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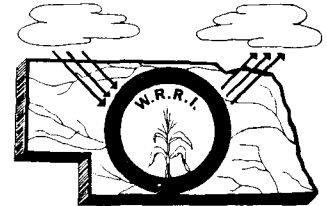
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WATER RESOURCES NEWS

NEBRASKA WATER RESOURCES RESEARCH INSTITUTE
212 AGRICULTURAL ENGINEERING BUILDING

THE UNIVERSITY OF NEBRASKA
LINCOLN, NEBRASKA 68503



Volume 1 Number 4

August, 1969

F.Y. 1971 MATCHING GRANT PROPOSAL DEADLINE

Matching grant proposals for consideration for funding in the 1971 program of the Nebraska Water Resources Research Institute must be submitted to the Institute Director by October 1, 1969. Complete details will be provided by the Institute Director upon request. Prospective researchers are advised to consult with the Director before preparing formal proposals. Call 3307 for further information.

RESEARCH ON METROPOLITAN WATER RESOURCES

The Secretary of the Interior has announced that a national program of research related to metropolitan water problems will be established. The Office of Water Resources Research will develop the program.

OFFICE OF SALINE WATER BUDGET

A budget of \$16.2 million was approved for research and development by the office of Saline Water in the current fiscal year.

U.C.O.W.R. ANNUAL MEETING

At the annual meeting held in Reno on June 30-July 2, several significant resolutions relative to water resources research were passed. The most important of these are the following:

- 1) Called for ammendments to the Water Resources Research Act of 1964 to increase annual Title 1 allotments to Institutes from \$100,000 to \$250,000 and to authorize and fund educational programs for the interpretation and dissemination of water research findings.

- 2) Requested the Director, Office of Science and Technology to explore possibilities of setting up a water resource internship program.

3) Requested that the President's Science Advisor consider all aspects of the involvement of behavioral sciences in water resources.

NORTH CAROLINA INSTITUTE RECEIVES STATE FUNDS

The recent legislature approved the University's request for a direct appropriation in partial support of the Institute's program. These funds together with other support provide a much improved fiscal base for water resources research in North Carolina. Over 30 state institutes are now receiving state financial support in varying amounts.

PUBLICATIONS AVAILABLE FROM THE NWRRI

A list of all water resources publications held by the Institute is available upon request. Any publication may be borrowed for a two week period.

NEW PUBLICATIONS RECEIVED BY THE INSTITUTE

The following publications have been received by the Institute since the last issue of the newsletter:

- 1) "Oxygenation of Iron (II) in Continuous Reactors" by Charles R. O'Melia. Water Resources Research Institute. University of North Carolina. Report No. 23
- 2) Water Resources Institute, 1969 Annual Report. Texas A&M University. July 1969.
- 3) Water Resources Research Catalog. U. S. Dept. of the Interior. Washington D.C. December, 1968. Volume 4.
- 4) Water Resources Series No. 14. Water Resources Observatory Climatological Data Water Year 1968. June 1969 University of Wyoming.
- 5) Fifth Annual Report of University of Wyoming. July 15, 1969.

RESEARCH REVIEW

Project Title: Engineering Phases of
Land Treatment Related
to Increasing Water Use
Efficiency and Storage
Efficiency of Rainfall

Principal Investigator: Dr. Howard Wittmuss

Dates: July 1965 to June 1969
Project Completed

The primary objective of this project was to develop improved soil and water conservation systems which are compatible with modern farming practices. A parallel steep backslope system with tile waterways has been installed on the University farm east of Lincoln. Improved construction techniques have been developed to reduce the cost and improve the performance of steep backslope terraces. The new conservation systems are compatible with modern large-capacity, high-speed farming and are capable of producing high crop yields.

Runoff, soil loss, soil moisture extraction, rainfall machinery time requirements, soil temperature and crop yield data were collected on a sustained basis in order to evaluate the effect of the new land shaping practices. Water losses have been reduced to 2/3 and soil losses have been reduced to 1/10 of the losses from a comparable non-conservation watershed. The soil loss from the steep backslope terrace watershed in 1967 was 0.4 tons per acre which is 1/10 of the allowable loss.

An automatic sediment sampler has been designed, constructed and installed to collect runoff samples for chemical and physical analyses. The sampler is turned on automatically when water starts to flow and collects one sample every 15 minutes. The samplers have been tested and the quality of runoff from different land shaping practices is being evaluated. The chemical composition of the runoff is similar to the chemical composition of water in reservoirs from agricultural watersheds in the Lincoln, Nebraska area.

The results of this research have direct immediate applicability to farming operations in Nebraska and surrounding states. Practices which improve water use efficiencies are akin to the development of new water supplies in this part of the United States.

A SUMMARY OF WATER RESOURCES
RESEARCH IN NEBRASKA

The Nebraska Water Resources Research Institute has recently published a 68 page compilation of current water-related research in the state. An abstract of each project is given along with the name of the investigator, supporting agency, etc. Copies are available upon request.

