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AAPSE

NEWSLETTER

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Vol. 5, No. 1

September, 1969

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MESSAGE FROM THE PRESIDENT

Ouch! The 1969-70 Academic Year has begun and all committee chairmen should be active and alert. In a very few days, we will congregate in Dallas for both WPCF and AAPSE meetings. A brief summary of our meetings follows:

1. SUNDAY, October 5, 1969
AAPSE Board of Directors Meeting
Place: Not yet available
Time: 10:00 a.m. to closing

2. MONDAY, October 6, 1969
AAPSE SEMINAR
Subject: Legislative Influence -- how to be effective!
Organizer: Dr. Wayne Echelberger, Jr.
Associate Professor, Notre Dame
Place: French Room (lobby level)
Hotel Adolphus, Dallas
Time: 7:30-9:30 a.m.
(continued breakfast will be available)

3. MONDAY, October 6, 1969
AAPSE Annual Meeting
Place: French Room (Lobby level)
Hotel Adolphus, Dallas
Speaker: Robert G. Snider
Chief, Training Grants Branch
FWPCA
Subject: Current FWPCA Training Grant and
Fellowship Policies and Procedures.

There will be time for questions and discussion.
Our education committee is nearing completion of
a report in this area.

Other Business: Nomination of New Directors
Committee Reports

4. Monday -- After the Seminar, members of the Education Committee will meet to complete their report on "Education Needs."

MEETINGS SCHEDULED

The following meetings for AAPSE members are scheduled for next year:

1. AAPSE WORKSHOP

Place: Brown's Lake Resort
Burlington, Wisconsin
Time: June 24-25-26, 1970
Subject: Consulting and Sanitary Engineering Education
Workshop Co-chairman: Wesley O. Pipes
Raymond J. Kipp

2. International Conference on Water Pollution Research

Place: San Francisco, California
Time:
Activity: 1/2 day Workshop for Foreign Visitors
(tentative)
Subject: Sanitary Engineering Education in the
United States.

More details on these meetings will be included in future newsletters.
See you in Dallas.

NEW AAPSE MEMBERS

AAPSE: Since the July Newsletter appeared, these professors have joined

Edwin R. Bennett
Assistant Professor
Department of Civil Engineering
University of Colorado
Boulder, Colorado 80302
303 443-2211 Ext. 7650

Thomas M. Keinath
Assistant Professor of
Environmental Systems Engineering
302 Lowry Hall
Clemson University
Clemson, South Carolina 29631
803 654-2421 Ext. 272

Lawrence A. Schmid
Assistant Professor
Department of Civil Engineering
Kansas State University
Manhattan, Kansas
913 532-6921

Gerald B. Ward
Assistant Professor
University of New Brunswick
Fredericton
New Brunswick
Canada
506 475-9471

Professor Ward is an affiliate member. Total AAPSE membership is now 104 including 4 affiliates.

Now that the academic year has started it is time that you informed your fellow staff members that are not AAPSE members about our upcoming seminars, workshops and activities. Rich Dick can supply you with application forms.

AAPSE ACTIVITIES AT DALLAS

If you have matters to be considered by the board, please get them to a board member before 3 October. Wayne Echelberger has arranged what promises to be an interesting seminar entitled "The Role of AAPSE As A Legislative Influence in Washington." Gordon McCallum, a Vice President of Engineering Science, will give his views of the Washington scene and how AAPSE members can make the scene. Members of the AAPSE Legislative Committee will also give their views. Coffee and doughnuts will be served.

BY LAWS AVAILABLE

If you as an AAPSE member did not receive a copy of the Bylaws, contact R. I. Dick.

