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DR. OKUN ON LEAVE IN EUROPE

On July 1, Dr. Daniel A. Okun, Professor of Sanitary Engineering and Head of the Department of Environmental Sciences and Engineering, University of North Carolina at Chapel Hill, leaves for a year in Europe. He has been awarded a Kenan Leave by the University and he will also hold a Special Research Fellowship from the Federal Water Pollution Control Administration.

Dr. Okun's headquarters for the next twelve months will be at University College, London, England, in the Department of Civil Engineering with Dr. Kenneth J. Ives. While there he will conduct studies of water supply and pollution control projects in England and on the Continent, with particular emphasis on the role of research in engineering project design. He will also be involved in studies related to the impact of Western engineering practice on water supply in developing countries. He will attend the International Water Supply Association meeting in Barcelona, Spain, early in October. His plans also include visits to Thailand, Pakistan and Israel as lecturer and consultant.

Dr. Maynard Hufschmidt has been designated by Chancellor Sitterson to fill Dr. Okun's place on the Institute Board of Directors during the coming year.

DEPARTMENT OF INTERIOR APPROVES INSTITUTE REQUESTS FOR MATCHING GRANTS

On June 9, 1966, Secretary of the Interior Stewart L. Udall announced the award of \$2 million in matching fund grants by the Office of Water Resources Research. This included two grants totaling \$159,189 for the Water Resources Research Institute of the University of North Carolina.

One of the Federal grants in the amount of \$114,950 will provide partial support for a three-year investigation of estuarine ecology and pollution under the direction of Dr. Donald B. Horton, Assistant Professor, Department of Zoology, North Carolina State University, and Director of the Pamlico Estuarine Laboratory. This project - together with a recently approved grant from the Federal Water Pollution Control Administration - will facilitate a major expansion of the Pamlico Laboratory's estuarine research program. The findings will be useful in guiding the economic development of the coastal region. The Texas Gulf Sulphur Company is making a major contribution to the non-Federal portion of the project cost.

The other project involves a grant for \$44,239 in partial support of a three-year study of the cycling of phosphorus between living and non-living systems in fresh water environments. Phosphorus is considered to be the most important ecological element and the cause of nuisance algae and other aquatic plant growths in streams, lakes, and estuaries. Its increasing concentration in surface waters from waste discharges and land runoff is a matter of growing concern on the part of water pollution control agencies. Information from the study will contribute to the understanding of the problem and water quality management. The North Carolina Board of Science and Technology has approved a grant towards the non-Federal portion of the project cost.

Dr. Renne, Director of the Office of Water Resources Research, stated that 227 matching grant proposals for nearly \$6 million were submitted for consideration within the \$2 million available. Of these proposals only 8 percent were not considered worthy of support. The competition was very keen as a result of the limited funds. North Carolina's two projects were among the 68 from 34 states finally selected for approval.

EAST VERSUS WEST IN WATER CONSERVATION

Those who attended the national Water Resources Engineering Conference of the American Society of Civil Engineers in Denver last month were treated to an unusually candid exchange of views between leading figures on Federal investment in water resources development in the West. Dr. Maurice K. Goddard, Secretary of Forests and Waters of Pennsylvania crossed swords with Commissioner Dominy, Bureau of Reclamation, while Dr. Ray K. Linsley of Stanford University attempted the middle ground. Goddard referred to the Central Arizona Project with two dams in the Grand Canyon region of the Colorado River as "another attempt to hornswoggle the taxpayers." He said, further, "It is sheer folly to keep pouring billions of dollars into Western reclamation development and grandiose Western schemes." Citing the Central Arizona Project, he contended that the East pays the major cost of reclamation projects and "is handed the crumbs and the cake goes West."

Commissioner Dominy contested Dr. Goddard's views that the Western irrigated lands are submarginal as compared with farm lands in other areas. He said, "There is ample documented proof that the economic impact of reclamation developments far exceeds the project costs." The conclusion by Dr. Linsley was that both Goddard and Dominy were partly right.

