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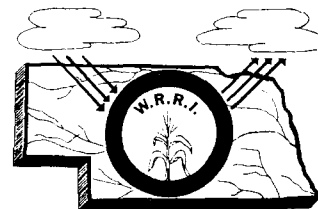
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WATER RESOURCES NEWS

NEBRASKA WATER RESOURCES RESEARCH INSTITUTE
212 AGRICULTURAL ENGINEERING BUILDING

THE UNIVERSITY OF NEBRASKA
LINCOLN, NEBRASKA 68503



Volume 3 Number 1

January 1971

MARCH SEMINAR PLANNED

The Nebraska Water Resources Research Institute (NWRRI) is planning a two-day Seminar, entitled "Water Resources Planning and Public Opinion", to be held March 8,9, 1971 at the Nebraska Center for Continuing Education. The fee for the program will be \$35 per person.

The objective of this conference is to acquaint water resources planners, managers, developers, researchers, and educators with public opinion. The conference will deal with such basic questions as: What is public opinion? How can planners assess it? In what ways can the planner take advantage of existing opinion? How can public opinion be shifted in favor of the planners' innovation? The answers to these questions will help planners to obtain the advice of persons who will be affected by public planning, and the consent of those who must pay for it.

For additional information, please contact:

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ENVIRONMENTAL EDUCATION ACT APPROVED

The Environmental Quality Education Act, H.R. 18260, has been signed into law by President Nixon. The Act is to encourage and support the development of new and approved curricula to encourage the understanding of policies and support activities designed to enhance environmental quality and maintain ecological balance. It will establish in the Office of Education an Office of Environmental Education to be headed by a Director to administer the program of authorized grants and contracts. Also established is an Advisory Council on Environmental Education. It authorizes for appropriation \$45,000,000 over the next 3 fiscal years for carrying out the purposes of the Act.

AIR POLLUTION RESEARCH MEASURE CLEARED FOR PRESIDENT NIXON

The Conference Report on the bill H.R. 17225 to amend the Clean Air Act by providing for accelerated research programs directed toward the development of improved, low-cost techniques for control of by-products from fuel combustion, and for other purposes has been accepted by both houses of Congress thus clearing the measure for the President.

The Conferees recommended that authorizations of \$75 million for fiscal year 1971, \$125 million for 1972, and \$150 million for 1973 be provided to pay part of the cost conducting air pollution research.

The Administrator of the Environmental Protection Agency (EPA) would be authorized to give special emphasis to research on the short- and long-term effects of air pollution agents or combinations of such agents on public health and welfare.

An Office of Noise Abatement and Control would be established within the EPA to study and investigate the effects of noise on public health and welfare, and to identify and classify the causes and sources of noise. In carrying out this program, the Administrator would hold public hearings and conduct research experiments, and demonstrations.

EPA BEGINS INVENTORY OF INDUSTRIAL WASTE

The Department of the Interior recently announced that the former Federal Water Quality Administration, now the Environmental Protection Agency, has started an inventory of industrial waste by mailing forms to 250 companies which are among the largest users of water in the nation. The survey will eventually include approximately 10,000 plants across the country in the next 6-8 months. The results and responses of the first survey will help EPA to evaluate its procedures before continuing with the complete survey.

Former Secretary Hickel in emphasizing the importance of acquiring the data said, "We are

asking industry to cooperate with us by voluntarily submitting the requested data." It is expected that the degree and quality of response will have a significant effect on future decisions regarding water pollution abatement and control programs. Interior plans to use the information in carrying out programs in comprehensive river basin planning, in research and development, in setting and revising water quality standards, and in awarding construction grants.

ECOLOGICAL STUDY ON CLOUD SEEDING

Walter J. Hickel, former Secretary of the Interior, recently announced that the most intensive ecological study of its kind ever undertaken will initiate a new phase in the San Juan Mountains of southwestern Colorado.

This 4-year environmental study and monitoring program will be conducted by Colorado State University, the University of Colorado, and Fort Lewis College, Durango, Colorado, under an \$881,000 contract. The project will involve the random seeding of winter storms on a selected basis and is intended to establish whether the winter snow pack can be augmented efficiently and economically and on a socially acceptable basis.