AAPSE VISITING FOREIGN LECTURER

Don Washington has just announced that Dr. Elie Eichenberger, an environmental ecologist and phycologist at the Swiss Federal Institute of Technology (ETH), Zurich, Switzerland will be the AAPSE visiting foreign lecturer during the early spring of 1970. The exact dates will be finalized soon. Dr. Eichenberger will present the "Experimental Ecology of Flowing Waters" which will include discussions of the problem, methods of research, results obtained, as well as the application of the results to engineering design. If you are interested in having Dr. Eichenberger visit your institution, contact

Don Washington
Director of the Water
Resources Center
Ohio State University
1791 Neil Avenue
Columbus, Ohio 43210

CORRECTION

The following addition should be noted in regard to the production of Environmental Health and Sanitary Engineering Degrees in the April Issue of the Newsletter. Vanderbilt awarded 14 MS degrees for the academic year ending June, 1967.

REGISTER OUT

The second edition of the "Register of Graduate Programs in the Field of Sanitary Engineering Education" has just come off the press. Copies can be obtained for \$13.50 from

Dale A. Carlson
Civil Engineering Department
304 More Hall
University of Washington
Seattle, Washington 98105

PROCEEDINGS AVAILABLE

Proceedings of the Eighth Annual Environmental and Water Resources Engineering Conference, sponsored by Vanderbilt University and the Tennessee Department of Public Health, June 5-6, 1969, are now available. Copies are \$4.00 and may be ordered from Professor E. L. Thackston, Box 122, Station B, Vanderbilt University, Nashville, Tennessee 37203.

TRAINING WORKSHOP

The Southeast Regional Office of FWPCA and Clemson University are jointly sponcering a workshop entitled "EDUCATIONAL SYSTEMS FOR OPERATORS OF WATER POLLUTION CONTROL FACILITIES." The workshop will be held 3-5 November 1969 at the American Hotel in Atlanta, Georgia. The purpose of this workshop will bring together, in an interdisciplinary effort, personnel from academic, government, industrial, and other organizations to focus on educational methods for training of operators of water pollution control facilities. The first portion of the workshop will be devoted to discussion of some of the educational methods currently in use such as correspondence courses, short schools conducted at Universities and on-the-job training. The second portion of the workshop will be devoted to the potential use of new methods such as the application of systems analysis to the design of educational systems, programmed learning, educational television, and computer based instruction. Speakers will be asked to assume that participants have no prior knowledge of these newer methods. Emphasis will be placed on the applicability and value of these methods to the training of operators for water pollution control facilities.

Further information can be obtained from Professor R. Banister, 112 Riggs Hall, Clemson University, Clemson, South Carolina 29631.

FWPCA SUBPROGRAM PLANNING OUTLINE

Dave Stephan, Assistant Commissioner, Research and Development, FWPCA has just released the following information on the planned fund allocations for new projects for FWPCA's research and development program for Fiscal Year 1970. "This breakdown is indicative only of monies expected to be avialable under the sections of the Water Pollution Control Act indicated in the code for grants and contracts. This does not, in any way, indicate total funds being expended in any subprogram element through existing and continuing grants and contracts of FWPCA in-house research and development efforts. Also, I stress that this is a "plan" and that our actual FY 70 appropriations have not yet been passed by the Congress."

August 4, 1969
PLANNED FY 1970 ALLOCATIONS
FOR NEW PROJECTS

Research, Development and Demonstration Program
Structure, Office of R&D FWPCA

Each subprogram has six figures just to the left of it. For instance 1101 Sewered Wastes appears as follows

0 0 1101
0 21 Sewered
4 0 Wastes

The following code applies to these figures

Sect 5 Research Grants (Class I)	0 0	Sect 6a1 S&C Sewer Grants (Class III)
Sect 5 Demo Grants (Class II)	0 0	Sect 6a2 AWT Grants (Class IV)
All Sect 5 & 6 Contracts	0 0	Sect 6G Industrial Waste Grants (Class V)

Examples: 0 = No Funds; M = Not more than \$49,000;
1 = \$50,000 to \$149,000; 2 = \$150,000 to \$249,000; etc.

