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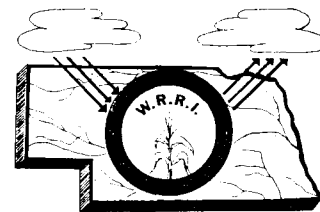
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WATER RESOURCES NEWS

NEBRASKA WATER RESOURCES RESEARCH INSTITUTE
212 AGRICULTURAL ENGINEERING BUILDING

THE UNIVERSITY OF NEBRASKA
LINCOLN, NEBRASKA 68503



Volume 2 Number 6

June, July 1970

OWRR TITLE II PROPOSALS INVITED

The Office of Water Resources Research, U. S. Department of the Interior, Washington, D. C. 20240, is now accepting unsolicited research proposals in the field of water resources for consideration for fiscal year 1972 support, beginning July 1, 1971, pursuant to Title II of the Water Resources Research Act of 1964, as amended.

Title II of the Act authorizes the Secretary of the Interior to make grants, contracts, and matching or other arrangements with educational institutions, private foundations or other institutions, with private firms or individuals whose training, experience, and qualifications are, in his judgment, adequate for the conduct of water research projects, and with local, State, and Federal Government agencies to undertake research into any aspects of water problems related to the mission of the Department of the Interior which he may deem desirable and which are not otherwise studied.

Within the broad research program authorized by Congress, the Office of Water Resources Research desires to encourage and support research investigations dealing with major water problem areas and which hold promise of contributing to the solution of important water problems. In its fiscal year 1972 program, the Office of Water Resources Research proposes at this time to emphasize support of research in the following major areas:

1. Analysis of Planning, Managerial, Financial, Operating and Regulatory Policies of Water Resources Institutions
2. Water Resources Policy and Political Institutions
3. Hydrologic Systems Analysis
4. Urban and Metropolitan Water Resources Problems
5. Environmental Considerations in Water Resources Planning and Management
6. Evaluation of Economic Importance of Various Uses of Water, Cost Allocation, Cost Sharing, Pricing and Repayment
7. Analysis and Evaluation of Water Resources Projects with Special Emphasis on Identification and Evaluation of Benefits Derived
8. Ground Water Management and Protection
9. Protection and Rehabilitation of Estuarine Resources
10. Thermal Loading Problems

Priority consideration will be given to those proposals that explicitly relate to one of the major areas. However, research support is not necessarily limited to those priority research subjects and any technical approach or idea which holds promise of contributing to the solution of the Nation's water problems will be given every consideration for support.

To allow sufficient time prior to July 1, 1971 for proposal review, contract negotiation, and transmittal to the Congress for a 60-day period as required by Title II of the Act, formal proposals must be submitted to the Office of Water Resources by October 1, 1970, in order to be eligible for fiscal year 1972 funding. Although proposals may be submitted to OWRR at any time, those received after October 1, 1970, will be held for future consideration for support.

Detailed instructions and forms for the submission of proposals for consideration for funding under the Title II provisions of the Water Resources Research Act may be obtained from the Director, Office of Water Resources Research, U. S. Department of the Interior, Washington, D. C. 20240.

Additional information concerning the priority research areas is available from the Institute.

STUDIES OF BRINE WASTE DISPOSAL

Studies of brine waste disposal at water desalting plants have been stepped up, according to the Department of the Interior. Five contracts totaling more than \$126,000 have been awarded by the Office of Saline Water to determine the best approach for obtaining solid effluent from desalination at inland locations. They include: Westinghouse Electric Corp., Philadelphia, Pa., \$36,633; Garrett Research and Development Co., Inc., La Verne, Calif., \$26,298; Dow Chemical Co., Midland, Mich., \$23,811; W. L. Badger Associates, Inc., Ann Arbor, Mich., \$21,200; and Struthers Energy Systems, Inc., Warren, Pa., \$18,829.

SEDIMENT POLLUTION FROM ROAD BUILDING TO BE CONTROLLED

The U. S. Department of Transportation has announced that future road-building contracts will contain specific regulations to assure effective control of water pollution from soil erosion at construction sites. The new provisions will set a limit of 750,000 s. ft. of erodible earth to be exposed at any one time.