SAFE DRINKING WATER RESEARCH MEASURE INTRODUCED IN HOUSE

The Public Health Service Act introduced by Rep. Paul G. Rogers H.R. 19874, would be to amend a

national research and development program to achieve a high level of drinking water supplies.

The measure would authorize the Administrator of the Environmental Protection Agency to award grants and contracts to public and nonprofit private agencies and educational institutions for projects which train persons for occupations involving the public health aspects of raw water resources, water treatment, and purification.

Financial assistance would be made available through the Administrator for research projects which include improved methods and procedures to identify and measure the existence and health effects of pesticides, organic chemicals, toxic metals, radioactive substances, viruses, and other contaminants in water used for drinking and recreation; new methods for treating raw water to prepare it for drinking; and improved methods for providing adequate quantities of safe water for drinking and recreation.

Authorizations of \$20 million for fiscal year 1972, \$30 million for 1973, and \$40 million for 1974 would be provided to carry out the research and training provisions of the measure.

Special study and demonstration project grants would be awarded to public and nonprofit institutions for the development and demonstration of new and improved methods for providing a safe supply of water to the public in both urban and rural areas for drinking and recreation, and for investigations and demonstrations which deal with health implications involved in reclamation, recycling, and reuse of waste water for

drinking and recreation. These grants would be supported by authorizations totaling \$45 million spread over fiscal years 1972 through 1974.

QUALIFICATIONS TO CONDUCT RESEARCH AND DEVELOPMENT STUDIES REQUESTED

Interested organizations are invited to submit qualifications to conduct research and development studies in any or all of the following areas:

The Study of Mercury or Heavy Metals in the Coastal Environment and at Mouths of Important Rivers; Fate of Mercury or Other Heavy Metals in Inland Surface Water; Determination of Mercury or Other Heavy Metals in Water, Sediments, & Biological Materials; Identification and Measurement of Organic Mercury or Organic Heavy Metal Compounds; Control of Pollution from Mercury or Heavy Metal Deposits in Streams & Lakes; Fate & Disposal of Mercury or Heavy Metals in Sewage Treatment Plants and Industrial Plants; Mercury or Heavy Metals Toxicity to and Residues in Aquatic Life; Toxicity of Mercury or Heavy Metals to Marine Fishes & Invertebrates; Toxicity of Mercury or Heavy Metals to Marine Planktonic Organisms; Laboratory Safety Plan for Work with Organomercurials; Identify & Characterize Bacteria involved in Mercury Recycling; Marine Sites for Study of Biological Recycling of Mercury; Toxicity of Mercury or Heavy Metals to Marine & Estuarine Organisms.

Qualifications should include but not be limited to information on company and personnel experience in:

Pollution problems in lakes, streams, impoundments, estuaries; Past work of an associated nature.

Organizations having capabilities as above are invited to submit qualifications.

Company brochures are not acceptable. Qualifications should be limited to approximately 16 typewritten pages, including Not more than 4 typewritten pages of personnel resumes. Closing date for submission of qualification is February 12. Acknowledgement of receipt of evaluation information will not be given. Only those sources deemed most qualified for the specific requirement under consideration will be invited to submit proposals when and if a request for proposals is issued. An original and two copies of each response should be submitted as follows:

Hand Carried Address:

Environmental Protection Agency
Water Quality Office
1921 Jefferson Davis Highway
Crystal Mall Bldg No. 2,
Room 700
Arlington, VA 22202

Mailed Address:

Environmental Protection Agency
Water Quality Office
Washington, DC 20242
Attention: W. M. Rugemer, Jr.

CONGR. MORTON PLEDGES STRONG
CONSERVATIONIST APPROACH AS NEW
SECRETARY OF INTERIOR

Congr. Rogers C. B. Morton, Maryland, the new Secretary of the Interior-designate, promised that he will push conservation programs just as strongly as his predecessor,

Walter J. Hickel. When President Nixon dismissed Hickel, the Administration went to great pains to assure conservationists that the change would not bring a letup in environmental protection programs. Congr. Morton stated his philosophy as follows: "There is always a real tug of war between resources and users. It's been going on since man started chopping firewood. If we have to err in management, let's err on the side of conservation."

Some conservationists expressed reservations about Congr. Morton's prior record, but others cited his efforts in helping prevent development of Assateague Island off the coast of Maryland. Congr. Morris K. Udall, Arizona, who serves with Congr. Morton on the House Interior Committee, describes him as "the model of my brother" -- former Interior Secretary Steward Udall, an ardent conservationist.