RESEARCH, DEVELOPMENT AND DEMONSTRATION PROGRAM

SUBPROGRAMS

MUNICIPAL-POLLUTION
CONTROL TECHNOLOGY

0 0	1101
0 21	Sewered
4 0	Wastes
1 53	1102
M 0	Combined
6 0	Sewer
	Discharges
0 20	1103
0 0	Storm Sewer
11 0	Discharges
M 2	1104
0 0	Non-Sewered
4 0	Run-off
0 0	1105
0 0	Non-Sewered
0 0	Municipal Wastes
0 0	1106
0 14	Joint
0 0	(Mun./Ind.) Wastes

INDUSTRIAL-POLLUTION
CONTROL TECHNOLOGY

1 0	1201
M 0	Metal and Metal
1 12	Products
M 0	1202
M 0	Chemicals and
1 21	Allied Products
M 0	1203
M 0	Power
M 2	Production
M 0	1204
M 0	Paper and Allied
M 9	Products
M 0	1205
M 0	Petroleum and
0 5	Coal Products
M 0	1206
M 0	Food and Kindred
M 10	Products
M 0	1207
0 0	Machinery and
0 1	Transportation
	Equipment
M 0	1208
0 0	Stone, Clay and
0 0	Glass Products
M 0	1209
M 0	Textile Mill
M 7	Products
0 0	1210
0 0	Lumber and wood
0 1	Products
0 0	1211
0 0	Rubber and
0 1	Plastic
M 0	1212
M 0	Miscellaneous
0 3	Industrial
	Sources

AGRICULTURAL-POLLUTION
CONTROL TECHNOLOGY

M 0	1301
0 0	Forestry and
0 0	Logging
0 0	1302
0 0	Rural Run-off
0 1	
0 0	1303
1 3	Irrigation
0 2	Return Flows
2 0	1304
2 0	Animal Feed
4 4	Lots
0 0	1305
0 0	Non-Sewered
0 0	Rural Wastes

RESEARCH, DEVELOPMENT AND DEMONSTRATION PROGRAM

SUBPROGRAMS

MINING-POLLUTION
CONTROL TECHNOLOGY

1	0	1401
0	0	Mine
6	13	Drainage
0	0	1402
0	0	Oil
1	0	Production
M	0	1403
0	0	Oil Shale
0	2	
0	0	1404
0	0	Other
0	0	Mining Sources
M	0	1405
0	0	Phosphate
0	2	Mining

OTHER-SOURCES OF POLLUTION
CONTROL TECHNOLOGY

0	0	1501
2	0	Recreational
1	0	
0	0	1502
1	0	Boat and
1	0	Ship
0	0	1503
0	0	Construction
3	0	Projects
0	0	1504
1	0	Impoundments
1	0	
0	0	1505
0	0	Salt Water
1	M	Intrusion
0	0	1506
0	0	Natural
0	1	Pollution
1	0	1507
0	0	Dredging and
2	0	Landfill
1	0	1508
M	0	Oil
17	5	Pollution

WATER QUALITY
CONTROL TECHNOLOGY

0	0	1601
2	0	Eutrophication
2	0	
1	0	1602
0	0	Physical-Chemical
1	0	Identification of
		Pollutants
0	0	1603
0	0	Biological
0	0	Identification
		of Pollutants
1	0	1604
0	0	Source of
1	0	Pollutants
2	0	1605
0	0	Fate of Pollutants
1	0	in Surface Waters
1	0	1606
0	0	Fate of Pollutants
0	0	in Ground Waters
1	0	1607
2	0	Fate of Pollutants
1	0	in Coastal Waters
M	0	1608
M	0	Water Quality
1	0	Control
2	0	1609
0	0	Water Resources
4	0	Planning and
		Resources Data
1	0	1610
1	0	Cold Climate
1	0	Research
1	0	1613
2	0	Thermal
4	0	Pollution