GRADUATE STUDIES IN WATER RESOURCES

"Graduate Studies in Water Resources," published by UCOWR is now available from the Institute upon request.

UNIVERSITY OF NEBRASKA WATER RESOURCES PLANNING AND MANAGEMENT
PROGRAM APPROVED

PARTICIPATING DEPARTMENTS - Agricultural Economics, Agricultural Engineering, Agronomy, Civil Engineering, Economics, Geography, Horticulture and Forestry, Political Science, Sociology.

BASIC PROGRAM - An intra-university program with emphasis on water resources planning and management. Each student will be required to complete a major in one of the participating departments, nine hours of core courses chosen from those listed below and, normally, a thesis oriented toward water resources planning and management. The Master's degree will be granted in one of the basic disciplines and students will be formally registered in one of the participating departments. The recommended program is Option I but other options may be approved under special circumstances.

WATER RESOURCES ADVISORY COMMITTEE -- A Water Resources Advisory Committee has been established to coordinate the inter-disciplinary aspects of the program. The Director of the Nebraska Water Resources Research Institute serves as Chairman with one member from each participating department. Approval of individual student programs and thesis topics will have the concurrence of the student's major department and the Chairman of the Advisory Committee. One member of the student's examining committee will be appointed from the Water Resources Committee.

CORE COURSES

265. Agricultural Economics (Water Resources Economics) (3 cr II)
Baker
Prereq Economics 10 or 12
A study of general concepts, specific techniques and sources of information for evaluating the alternative uses, management and development of water resources. The evaluation of the adequacy of the application of these techniques and principles by various water resource development agencies.
316. Civil Engineering (Case Studies in Water Resources) (3 cr)
Marlette
Prereq Permission of Instructor
Engineering, economic, and legal studies of water resource systems.
314. Civil Engineering (Water Resources Planning) (3 cr)
Viessman
Prereq Agricultural Economics 265
The techniques of comprehensive water resources planning considered relative to social patterns, political structures, economic objectives, technical requirements and legal constraints.

RESEARCH NEEDED ON OIL POLLUTION SOURCE IDENTIFICATION

The Federal Water Quality Administration desires to receive proposals to demonstrate systems for positively identifying the person, ship or source of unknown discharge of oil to receiving waters.

The system design objectives should include but not be limited to the following: (A) Capability of tags with subsequent handling techniques or use. (B) Stability of tags over long periods in storage and when exposed to ambient air and water conditions. (C) Minimum effect of weathering on effectiveness of passive analytical techniques. (D) Capacity for a large coding vocabulary such that oil stored or transported is unequivocally related to the persons responsible for preventing its spillage. (E) High sensitivity to detection and negligible effect of potentially interfering substances. (F) Low cost and operational simplicity of both the tagging operation and analytical procedures.

Parties wishing to respond to the RFP may obtain detailed information from the following address: Department of the Interior, Federal Water Quality Admin., Washington, D. C. 20242, Attn: Procurement Branch, or by wire at the following address: Department of the Interior, Federal Water Quality Administration, Room 700, 1921 Jefferson Davis Highway, Arlington, VA, 22202.

THIRD OUTDOOR RECREATION RESEARCH CATALOG ANNOUNCED

The publication of the third Outdoor Recreation Research Reference Catalog by the Department of the Interior's Bureau of Outdoor Recreation and the Smithsonian Institution's Science Information Exchange was announced on May 7, 1970.

The one volume catalog briefly describes 371 active or recently completed outdoor recreation and related environmental research projects.

The publication is sold for \$1.25 by the Superintendent of Documents, Government Printing Office, Washington, D. C. 20402, Catalog No. I66.18:3.

COST STUDY SHOWS NEED FOR INCREASED MUNICIPAL SPENDING FOR WATER POLLUTION CONTROL

According to an updated report on the cost of clean water, some \$9.9 billion must be spent in the next four years to help keep pace with the Nation's requirements for community waste treatment facilities.

The report, which is revised and refined each year, says the estimated costs for needed municipal treatment facilities has risen from \$8 to \$9.9 billion. Secretary of the Interior Walter J. Hickel submitted the study to Congress on April 20.

