a water resources specialist.

Bachelor's with major in climatology, geography, water resources of related field plus two years experience required. Master's preferred. Strong research/writing skills and understanding of climatology essential. Working knowledge of computers and software packages required.

Excellent interpersonal and communication skills necessary. Familiarity with state and federal agencies preferred. Submit cover letter of application, resume and three letters of professional reference to Dr. Donald Wilhite, 241 L.W. Chase Hall, UNL, Lincoln, NE 68583-0728. Review of applications will begin April 14. Position will remain open until a suitable candidate is found. Position is contingent upon grant funding.

Pesticide applicator manuals on Web

Two manuals presently used as the instructional foundation for pesticide applicator certification training in Nebraska are now available on the Internet.

The manuals, *Applying Pesticides Correctly: Nebraska Core Manual* and *Nebraska Private Pesticide Applicator Self-Study Manual*, are the backbone of the new World Wide Web home page of Environmental Programs, Water Center/Environmental Programs unit, University of Nebraska-Lincoln.

Four members of the Institute of Agriculture and Natural Resources at UNL, Larry Schulze, extension pesticide coordinator; Clyde Ogg, extension assistant-pesticide training; Al Stark, manager of clientele services; and Jim Emal, extension microcomputer specialist; introduced the home page earlier this month.

The web page was unveiled at the National Pesticide Applicator Training and Certification Workshop April 10-13 in San Diego. The page contains educational information on pesticides and directs the Internet user to other related information available at other Internet sites around the country.

Nebraskan named NACD director

Gerald L. Vap of McCook is the new president of the National Association of Conservation Districts. Vap is president of Vap's Seed and Hardware Inc. He has been a board member of the Middle Republican Natural Resources District and served as president of the Nebraska Association of Resources Districts.

Faculty receive extension grants

The following University of Nebraska projects have been funded with Fiscal Year 1995 Extension Water Quality Mini Grants:

Marion O'Leary — The SEER Program in Water Education (\$10,000); Charles Shapiro — On-Farm Manure Spreader Calibration and Demonstration Project (\$9,500); David Aiken — Conjunctive Use (\$7,000); Donald Steinegger —

Evaluation of Educational Delivery Methods to Enhance Water Quality Education (\$5,250); Sharon Skipton and DeLynn Hay — Hydrologic Cycle/Nebraska Water Resources Dynamic Learning (\$5,200); Dave Varner and Barb Ogg — Agricultural Rinsed Plastic Pesticide Container Recycling Program (\$1,000); and Dewey Teel — A Water Quality Event for Fifth Grade Students in Madison, Antelope, Stanton and Pierce counties (\$600).

A total of \$38,550 was awarded in grants.

Awards honor groups, individuals for service

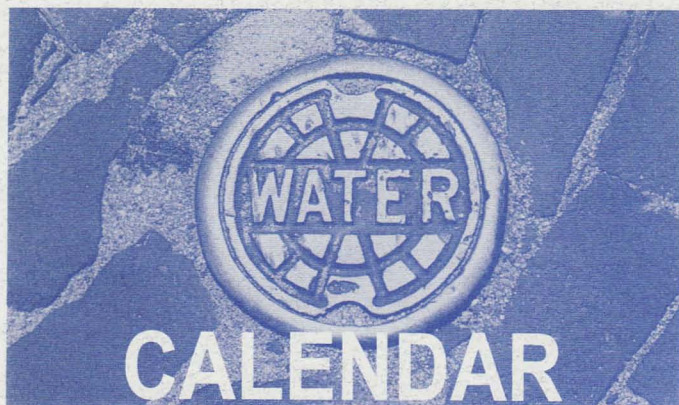
Les Sheffield, associate professor of agricultural economics emeritus at the University of Nebraska-Lincoln, received the Pioneer Award at the annual Nebraska Water Conference March 14 in Lincoln.

The League of Women Voters of Nebraska received the Progress Award. The awards are given each year by the Nebraska Water Conference Council to recognize individuals and organizations for outstanding accomplishments in the water resources area, said Bob Volk, director of the Water Center/Environmental Programs unit.

The council also gave the Nebraska Department of Water Resources an award for 100 years of service and recognized Jack Aschwege, outgoing chair of the council, with a plaque.

Mathiasen appointed

Jerry Mathiasen of Council Bluffs, Iowa, is the new executive director of the Nebraska Association of Resources Districts.



APRIL

April 19: Water Resources Seminar. "Environmental Risk Analysis and Management," Wayne Woldt, extension waste management specialist, UNL. 3 p.m. to 4 p.m., 116 L.W. Chase Hall, UNL, Lincoln, NE, and via satellite.

April 20: Environmental Studies Seminar. Speaker: Marty Strange, Center for Rural Affairs, Walthill, NE. 4 p.m., Nebraska Union, UNL.