RESEARCH, DEVELOPMENT AND DEMONSTRATION PROGRAM

SUBPROGRAMS

WASTE TREATMENT & ULTIMATE
DISPOSAL TECHNOLOGY

1	0	1701
0	0	Dissolved
3	0	Nutrient Removal
0	0	1702
0	0	Dissolved Refrac-
		tory Organics
2	0	Removal
M	0	1703
0	0	Suspended and
4	0	Colloidal Solids
		Removal
M	0	1704
0	0	Dissolved
5	0	Inorganics
		Removal
M	0	1705
M	0	Dissolved Bio-
1	0	degradagle Organics
		Removal
1	0	1706
M	0	Microorganisms
1	0	Removal
1	0	1707
2	1	Ultimate
5	0	Disposal
0	0	1708
0	10	Waste Water
6	0	Renovation and
		Re-use
0	0	1709
0	0	General Waste
2	0	Treatment
		Technology

WATER QUALITY
REQUIREMENTS RESEARCH

1	0	1801
0	0	Municipal
0	0	Uses
0	0	1802
0	0	Industrial
0	0	Uses
1	0	1803
0	0	Agricultural
0	0	Uses
0	0	1804
0	0	Recreational
0	0	Uses
3	0	1805
0	0	Fish and Other
8	0	Aquatic Life
0	0	1806
0	0	Other Single
0	0	Uses
0	0	1807
0	0	Multiple
0	0	Uses

EDUCATIONAL NEWS

ECKENFELDER TO VANDERBILT

W. Wesley Eckenfelder, Jr., presently Professor of Civil Engineering at the University of Texas, has accepted a position as Distinguished Professor of Environmental and Water Resources Engineering at Vanderbilt University.

He has held teaching appointments at Manhattan College and the University of Texas and visiting professorships at the University of Wisconsin and the University of Delft. He has also worked extensively in industry and has been a member of several consulting firms.

He was director of the Summer Institute in Water Pollution Control at Manhattan College from 1955 to 1967 and is currently director of a program of seminars in Water Pollution Control in the Chemical Industry, sponsored by the Manufacturing Chemists Association.

MCCLANAHAN JOINS GEORGIA TECH STAFF

Dr. Mark A. McClanahan has recently completed his doctoral program in Environmental Chemistry with Dr. K. H. Mancy at the University of Michigan and will be joining the staff of the School of Civil Engineering, Division of Sanitary Engineering at Georgia Tech in September, 1969.

CANTER JOINS OKLAHOMA STAFF

Larry Canter has left Tulane to become Assistant Professor of Civil Engineering at the University of Oklahoma in Norman.

MEETINGS OF INTEREST

September 22-24 - U. S. Bureau of Solid Wastes,
Packaging Industry Advisory Committee
and University of California at Davis.
First National Conference on Packaging
Wastes. Sheraton - Palace,
San Francisco, California

October 3 - University of Texas
Conference on the Health Aspects of
Air Pollution.
Austin, Texas

October 13-16 - Association of Official Analytical
Chemists. Marriott Motor Hotel,
Twin Bridges, Washington, D.C.

October 14-15 - Purdue. 8th Annual Indiana Air Pollution
Control Conference.
Lafayette, Indiana

October 20-21 - Battelle Memorial
Conference on Membranes for Industrial,
Biological and Waste Treatment Processes:
Fundamental and Applied Aspects.
Columbus, Ohio

NOTES OF INTEREST

NATIONAL WATER COMMISSION

The National Water Commission wants the advice and guidance of nongovernmental organizations of citizens as well as of the States and regional inter-governmental agencies in the series of conferences it has planned for the late summer and fall, Charles F. Luce, Chairman, announced today.

Mr. Luce said invitations had been sent to the Governors of the 50 states to present their views as to the major issues and problems on which the Commission should concentrate and on the program of studies to be undertaken to provide the basis for the report and recommendations to be submitted to the President and the Congress in 1973.

"We are now asking for similar contributions from the representatives of those organizations and citizens whose objectives and programs have a bearing on the work of the National Water Commission," he said. "Letters are being sent to those which have indicated an interest in our work, but we will welcome the views and comments of any organizations concerned with the management of the nation's water and related land resources." Any group wishing to present its views should communicate promptly with the Commission at 800 N. Quincy St., Arlington, Va. 22203.