An updated study is required each year by the Clean Water Restoration Act. The new report is entitled, "The Economics of Clean Water." The report attributes the increases to two years of substandard investments coupled with two years of growth, replacement needs, inflation, and the acquisition of additional information.

The four-volume cost study includes a summary of findings, a detailed analysis of the economics of clean water, and special studies of the inorganic chemicals industry and animal feeding industry.

Copies of the report may be obtained by writing to the FWQA, Public Information Office, Washington, D. C. 20242, as long as the supply lasts.

NATIONAL CONFERENCE ON ENVIRONMENTAL POLLUTION

Secretary Walter J. Hickel announced that the Department of the Interior will sponsor a four-day conference and exposition early next fall on environmental pollution.

According to Secretary Hickel, the conference is being called in response to President Nixon's request for "a total mobilization" for cleaning up our environment.

More than 3000 leaders from government, national organizations, industry, and universities are expected to join in the conference which will cover eighteen major environmental topics in more than fifty separate sessions.

The National Environmental Pollution Conference and Exposition is to be held September 29 through October 2 in Sheraton Park Hotel in Washington, D. C.

CANADIAN WATER SALES MAY BECOME REALITY

The sale of water as a marketable commodity in Canada has been voiced in Parliament and endorsed in the Toronto Telegram newspaper. The paper stated, "It's inconceivable that Canadians would expect to be able to sit indefinitely on the world's largest reserve of fresh water without sharing it with the remainder of the water-hungry continent."

"Why not sell it instead of wasting it?" is a quote by Sen. Frank Moss, D-Utah. "The fact that some Canadians are now giving thoughtful consideration to this problem is most gratifying and they are to be commended for their foresight," Moss stated.

Moss noted that the Trudeau government informed Parliament that 100 million gallons of fresh water is wasted each day; but before Canada can sell any of it there must be an inventory and appraisal of Canada's own future needs.

\$344,000 CONTRACT AWARDED GILLETTE RESEARCH
BY FWQA TO DEVELOP PHOSPHATE-FREE DETERGENTS

Secretary of the Interior Walter J. Hickel announced that a \$344,000 contract has been awarded to the Gillette Company Research Institute to develop phosphate-free laundry detergents.

Secretary Hickel said, "Industry must eliminate phosphates from detergents if we are to make any significant headway toward restoring our lakes."

"We believe these experimental detergents will be both a benefit and a spur to industry to proceed with phosphate removal from its commercial products as quickly as possible," the Secretary said.

Interior Department's Federal Water Quality Administration awarded the 18-month contract to the Rockville, Maryland, firm. The Academy of Natural Science in Philadelphia has been selected as a subcontractor to test the toxicity of new detergents developed by Gillette.

MEETING "CHALLENGE OF THE ENVIRONMENT" IS CORPS OF ENGINEERS'
GREATEST CHALLENGE

Army Secretary Stanley R. Resor said the Army Corps of Engineers is "showing the way toward a balanced development of our resources in harmony with preservation of outstanding natural values." He continued: "I believe that meeting the challenge of the environment is by far the greatest task in the years ahead. It will not be easy. There is no simple way to quantify the value of a river in its natural state, or to calculate the point at which the present demands of commerce put too heavy a tax on the future, or recreational development becomes despoliation. Striking a balance will require complex analysis and sensitive judgment."

SAND HILLS IS TEST GROUND THIS SUMMER

University of Nebraska and U. S. Geological Survey scientists will drill more than 30 test holes in the Sand Hills this summer to learn more about the vast ground water reservoir and geological formations in this part of Nebraska.

The purpose of this summer's test drilling is to determine the age and physical properties of the geologic formations beneath the mantle of wind-deposited sand, the depths to water, and thicknesses of saturated rock. This information will make it possible to estimate the amount of groundwater stored beneath the Sand Hills. Estimates of the potential for water utilization will be made after the geologic and hydrologic characteristics of the formations drilled have been evaluated.