CEQ POLICY ON AVAILABILITY OF
ENVIRONMENTAL IMPACT
STATEMENTS CRITICIZED

Recent press stories have been critical of Council on Environmental Quality (CEQ) policy on public disclosure of statements on environmental impact of federal or federally licensed projects. This has been alleged to frustrate citizen participation in decision-making.

Section 102(2)(c) of the National Environmental Policy Act provides that every federal agency shall "include in every recommendation or report on proposals for legislation and other federal actions significantly affecting the

quality of the human environment, a detailed statement by the responsible official" on the environmental impact of the proposed action, possible adverse effects, alternatives, etc. Prior to making such a detailed statement the Section requires the responsible official "to consult and obtain the comments of any federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved." The Section then provides that copies of such statements, together with the comments of appropriate federal, state, and local agencies, are to be made available to the Council and to the public pursuant to the provision of the Freedom of Information Act.

Public inquires are now being referred by the Council to issuing agencies. The agencies, in turn, have been accused of failure to prepare and submit statements on many projects in compliance with the Act. Considerable difficulty has been experienced in obtaining copies of environmental statements through this process and interested public groups are asking CEQ to strictly enforce the Act and to release available draft statements to facilitate public information and participation.

O.M.B.'S ACTION VITAL
ON CRITERIA ISSUE

Almost everyone, supporters and opponents of water resource programs alike, agree that if the Office of Management and Budget (O.M.B.) sticks to its insistence on economic efficiency as the sole criterion for evaluating water projects, the proposed new guide-

lines -- and the two years of work which has gone into them -- will go down the drain. A confrontation between Congress and O.M.B. is likely to happen with the possibility that congressional committees will draw up new guidelines themselves, if this occurs.

Congr. Bob Jones, Alabama, chairman of the House Public Works Subcommittee on Flood Control, told the House: "We have repeatedly urged the Executive Branch to develop new guidelines and procedures that would more appropriately reflect the concerns that Congress has expressed.*** It is disturbing that the O.M.B. is now taking a position which contravenes existing national goals and seriously endangers the development of water resource plans truly responsive to our national needs.*** In the event that the Water Resources Council is prevented from carrying out the responsibility granted to it by the Congress, the Congress may find it necessary to reassert its authority in this field." Both Senator Jennings Randolph, West Virginia, chairman of the Senate Public Works Committee, and Senator Allen J. Ellender, Louisiana, chairman of the Senate Appropriations Subcommittee on Public Works, condemned O.M.B.'s action.

O.M.B. WANTS GREATER DISCOUNT RATE
AND INCREASE IN COST SHARING

The Office of Management and Budget (O.M.B.) told the Water Resources Council that greater consideration should be given to higher discount rates and increased cost sharing. The "opportunity

cost principle" -- which dictates that government should exact a return on its investment equivalent to that of the private sector -- should be used in determining the discount rate, said Mr. Donald B. Rice. Such a rate should be in the neighborhood of 10 to 15 percent -- or two or three times the current interest/discount rate. Mr. Rice commended the Council task force's recommendation that cost sharing be employed in water quality programs but stated that "other cost sharing proposals also are needed", particularly in flood control projects. "Non-Federal interests should be required to pay substantially more of the investment costs in the future," he stated.

SUPPLEMENTAL MONEY BILL PASSES SENATE WITH 67 RESEARCH FUNDS

The measure to appropriate supplemental funds for fiscal year 1971, H.R. 19928, has passed the Senate with a recommendation that \$8 million in additional funds be provided for the Office of Education (OE) for research and training. It was recommended that \$6 million of that amount be used for drug abuse education and community education projects authorized under the Drug Abuse Education Act of 1970. The senate also accepted a floor amendment that would provide an additional \$49.2 million for Labor Department manpower training.

Other appropriations of interest to subscribers in the Senate-passed bill: Navy, \$10 million, research, development, testing & evaluation; Department of Housing and Urban Development, \$25 million,

urban research & technology; Bureau of Indian Affairs, \$16.9 million, education & welfare services; Department of Agriculture's Forest Service, \$108,000, forest research; Health Services & Mental Health Administration, \$43 million, mental health and \$12 million, special project grants & contracts for family planning services; National Institute of Child Health & Human Development, \$5 million, family planning and population research grants and contracts; Environmental Protection Agency, \$23.4 million, pollution control operations & research; Commerce Department's Office of Telecommunications, \$1 million, research, engineering, analysis & technical services; Federal Aviation Administration, \$24 million airport & airways research & development.