"Statements of views may be submitted at any time. Those which cannot be taken up in conference will be treated the same as the presentations at the conferences and made a part of the official records of the Commission."

The first of the regional conferences -- for the Pacific Northwest states of Alaska, Idaho, Oregon and Washington -- is scheduled for Portland, Oregon, August 29, and will be held in the Hotel Benson. Other conferences are at Denver, September 26, for the Rocky Mountain and Missouri Basin states; Chicago, October 3, for the North Central states; New Orleans, October 9, for the South; New York, October 16, for New England and the Middle Atlantic States, and Los Angeles, October 27, for the Pacific Southwest.

There will be a national conference at Washington, November 6-7, for presentations of national organizations having a direct interest in national water policy and programs. Mr. Luce said local and state components of national organizations would be encouraged to present consolidated views at the Washington conference.

The National Water Commission, a non-partisan body of seven appointed by the President, has a five-year statutory assignment to develop an overall national water policy. It is directed by law to review present

and anticipated national water problems, assess future water needs and identify alternative ways of meeting these needs. The Commission is to consider both economic and social consequences of water resource development, including the impact of such development on regional economic growth, on institutional arrangements, and on esthetic values. The Commission takes the approach that water resource development cannot be considered as an independent problem but must be viewed as an integral part of the national effort to protect and improve the quality of man's environment.

NIXON CREATES NEW ENVIRONMENTAL UNIT

Interagency action on environmental problems will be coordinated through an Environmental Quality Control Council being created by President Nixon. Composed of eight members, the council will be chaired by the President and will include Vice President Agnew and the Secretaries of six departments concerned with the environment. Science Advisor Lee Dubridge is slated to be executive secretary. Patterned after the Urban Affairs Council, the new executive-level unit is expected to establish environmental policy on such issues as pollution, conservation, and resources. From Professional Engineering, July 1969.

CENTRALIZED SCIENCE AGENCY

Should the Government's science activities be combined under one organization? Rep. Emilio Q. Daddario (D-Conn.) opened up this question for broad discussion when he released a report to the House Subcommittee on Science, Research and Development which lays the groundwork for extended congressional inquiry into the controversy. According to the report, some experts assert that the present diffuse organization, with research and development scattered over some 20 agencies, is responsible for the current negative mood of the Congress in voting money for these activities. Others see a need to establish organizational neatness after 25 years of scientific expansion.

Mr. Daddario, who chairs the Subcommittee, indicated his intention to call for hearings as soon as practicable, and to gather ideas from Executive agencies and departments, the Executive Office of the President, experts in political science and administration, and other informed observers. A new model organization, proposed for discussion, and called the National Institutes of Research and Advanced Studies, would include the present National Science Foundation, the National Foundation on the Arts and Humanities, the National Institutes of Health, the National Bureau of Standards and parts of the Office of Education, the Atomic Energy Commission, and the Environmental Science Services Administration.

Dr. Lee A. DuBridge, the President's Science Adviser, and Mr. Roy Ash, chairman of President Nixon's recently appointed advisory group on government reorganization, have been asked to comment on the questions raised in the report. Similar requests have gone to public administration expert Don K. Price, Dean of the Kennedy School of Government at Harvard University, and Carnegie-Mellon University President Dr. H. Guyford Stever, chairman of Mr. Nixon's interregnum task force on science affairs. The four previous Presidential science advisers were consulted during preparation of the report by the Science Policy Research Division of the Library of Congress. They are Dr. James R. Killian, Dr. George B. Kistiakowsky, Dr. Jerome B. Wiesner, and Dr. Donald F. Hornig. Also consulted was the Research Management Advisory Committee to the House Subcommittee.

From Legislative Bulletin, Nat'l Soc. Prof. Engr., July 1969.