April 22: 25th Earth Day Celebration. 10 a.m. to 3 p.m., Antelope Park, Lincoln, NE. Contact Peggy Hunt, (402) 441-7895.

April 23-26: "Water Conservation in the 21st Century: Conservation, Demand, and Supply." Salt Lake City. Contact J. Paul Riley, Utah State University, Logan, UT 84322-4110, (801) 750-2783.

April 26: Water Resources Seminar. "Introduction to Farm-A-Syst," DeLynn Hay, extension water resources specialist, UNL. 3 p.m. to 4 p.m., 116 L.W. Chase Hall, UNL, and via satellite.

April 27-28: Joint regional meeting of the North- and South-central sections of the Geological Society of America, University of Nebraska, Lincoln, NE. For more information, contact the GSA Meetings Department at 1-800-472-1988, extension 113.

April 27: "The Variability of Large Alluvial Rivers — Implications for Geological Interpretation." Banquet address by Stanley A. Schumm, Colorado State University. GSA Regional Meeting, University of Nebraska, Morrill Hall, Lincoln, NE.

April 28: Arbor Day.

April 30-May 7: National Soil and Water Stewardship Week

MAY

May 3: Tenth Annual Awards Banquet, The Groundwater Foundation. Call 1-800-858-4844 for more information.

May 7-13: Nebraska Groundwater Week/ National Drinking Water Week.

May 8-10: "Planning for a Sustainable Future: The

Case of the North American Great Plains," Lincoln, NE. Contact Donald Wilhite, International Drought Information Center, P.O. Box 830728, University of Nebraska, Lincoln, NE 68583-0728. (402) 472-6707 (phone), agme002@unlvm.unl.edu (e-mail).

May 14-18: American Institute of Hydrology Annual Meeting, Denver. Contact AIH, (612) 379-1030. Contact AIH, 3416 University of Hydrology, 3416 University Avenue SE, Minneapolis, MN 55414-3328, (612) 379-1030 (phone), (612) 379-0169 (fax).

May 15: Deadline for applications to the Nebraska Environmental Trust Fund for the 1995 grant cycle. Contact Nebraska Environmental Trust, P.O. Box 30370, Lincoln, NE 68503, (402) 471-5409.

May 23-25: "Workshop on Computer Applications in Water Management," Fort Collins, CO. Sponsored by Great Plains Agricultural Council; USDA, NRCS and ARS; Colorado State University, Department of Soil and Crop Sciences and Water Resources Research Institute; University of Wyoming, Cooperative Extension Service and Water Resources Center; and University of Nebraska, Water Resources Center. Contact L.R. Ahuja, USDA-ARS, (303) 490-8300.

JUNE

June 9-11: First Conference, Association for the

Study of Literature and Environment, Fort Collins, CO. Contact Office of Conference Services, Colorado State University, (303) 491-6222.

June 18-22: Annual American Water Works Association, Anaheim, CA. Contact AWWA, (303) 347-6190.

June 25-28: "Water Resources and Environmental Hazards: Emphasis on Hydrologic and Cultural Insight in the Pacific Rim," Honolulu, Oahu, Hawaii. Contact American Water Resources Association, (703) 904-1225.

JULY

July 16-19: Interdisciplinary Conference: "Animal Waste and the Land-Water Interface." Fayetteville, AR. Contact: Arkansas Water Resources Center, University of Arkansas, 113 Ozark Hall, Fayetteville, AR 72701, (501) 575-4403.

July 17-19: North Central Regional Meeting, American Society of Agronomy, "Agricultural Management to Protect Water Quality," Grand Island, College Park, NE.

July 18-19: Annual Nebraska Water Resources Tour. Sites in central and south-central Nebraska. Contact Water Center/ Environmental Programs, University of Nebraska-Lincoln, 103 Natural Resources Hall, Lincoln, NE 68583-0844, (402) 472-3305.



Hungarian water official sees similarities in issues

LINCOLN — Pál Varga spent the last week immersing himself in Nebraska water issues. Specifically, he studied the way Nebraska relates to its upstream neighbors as well as technical methods of preventing and remediating water pollution.

A chemical engineer, Varga heads the department of the National Authority for Environment in Budapest, Hungary, a division of the Ministry for Environmental and Regional Policy there.

"We are far from each other, but we have many things in common," Varga said. "This is a good opportunity for me to exchange information with the experts here."

Varga's visit was sponsored by a three-year grant of the U.S. Information Agency for an international, cooperative project. The University of Nebraska-Lincoln has been working with the University of Science in Budapest on the project since 1991. The project, directed by Istvan Bogardi, professor of civil engineering, and Ivan Volgyes, professor of political science at UNL, integrates engineering, the humanities and social science to prevent environmental degradation in the United States and Hungary.