N.W.R.R.I. ANNUAL REPORT AVAILABLE

The Nebraska Water Resources Research Institute has recently published the 6th Annual Report of Activities for Fiscal Year 1970. Copies are available upon request from the Institute.

RESEARCH REVIEW

Project Title: "A Survey of the Woody Phreatophytes of the Republican River in Nebraska"

Principal Investigator: Dr. Patricia J. Rand

Dates: July, 1970 to June, 1971

Relatively little is known concerning the role of riparian vegetation in the hydrologic processes which occur in the central grasslands. Basic information about the numbers and kinds of phreatophytes along the rivers of the Great Plains is necessary, however, if adequate water use studies are to be undertaken or effective watershed improvement programs are to be developed. The proposed research will provide basic information of value to those water resources planners who must estimate water losses by the plant population occupying river beds in the Great Plains region. The project is of state and regional significance.

NEW PUBLICATIONS RECEIVED BY THE INSTITUTE -- JUNE

1. "Determination of Degraded Dyes and Auxiliary Chemicals in Effluents from Textile Dyeing Processes," by R. K. Flege, Georgia Institute of Technology, March 1970.
2. "A Study of Water Pollution Control in the Textile Industry of North Carolina," by D. I. Gramley, University of North Carolina, January 1970.
3. "Hydraulic Resistance In Alluvial Channels," by Ben Chie Yen & Ying-Chang Liou, University of Illinois, July 1969.
4. "Virus Removal by Chemical Coagulation," by R. S. Engelbreth & Malay Chaudhuri, University of Illinois, September 1969.
5. "Meteorological Tables for Determination of Precipitable Water, Temperatures, and Pressures Aloft for a Saturated Pseudoadiabatic Atmosphere - in the Metric System," by W. O. Eihle, R. J. Powers, & R. A. Clark, Texas A & M, December 1968.
6. "Evaluation of the Social Impact of Reservoir Construction on the Residential Plans of Displaced Persons in Kentucky and Ohio," by R. L. Ludtke & R. J. Burdge, University of Kentucky, 1970.
7. "Factors Affecting Relocation in Response to Reservoir Development", by R. J. Burdge & R. L. Ludtke, University of Kentucky, 1970.
8. "Records of Water Levels and Chemical Analyses From Selected Wells in Parts of the Trans-Pecos Region, Texas, 1965-68," by M. E. Davis & J. D. Jordon, April 1970.

9. "The Effects of Copper Sulfate on Certain Algae and Zooplankters in Winnisquam Lake, New Hampshire," by P. J. Sawyer, University of New Hampshire, May 1970.

10. "A Study of Institutional Factors Affecting Water Resource Development in the Lower Rio Grande Valley, Texas," by T. J. Casbeer, W. L. Trock, Texas A & M University, September 1969.

11. "Benthal Decomposition of Absorbed Oil Pollutants," by J. V. Hunter, H. L. Allen, & T. B. Shelton, State University of New Jersey, May 1970.

12. "A Critical Analysis of Employment Projection Methods: A Test Case of New Jersey," by Daryl Hellman & Matityahu Marcus, State University of New Jersey, May 1970.

13. "Responses of Some Anadromous Fishes to Varied Oxygen Concentrations and Increased Temperatures," by Donald Dorman, & James Westman, State University of New Jersey, June 1970.

NEW PUBLICATIONS RECEIVED BY INSTITUTE - JULY

1. "Use of Taxes, Subsidies, and Regulations for Pollution Abatement," by Hugh H. Macaulay, Clemson University, June 1970.

2. "Guidelines for Establishing Economic and Engineering Flood Criteria," by P. W. Barkley, D. L. Bender, H. D. Copp, J. G. Hattersley & J. F. Orshorn, Washington State University; J. A. Crutchfield & G. H. Hopkins, University of Washington, June 1970.

3. "Annual Report of Activities for Fiscal Year 1970," Water Resources Research Institute of Nebraska, July 1970.

4. "Proceedings Mississippi Water Resources Conference 1970", Water Resources Research Institute, Mississippi State University, 1970.

5. "Utilization of the Storage Potential of River Valley Aquifers," by Ralph R. Marlette & Leon S. Directo, University of Nebraska, June 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.