ACTION ON THE HILL

Senator Scott (R-Pa.), for Senator Case (R-N.J.), introduced S. 2312 to create a new Cabinet-level Department of Conservation and Environment. To include most of the functions of the Department of Interior. S. 2312 is intended to establish a single, effective instrumentality for environmental protection. Citing as the need for such legislation, Senator Case pointed to the diffusion of responsibility and authority and the absence of any one top official or department within the Federal Government charged with restoring the quality of the environment as a whole. The bill has been referred to the Senate Committee on Government Operations. In the House, Representative Daddario (D-Conn.) would turn the Department of Interior into a Department of Resources, Environment and Population, and transfer to such new Department parts of the Departments of Commerce, Agriculture, and HEW. Daddario's bill, H.R. 12000, has been referred to the House Committee on Government Operations.

By Executive Order 11472, President Nixon has established the Environmental Quality Council. The Council is specifically charged with Presidential advisory duties on environmental quality matters, and directed to recommend measures to insure consideration of environmental effects in Federal policies and programs, foster cooperation between all levels of government, and promote the advancement of scientific knowledge and the development of technology to prevent adverse health effects.

Congressmen Dingell (D-Mich.), Blatnik (D-Minn.), and Karth (D-Minn.) have joined in the introduction of H.R. 11747, a bill to establish a clean water trust fund. It would establish a system of Federal water user fees to be deposited in the Treasury and used to finance Federal water pollution control programs. The bill has been referred to the House Public Works Committee.

Senator Muskie has introduced S. 2005 to provide financial assistance for the construction of solid waste disposal facilities. An amendment to the Solid Waste Disposal Act, S. 2005 is called the Resources Recovery Act of 1969. It has been referred to the Senate Public Works Committee. And additional hearings have been held on Muskie's bills to strengthen water pollution controls and finance the construction of waste treatment plants (S. 7 and S. 544). The Senate Subcommittee on Air and Water Pollution is expected to begin markup of S. 7 in early summer. From Legislative Bulletin, Nat'l Soc. Prof. Engr., July 1969.

HALL TO OFFICE OF SCIENCE AND TECHNOLOGY

Professor Warren A. Hall of the University of California, Riverside, noted especially for his work on systems analysis and water supply to arid lands, is expected to become the Federal Government's coordinator of water quality resources and research in the President's Office of Science and Technology. He would succeed Bernard B. Berger, who is returning next month to the University of Massachusetts in Amherst on expiration of his one-year leave of absence. From Environmental Health Letter, August 1, 1969.

LAPLANTE JOINS FWPCA

Bryan LaPlante, acting staff director of the Republican Senate Policy Committee and former security officer of the Atomic Energy Commission, will become Deputy Commissioner of the Federal Water Pollution Control Administration pending completion of paper work. He will succeed John T. Barnhill, who is being reassigned as chief of program coordination, succeeding Kelly Campbell, resigned. LaPlante will conduct an evaluation of FWPCA to determine if further personnel changes should be made. From Environmental Health Letter, August 1, 1969.

LAND LITTER POLLUTES WATER

A survey made by the American Public Works Association for the Federal Water Pollution Administration shows a great potential pollution of rivers and streams by storm waters washing street litter into sewer systems. In one stretch of urban street tested, the weighted average of the amount of dust and dirt was found to be approximately one and one-half pounds per day per 100 feet of curb. From Land Pollution Reporter, July-August, 1969.

ROOM FOR RESEARCH

It will cost \$176 million more to handle waste from packaging in 1976 than in 1966. This forecast was made in a recent study. "The Role of Packaging in Solid Waste Management 1966 to 1976," conducted for the U.S. Public Health Service by the Midwest Research Institute.

About 90% of all packaging materials eventually enter the solid waste system for collection and disposal -- and the report predicts that packaging consumption will increase by 50% during the decade.

Among steps proposed for mitigating the situation: further studies of waste materials by industry; encouragement of adoption of materials acceptable for reuse; development of an automated waste separation process; and public education. The report also stated, "although regulation of packaging by government would be the most effective mechanism for accomplishing the objective, it would likely be difficult to justify." From Land Pollution Reporter, July-August 1969.