Nebraska and Hungary have very similar topographic and climatic conditions, Bogardi said. Hungary is located in Europe's center in the deepest part of the Carpathian Basin and consists mostly of plains regions.

"Both are flat; agriculture is very important in both; and both receive a lot of water from neighbors," Bogardi said.

Lack of control of water quantity and quality caused by Nebraska's and Hungary's downstream locations creates common problems. Nebraska depends on water coming from Wyoming and Colorado. About 94 percent of Hungary's water supply comes from other countries, so the availability and quality of water is determined by the country's neighbors, Varga said.

"This is a serious problem for us if the water quality is not good enough," Varga said.

Lack of control of water quantity and quality caused by Nebraska's and Hungary's downstream locations creates common problems.

About two-thirds of the water available in Hungary stems from surface water, the rest from groundwater. About 73 percent of Hungary's water is used for industrial purposes, 13 percent for agriculture and 8 percent for municipal use.

Most Hungarian surface water problems stem from its neighbors Romania and Slovakia, Varga said. Like Hungary, these countries lack money for improved sewage treatment, and former governments failed to address environmental pollution. Surface water pollution problems include industrial contaminants such as oil, grease, organic matter and oxygen as well as bacteria pollution from sewage.

The famous "Blue Danube" has turned into a brown Danube contaminated with algae blooms and sediment, Varga said.

In a typical incident, a large oil spill occurred in January in Romania and was carried into Hungary. The spill was caused by an industrial accident at an oil refinery.

"It took us two months to clean up the oil from the surface of the water," Varga said.

Ideally, the Romanian government would immediately inform its downstream neighbor of such a spill, but this is not always the case, Varga said. The Hungarian government invited Romanian officials to come and witness the oil spill downstream. It also offered Romania technical assistance in removing the oil on the Romanian side. Communication on environmental hazards between the governments needs to be improved, Varga said.

"We've had some discussion, but it's not efficient enough," Varga said.

The governments of Slovakia and Hungary, however, have been able to make some progress. "We have a common program to control transport on rivers, common sampling places and common analytical methods," Varga said.

Three international agreements on industrial accidents across boundaries, use and protection of rivers and environmental impact assessment methods were signed in Helsinki, Finland, in the early 1990s. Hungary signed all three, but ratified only parts of them. Of its neighbors, only Austria signed and ratified all three. Yugoslavia did not sign any, and Romania and Slovakia each only signed one.

"We need to use and apply these international agreements, and of

**See Hungary.
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Hungary.
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course we'd like to force our neighbors to apply them," Varga said.

Nebraska has an advantage because its neighbors are part of the same country, Bogardi said. Entities such as the Supreme Court can issue binding decisions for the states. For Hungary, however, only international courts can issue rulings on the disputes between the country and its neighbors, and it's up to the countries to accept these decisions.

Not all of Hungary's water problems are caused by its neighbors. About 90 percent of the population has access to public water systems, but only 50 percent has access to a sewer system. Only half of the sewage plants are equipped for biological treatment. About 1.3 billion cubic meters per year of untreated sewage is discharged into the rivers, Varga said. Hungary also faces serious soil and groundwater contamination problems stemming from Russian army sites and former industrial production sites.

In recent years, Hungary has been

"We're working together across the disciplines to predict and mitigate environmental hazards. This is very rare."

— Istvan Bogardi, professor of civil engineering, UNL

trying to switch to a preventive approach, but new laws are needed for enforcement, Varga said. The Hungarian government is now debating such new laws. Suggested new principles stress prevention and sustainable development, based on user-pay and polluter-pay principles. A new law currently in discussion would protect groundwater drinking water sources, improve sewage treatment facilities, restore water quality in lakes and rivers and clean up serious contamination. It would also introduce water and sewage fees, fines for sewage discharge and effluent standards.

"We need to do it step by step," Varga said. "This project helps us in the process."

In addition to learning about Nebraska's water policy and laws, Varga also visited with experts about nitrate contamination, risk assess-

ment and monitoring surface water systems.

The U.S. Information Agency project making Varga's visit possible will end in August. As part of the project, UNL faculty have given presentations in Hungary on how to deal with environmental degradation and Hungarian experts spoke at the UNL Water Seminar Series sponsored by the Water Center/Environmental Programs unit in the Institute of Agriculture and Natural Resources. UNL faculty provided training to Hungarian environmental officials, and Bogardi helped organize a 1994 NATO conference in Greece on the topic of transboundary environmental and water resources conflicts.

"We're working together across the disciplines to predict and mitigate environmental hazards," Bogardi said. "This is very rare."

WATER CENTER/ENVIRONMENTAL PROGRAMS

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