CONTROVERSY ERUPTS AFTER ACTS TO OVERRIDE PROPOSED NEW GUIDELINES

A major controversy has erupted over the U.S. Water Resources Council's efforts to revise and update water resource project evaluation guidelines. A special Council task force finally recommended last August that all projects be evaluated on the basis of four objectives: economic efficiency (equivalent to traditional benefit/cost analysis); environmental enhancement; regional development, and social well being. Only national income gain is considered under present procedures. The new Office of Management and Budget (O.M.B.), which acts for the President in such matters, has registered strong objections. Asst. Director Donald B. Rice, Council's executive director, said economic efficiency

must continue to be the single deciding factor in the approval and funding of all projects. He also recommended adoption of a much higher discount rate, rejection of secondary benefits, and greater reliance on cost sharing.

Both the Senate and the House adopted an amendment to the omnibus river and harbors and flood control authorization bill that sets forth the Council's proposed new criteria as "the intent of Congress." O.M.B. Deputy Director Caspar W. Weinberger then urged the Senate-House conference committee to drop the amendment on grounds that O.M.B. has not completed its review of the new guidelines: "We strongly recommend that Congress delete this provision until the Executive Branch agencies have had an opportunity to complete their review and make appropriate recommendations." However, Congress adopted the conference report which included the amendment and the President signed the authorization bill.

RESEARCH REVIEW

Project Title: "Ecological Impact of Surface Water Impoundments in the Great Plains Areas"

Principal Investigator: Dr. C. Michael Cowan

Dates: July, 1970 to June, 1972

In recent years, considerable emphasis has been placed on the control of our environment. Such a consideration is based on the premise that we should provide optimal living conditions for ourselves and for future generations. We must be careful, however, to assure that projects undertaken do

not ultimately produce adverse irreversible effects. Meager consideration has been given the outcome of planned developments in terms of change on the local ecosystem. Recently the Corps of Engineers has proposed the construction of a large reservoir north of Ashland, Nebraska. If constructed, the reservoir will inundate about 100 square miles of the Platte River Valley. A project of this scale will constitute a significant change in the environment of the valley and will modify the water use potential in the region. The lake formed by the project will undoubtedly cause changes in the microclimate over a wide area adjacent to the reservoir. There will be environmental modifications of the ichthyofauna presently inhabiting the Platte River drainage and it is likely that the reservoir will modify the habits of migratory water fowl. The projected urbanization of the area will certainly pose serious problems relative to chemical and biological pollution of the impounded water. The final outcome may be either beneficial or detrimental but a key to its nature may be had by studying the habitat disruption affecting various species of plants and animals.

This project is designed to explore the nature of ecosystem changes which would likely develop from the construction of large reservoirs in the Great Plains region. A case study will be made of the Platte River project. The techniques and findings of this research should be directly extendable to many areas in the Great Plains region and should be of value to water resources planners across the United States. The type of research proposed herein is

much needed and a concentrated effort should be made to study more fully the impact on our environment of major water resources development schemes.