OWRR 1970 TITLE II RESEARCH PROGRAM

Secretary of the Interior Walter J. Hickel announced today the selection of 36 research projects for the fiscal year 1970 water research program authorized under Title II of the Water Resources Research Act of 1964.

The Title II program -- administered by the Office of Water Resources Research -- provides for grants, contracts, or other arrangements with educational institutions, private foundations or other institutions, and with private firms and individuals.

Secretary Hickel said "The response of the Nation's research community to water resources research opportunities made possible by the Title II provisions of the Act is highly encouraging. This year we received 360 proposals representing requests for approximately \$35,000,000 in Federal funds for research under Title II.

"The pending budget request for the support of the fiscal year 1970 program is \$2 million. While this assures that only research of a high quality will be approved for funding, it also made our selection task difficult in view of the limited funding available for Title II support".

In the research projects selected for support, emphasis is given to research related to urban and metropolitan water problems and to the development and application of systems analysis to water resources problems.

Eight of the projects deal with research related to urban or metropolitan water problems, eight of the projects deal with systems analysis development and application, and five of the projects deal with water resources planning and management.

In addition, other projects deal with the ecologic impact of water resources development, social objectives in water resources policy, and the management of inland lake resources.

WATER RESOURCES RESEARCH ACT - PROPOSED FISCAL YEAR 1970 AWARDS

New Mexico State University, Las Cruces, New Mexico -- Soil and Water Management for Salinity Control - \$46,223

Cornell University, Ithaca, New York -- Metropolitan Water Resources Systems Analysis - \$67,255

Kansas State University, Manhattan, Kansas -- Modeling and Optimization of Water Resources Systems, Phase II - \$36,650

Michigan State University, East Lansing, Michigan -- An Ecological Evaluation of Stream Eutrophication - \$73,604

Georgia Institute of Technology, Atlanta, Georgia -- Case Study of Remedial Flood Management in an Urban Area, Phase II - \$60,000

Oregon State University, Corvallis, Oregon -- Computer Simulation of Eutrophication - \$29,000

Desert Research Institute, Reno, Nevada -- Research and Analysis to Plan, Develop, and Manage a Ground and Surface Water Supply, Phase II - \$55,000

Desert Research Institute, Reno, Nevada -- Application of Simulation Theory to Water Resources Planning and Management - \$60,000

University of New Hampshire, Durham, New Hampshire -- Economic Evaluation of Various Uses and Cost Allocation of Surface Water Resources - \$48,716

University of Michigan, Ann Arbor, Michigan -- Systems Analysis of the Great Lakes - \$72,082

Barnard College, Columbia University, New York, New York -- Coordinated Management and Design of Metropolitan Water Supply and Waste Water Disposal Networks: A Linked Systems Analysis - \$79,202

Stanford University, Stanford, California -- Evaluation of the Decision Process in Water Resource Planning - \$38,954

University of California, Riverside, California -- Optimization of Water Resources Development: Phase III - Optimization of Capacity Specifications for Components of Regional Complex Integrated Multipurpose Water Resources Systems - \$49,886

Union College, Schenectady, New York -- Continuation of Stochastic Basis for Comprehensive River Basin Planning - \$18,256

Massachusetts Institute of Technology, Cambridge, Massachusetts --
Optimum Linear Synthesis in Urban Hydrology - \$38,461

Massachusetts Institute of Technology, Cambridge, Massachusetts --
A Problem Oriented Language for Hydrologic Analysis - \$49,345

Rensselaer Polytechnic Institute, Troy, New York -- Diatom Population
Changes in Lake George: Phase II - \$47,000

George Washington University, Washington, D.C. -- Implementation of
Water Resources Plans in Metropolitan Environments - \$16,845

Antioch College, Yellow Springs, Ohio -- Evaluation of Natural River
Environments - \$23,367

Hofstra University, Hempstead, New York -- Evaluation of Recreational
and Cultural Benefits of Estuarine Use in an Urban Setting - \$45,063