COUNTY ROLE STRESSED IN WATER FORUM

The North Carolina Association of County Officials devoted the first afternoon of their three-day annual meeting in Asheville on June 12-14 to a discussion of the county role in providing area-wide water and sewerage services. The water forum was opened with

a luncheon talk by Senator B. Everett Jordan. This was followed by a keynote address by David H. Howells, Director of the Water Resources Research Institute. Assistant Director Warren J. Wicker of the Institute of Government, University of North Carolina at Chapel Hill, moderated a forum which included presentations of the water and sewerage programs of Anson, Mecklenburg and Nash Counties and related discussions of applicable Federal aid programs by Charles Edwards of EDA and Vance Swift of FHA. General James R. Townsend, Chairman of the State Board of Water Resources, summarized the afternoon's talks and discussion. There was general agreement among the panel participants that the Counties of North Carolina are uniquely qualified by virtue of legal powers and geography to assume a greater role in the provision of area-wide water and sewerage services.

ORGANIZATION OF NEW FEDERAL WATER POLLUTION CONTROL ADMINISTRATION ANNOUNCED

The organizational plan for the Water Pollution Control Administration announced by Secretary of the Interior Stewart L. Udall on June 3, 1966, breaks up the Administration's functions into four main areas - technical programs, facilities programs, research and development, and enforcement - each headed by an Assistant Commissioner under the direction of Commissioner James M. Quigley.

The technical program will include developing long-range water pollution control plans for the Nation's major river basins, providing technical assistance to the States, and maintaining a national pollution surveillance system.

The facilities program will administer construction grants to municipalities to assist in building sewage treatment facilities, demonstration grants to develop new and improved methods for controlling pollution caused by combined storm and sanitary sewers, and the elimination of pollution from Federal installations.

The research and development program will administer research activities relating to the causes, control and prevention of water pollution. This will include a Division of Engineering Development to develop and conduct field projects and administer contracts for new and improved waste treatment or control processes. The program also administers research and training grants and fellowships to public and private agencies, institutions, and individuals.

The fourth major area of the Administration is responsible for carrying out the enforcement provisions of the Federal Water Pollution Control Act and for achieving interstate compacts and uniform State water pollution control laws.

COAL MINE DRAINAGE LIBRARY OPENS

The National Coal Association has announced the opening of the Coal Mine Drainage Library in Monroeville, Pennsylvania. This library, sponsored by the Coal

Industry Advisory Committee to the Ohio River Valley Water Sanitation Commission, through cooperation of the National Coal Association, is said to possess the most complete collection of material treating on mine drainage and acid pollution in existence. Persons interested in the acid mine drainage problem are urged to avail themselves of the Library's services. Further information can be obtained by writing to: Coal Mine Drainage Library, Bituminous Coal Research, Inc., 350 Hochberg Road, Monroeville, Pennsylvania. Telephone: (412) 327-1600.

TOMORROW'S WATER SERVICE

In a paper before the 86th Annual Conference of the American Water Works Association at Bal Harbour, Florida, on May 23, 1966, Dr. Daniel A. Okun, Head of the Department of Environmental Sciences and Engineering of the University of North Carolina at Chapel Hill, maintained that the explanation for the relatively slow rate of technological change in the water and waste water field can be attributed to a virtual absence of commitment to research. Compared with private industry, construction, medicine, space and military efforts, Dr. Okun said, "Research in the water field is only undertaken within the industry after routine responsibilities have been discharged, which means almost never." "Seldom," he commented, "does one find a commitment to research as a prime obligation of any segment of the water industry."

Dr. Okun suggested a number of approaches to the water industry to permit it to move with the rest of society into the twenty-first century. These include the recommendations that the most obvious place to begin research is at existing facilities; regulatory agencies should permit new developments in operating plants to facilitate research investigations; the waterworks industry should conduct more of its own research; the industry should also sponsor research within universities; the water industry should profit from spinoff from the extensive research in the space and defense establishments; and the Federal government should be encouraged to invest more heavily in research of interest to the water industry.

BIBLIOGRAPHY ON SOCIO-ECONOMIC ASPECTS OF WATER RESOURCES AVAILABLE

An advance copy of a "Bibliography on Socio-Economic Aspects of Water Resources," prepared for the Office of Water Resources Research by the Battelle Memorial Institute of Columbus, Ohio, has been received in the Institute Office. This extensive document is available for reference by anyone interested in this aspect of water resources research.