NEW PUBLICATIONS RECEIVED
BY INSTITUTE - JANUARY

1. "The Treatment of Disperse Textile Dye Wastes by Foam Fractionation", D. L. Michelsen, T. B. Fansler, Virginia Polytechnic Institute & State University, December 1970.
2. "Feasibility Study Manual-Mine Water Pollution Control Demonstrations", U.S. Department of the Interior, Federal Water Quality Administration, June 1970.
3. "Residence Times of Waters Behind Barrier Islands", T. Y. Chiu, J. Van De Kreeke, R. B. Dean, Florida Water Resources Center, University of Florida, November 23, 1970.
4. "Removal of A Spherical Particle From a Flat Bed", C. N. Chen, Georgia Institute of Technology, November 1970.
5. "Phosphorus in Water and Wastewater", L. W. Little, Department of Environmental Sciences & Engineering, UNC Waste Water Research Center, November 1970.
6. "Evaluation of Advanced Treatment Processes for Improving Plant Performance", J. C. Lamb, UNC Wastewater Research Center, Department of Environmental Sciences & Engineering, November 1970.
7. "Development of A Pilot Plant to Demonstrate Removal of Carbonaceous, Nitrogenous & Phosphorus Materials from Anaerobic Digester Supernatant and Related Process Streams", U.S. Department of the Interior, Federal Water Quality Administration, G.E. Bennett, May 1970.
8. "New Mine Sealing Technique for Water Pollution Abatement", U.S. Department of the Interior, Federal Water Quality Administration, March 1970.
9. "Catalog of Information on Water Data - Index to Surface Water Section", U.S. Department of the Interior, Geological Survey, 1970.
10. "Catalog of Information on Water Data - Index to Water Quality Section", U.S. Department of the Interior, Geological Survey, 1970.
11. "Studies in Density Stratified Flows", D. L. Wilkinson, University of New South Wales, April 1970.
12. "Proceedings of Groundwater Symposium", K. K. Watson, August 28-29, 1969, University of New South Wales, April 1970.
13. "Hydraulic Studies for Liddell Power Station Vol. VI: Cooling Water Outfall", D. N. Foster & D. L. Wilkinson, University of New South Wales, May 1969.
14. "A Wave-Recording Network For Australia", D. M. Stone, University of New South Wales, April 1969.
15. "Mitigation of Siltation In Farm Water Storages", R. T. Hattersley, R. C. Nelson, University of New South Wales, May 1969.
16. "Ash Transport In Galvansied Steel Pipes", K. C. Yong, P. B. Stone, University of New South Wales, May 1969.
17. "Extraction of Water From Unconsolidated Sediments - A Literature Survey", C. R. Dudgeon, K. C. Yong, University of New South Wales, April 1969.
18. "Hydraulic Studies for Liddell Power Station - Vol II: Hunter River Intake Model Investigations", K. K. Lai, K. C. Yong, R. T. Hattersley, University of New South Wales, April 1969.

19. "Hydraulic Studies for Liddell Power Station - Vol. I: Hunter River Intake Basic Data", K. K. Lai, K. C. Yong, R. T. Hattersley, University of New South Wales, April 1969.

20. "Hydraulic Studies For Liddell Power Station - Vol. V: Cooling Water Circulating Pump Intake", K. C. Yong & R. T. Hattersley, May 1969.

21. "Removal of Lignin by Foam Separation Processes", T.E. Wilson, M. H. Wang, Rutgers - the State University, November 1970.

22. "Removal of Phosphate From Waste Water by Aluminum and Iron", Pa Ho Hsu, Rutgers - The State University, December 1970.

23. "Flow Concentration Groins For Reaeration in Passaic River - A Hydraulic Model Study", E. L. Bourodimos, Ph.D.; L. Michna, M.S., Rutgers - The State University, September 1970.

24. "Digital Systems for On-Site Collection For Water Quality Analysis", M. K. Testerman, University of Arkansas, 1970.

25. "Seasonal Cycles of Net Plankton In a Cold-Tailwater And a Natural Stream In the State of Arkansas", J. S. Gray, University of Arkansas, 1970.

26. "Bactericidal Effects of Algae on Enteric Organisms", U.S. Department of the Interior, Federal Water Quality Administration, March 1970.

27. "Subsidence & Ground-Water Offtake in the Baton Rouge Area", W. A. Wintz, Jr., R. G. Kazmann, C. G. Smith, Jr., Louisiana State University, October 1970.

28. "An Economic Reappraisal of the Toledo Bend Multiple-Purpose Water Project", L. H. Falk, W. J. Stober, Louisiana State University, October 1970.

29. "Fluid Model Studies of the Storage of Freshwater in Saline Aquifers", O. K. Kimbler, Louisiana State University, October 1970.

30. "Proceedings of a Seminar on Sediment Transport in Rivers and Reservoirs", U.S. Army Corps of Engineers, April 7-9, 1970.

31. "Geology and Hydrology of Selected Playas in Western United States", W. S. Motts, D. Carpenter, C. G. Groat, D. V. Matz, R. F. Walker, University of Massachusetts, May 1970.

NEWSLETTER ITEMS

Newsletter items and inquiries should be sent to: Dr. Warren Viessman, Jr., Director, N.W.R.R.I., 212 Agricultural Engineering Building, East Campus, Lincoln, Nebraska 68503.