University of Chicago, Chicago, Illinois -- Water as a Potential
Organizing Concept in Urban Regions - \$75,000

University of Illinois, Urbana, Illinois -- Statistical Geometry of
Porous Media - \$21,170

Texas Water Development Board, Austin, Texas -- Stochastic Optimization
and Simulation Techniques for Management of Regional Water Resource
Systems - \$85,000

Huron River Watershed Council, Ann Arbor, Michigan -- Coordination of
Public and Private Forces on Inland Lake and Shoreland Management - \$63,100

Institute of Marine Science, Miami, Florida/Conservation Foundation,
Washington, D.C. -- Water Cycles, Water Resources Planning, and Urban
Development at Rookery Bay, Florida - \$78,546

American Society of Civil Engineers, New York, New York -- Systematic
Study and Development of Long-Range Programs of Urban Water Resources
Research - \$50,000

Ralph Stone and Co., Inc. Los Angeles, California -- Socio-Economic
Study of Multiple Use Water Supply Reservoir - \$60,000

Hydronautics, Inc., Laurel, Maryland -- Experimental and Theoretical Study
of the Hydrodynamics of Dispersion in Rivers and Estuaries - \$60,000

General Electric Co., Philadelphia, Pennsylvania -- Mathematical Modeling
of Water Distribution Systems - \$81,828

Engineering Science Inc., Arcadia, California -- Decision Process in Water Quality Management - \$80,000

General Electric Co., Santa Barbara, California -- Mathematical Modeling of Fresh Water Aquifers Having Salt Water Bottoms - \$60,000

Leeds, Hill & Jewett, San Francisco, California -- Economic and Institutional Analysis of a Waste Water Reclamation and Reuse Project - \$69,834

Battelle Memorial Institute, Columbus, Ohio -- Evaluating Urban Core Usage of Waterways and Shorelines - \$68,013

Morton W. Bittinger and Associates, Fort Collins, Colorado -- Integrated Management and Administration of Ground Water in Interstate and International Aquifers - \$37,600

AVCO Economic Systems Corp, Washington, D.C. -- A Multi-Phasic Component Study to Predict Storm Water Quality from Urban Areas - \$80,000

Hittman Associates, Inc., Columbia, Maryland -- Factorial Analysis of Price - Demand and Demand - Cost Functions for Municipal Water Systems - \$75,000

INTERIOR DEPARTMENT ORGANIZES URBAN WATER RESOURCES RESEARCH PROGRAM

Secretary of the Interior Walter J. Hickel announced on July 31, 1969 that he has ordered the Office of Water Resources Research (OWRR) to give top priority to improving water resources management in the metropolitan areas of the country. He said Carl L. Klein, Assistant Secretary for Water Quality and Research, would supervise the OWRR in developing a new national program of research in this field.

"Metropolitan water problems affect the livelihood and well-being of three-fourths of the American people and involve billions of dollars of investment," Secretary Hickel said.

"With water quality and water quantity requirements rising as the population grows," he added, "these problems can have profound effects on water resources management and on the enhancement of the environment."

"The major purposes of water resources research," Secretary Hickel said, "are the improvement of knowledge and understanding, and relating these meaningfully to decision-making and to technological improvements. In working toward these goals, OWRR will prepare a program to provide greater cooperation and coordination between Federal agencies, State and local governments, and academic and other research organizations."

Assistant Secretary Klein said, "There is a particularly urgent need for research to improve planning, development and management of water resources in the metropolitan-urban environment. We must meet water-related requirements efficiently and economically if we are ever to succeed in improving our environment."

"We will be seeking increased support for this type of research through the OWRR program," the Assistant Secretary added. "We feel OWRR is well qualified to do the job, since it has been designated the main government agency in this area by the Federal Council for Science and Technology."

Work on organizing the new program will continue during the summer and will involve consultation with technical experts in urban water research and practice. The planned program will then be reviewed and discussed at a national conference of experts to assure its technical and practical soundness.