NORTH CAROLINA QUALIFIES FOR RECREATION GRANTS

North Carolina has established eligibility for matching Federal grants from the Land and Water Conservation Fund for acquisition and development of State and local outdoor recreation areas.

To qualify, it was necessary for the State to develop a statewide outdoor recreation plan and planning program and for the Department of the Interior's Bureau of Outdoor Recreation to find these adequate for initial qualification for the 25-year program. North Carolina's apportionment for fiscal years 1965 and 1966 is \$1,672,712.

State outdoor recreation plans evaluate supply, demand, and need for areas and facilities for significant outdoor recreation activities. The plans include an action program for meeting priority needs. Priority is expected to be given to serving the needs of metropolitan and other urban areas. The initial period of eligibility for North Carolina is until February 28, 1968. The State may now apply for grants for 50 percent of the cost of State and local government land acquisition and development projects designed to meet the priority needs identified in the State plan.

The program is administered in North Carolina under the direction of Mr. Wayne Corpening, Director, State Planning Task Force.

The Land and Water Conservation Fund Program became effective in 1965. It is financed by revenues from the new \$7.00 Federal Recreation Permit for admission to 7,000 Federal outdoor recreation areas, other Federal recreation fees, sales of surplus Federal real property, and the Federal motorboat fuels tax.

COOPER NAMED TO HEAD COASTAL STUDIES PROGRAM

Dr. Arthur W. Cooper, Associate Professor, Department of Botany, North Carolina State University, has been appointed director of North Carolina's new Coastal Studies program. A nationally-known ecologist and conservationist, Cooper will administer projects financed by a \$100,000 fund made available for studies of coastal problems. Chancellor Caldwell said he will be concerned with research projects in erosion control, the expansion and development of new areas of work, the development of the laboratory near Manteo, and will represent the Coastal Studies program with the North Carolina Sea-shore Commission. Dr. Cooper is also a member of the Water Resources Research Institute Technical Committee.

NEW WATER RESOURCES BILLS INTRODUCED IN THE CONGRESS

S. 3308 - To amend the Act of October 4, 1961, relating to the acquisition of wetlands for conservation of migratory waterfowl, to extend for an additional 8 years the period during which funds may be appropriated under that Act.

S. 3327 - To amend the Federal Water Pollution Control Act to authorize investigations of specific water pollution problems by the Federal Water Pollution Control Administration upon request of State or interstate agencies and municipalities and authorizing annual appropriations of \$100 million for this purpose; extend grants for research and development related to combined sewer systems to include the demonstration of new or advanced features of sewage collection and treatment systems and increasing the annual authorized appropriation to \$100 million for this purpose; extend the date for adoption of State water quality standards to June 30, 1968; authorize \$100 million annually for grants to the States and interstate agencies to administer water quality standards and plans; increase grants for construction of waste treatment works to 90 percent of the cost and authorize annual appropriations of \$3 billion for this purpose; authorize Federal loans to finance the local share of construction cost; and set up the enforcement arm of the Federal Water Pollution Control Administration as an independent Division with its own professional and administrative staff.

H.R. 15106, H.R. 15134, H.R. 15172 - Identical to S. 3327

H.R. 15131 - To amend the River and Harbor Act of 1965 to prohibit the collection of fees under authority of the Land and Water Conservation Fund Act of 1965 for entrance, admission, or access to the project area (including waters) for the use of minimum recreational facilities at such project area.

H.R. 15192 - To amend Title II of the Merchant Marine Act of 1936 to authorize the establishment and operation of sea grant colleges and certain education, training, and research programs. The Smithsonian Institution would be charged with the responsibility of initiation and support of programs in the marine sciences through contracts with, or grants to, public or private institutions and other groups.

H.R. 15261 - To amend the National Science Foundation Act of 1950 to authorize the establishment and operation of sea grant colleges and programs by initiating and supporting programs of education, training, and research in the marine sciences and a program of advisory services relating to such marine sciences, to facilitate the use of the submerged lands of the Outer Continental Shelf. The program would be administered by the National Science Foundation.

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