FEDERAL WATER POLLUTION CONTROL ADMINISTRATION
RESEARCH AND DEVELOPMENT PROGRAM FOR F.Y.1970

Attached to the newsletter is a summary of proposed fund allocations for new projects for F.W.R.C.A.'s research and development program in F.Y. 1970. This information is considered of special value to prospective researchers in the field of water quality.

NEWSLETTER ITEMS

Newsletter items and inquiries should be sent to: Dr. Warren Viessman Jr., Director, Water Resources Research Institute, 212 Agricultural Engineering, East Campus.

CODE SYMBOLS

SECT 5 RESEARCH GRANTS (CLASS I) 0 0 SECT 601 SMC SEWER GRANTS (CLASS III)
 SECT 5 DEMO GRANTS (CLASS II) 0 0 SECT 602 AWT GRANTS (CLASS III)
 ALL SECT 5+6 CONTRACTS 0 0 SECT 66 INDUST. WASTE GRANTS (CLASS V)

EXAMPLES: 0 = NO FUNDS; M = NOT MORE THAN \$67,000;
 1 = \$50,000 TO \$149,000; 2 = \$150,000 TO \$249,000; etc.

RESEARCH,
 DEVELOPMENT
 AND
 DEMONSTRATION
 PROGRAM

4 AUGUST 1969

PLANNED FY 1970 ALLOCATIONS FOR
 NEW PROJECTS

| SUBPROGRAMS | | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|-------------|-----|--------------------------------------------------|---------------------------------------------------|-----------------------------------------------------|-----------------------------------------------|---------------------------------------------------------|-----------------------------------------------------|-------------------------------------------------------------|----------------------------------------------|
| | | MUNICIPAL- POLLUTION CONTROL TECHNOLOGY | INDUSTRIAL- POLLUTION CONTROL TECHNOLOGY | AGRICULTURAL- POLLUTION CONTROL TECHNOLOGY | MINING- POLLUTION CONTROL TECHNOLOGY | OTHER SOURCES- OF POLLUTION CONTROL TECHNOLOGY | WATER QUALITY CONTROL TECHNOLOGY | WASTE TREAT- MENT & ULTI- MATE DISPOSAL TECHNOLOGY | WATER QUALITY REQUIREMENTS RESEARCH |
| 0 0 | 0 0 | 1201 Sewered Basins | 1201 Metal and Metal Products | 1301 Forestry and Logging | 1401 Mine Drainage | 1501 Recreational | 1601 Aerobication | 1701 Dissolved | 1801 Municipal Uses |
| 0 0 | 0 0 | 1102 Combined Sewer Discharges | 1202 Chemicals and Allied Products | 1302 Rural Run-off | 1402 Oil | 1502 Boat and Ship | 1602 Physical-Chemical Identification of Pollutants | 1702 Dissolved | 1802 Industrial Uses |
| 0 0 | 0 0 | 1103 Storm Sewer Discharges | 1203 Paper and Allied Products | 1303 Irrigation Return Flows | 1403 Oil Shale | 1503 Construction Projects | 1603 Biological Identification of Pollutants | 1703 Refractory Organics | 1803 Agricultural Uses |
| 0 0 | 0 0 | 1104 Non-Sewered Run-off | 1204 Petroleum and Coal Products | 1304 Animal Feed Lots | 1404 Other Mining Sources | 1504 Impoundments | 1604 Source of Pollutants | 1704 Suspended and Colloidal Solids | 1804 Recreational Uses |
| 0 0 | 0 0 | 1105 Non-Sewered Municipal Wastes | 1205 Food and Kindred Products | 1305 Non-Sewered Rural Wastes | 1405 Phosphate Mining | 1505 Salt Water Intrusion | 1605 Fate of Pollutants in Surface Waters | 1705 Removal | 1805 Fish and Other Aquatic Life |
| 0 0 | 0 0 | 1106 Joint (Man./Ind.) Wastes | 1206 Machinery and Transportation Equipment | | | 1506 Natural Pollution | 1606 Fate of Pollutants in Ground Waters | 1706 Dissolved | 1806 Other Single Uses |
| 0 0 | 0 0 | | 1207 Stone, Clay and Glass Products | | | 1507 Leachate | 1607 Fate of Pollutants in Coastal Waters | 1707 Biodegradable Organics | 1807 Multiple Uses |
| 0 0 | 0 0 | | 1209 Textile Mill Products | | | 1508 Water Quality Control | 1608 Water Resources Planning and Resources Data | 1708 Microorganisms | |
| 0 0 | 0 0 | | 1210 Lumber and Wood Products | | | 1509 Cold Climate Research | 1609 Thermal Pollution | 1709 Ultimate Disposal | |
| 0 0 | 0 0 | | 1211 Rubber and Plastic | | | | | 1708 Wastewater Innovation and Re-use | |
| 0 0 | 0 0 | | 1212 Miscellaneous Industrial Sources | | | | | 1709 General Waste Treatment Technology | |

RESEARCH, DEVELOPMENT AND
 DEMONSTRATION PROGRAM
 STRUCTURE

Office of R&D
 FRPCA