

WATER RESOURCES RESEARCH INSTITUTE

OF THE UNIVERSITY OF NORTH CAROLINA

NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

Number 70

November 1971

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NATIONAL SYMPOSIUM ON COSTS OF WATER POLLUTION CONTROL

A National Symposium on Costs of Water Pollution Control will be held in Raleigh, N. C. on April 6 and 7, 1972. Sponsored by the Research Triangle Universities and several national societies, the program will include sessions on:

- Economic Implications of National Goals for Water Pollution Control
- Cost Effectiveness of Comprehensive Planning, Design and Construction, Information and Monitoring Systems
- Economic Incentives for Pollution Control
- Economics of Industrial Waste Management

The National Symposium succeeds the Southern Water Resources and Water Pollution Control Conference. The Water Resources Research Institute is serving as Secretariat. Inquiries should be addressed to Assoc. Director F. E. McJunkin, 124 Riddick Bldg., NCSU, Raleigh, 27607. The telephone is 755-2815.

WATER RESOURCES RESEARCH APPLICATIONS INVITED

Applications from faculty members of colleges and universities in North Carolina for grants under the Institute's Fiscal Year 1972-73 Annual Allotment Program will be accepted until February 1, 1972. No exceptions will be made to this cutoff date.

The purpose of the Annual Allotment Program is to encourage new research related to the water resource problems of North Carolina. A statement of "Water Resource Problems and Research Needs in North Carolina" which discusses and highlights areas in which the Institute is attempting to develop research was distributed earlier this year. This is currently under revision and revised copies will be distributed by December 1, 1971. First consideration will be given to proposals which attempt to respond to these recognized needs.

Priority will also be given to short-term proposals which launch important new work and have the potential for continued support. Grants for proposals involving more than one year's support will be approved on an annual basis. Projects will be considered for renewal on the basis of individual merit.

Faculty members are encouraged to discuss their research interests with the Institute Director or Associate Director prior to the preparation of formal proposals. Memoranda setting forth tentative objectives and procedures in advance of a proposal can be very helpful. These are particularly encouraged where complex or multi-disciplinary problem areas are involved.

Further information can be obtained from the Office of the Director, 124 Riddick Building, North Carolina State University, Raleigh, North Carolina, Telephone Code 919, 755-2815.

NEW INSTITUTE REPORT

Report No. 57: Proceedings Workshop on Toxic Metals in Water

The objectives of this workshop were to evaluate the state of the art of monitoring for toxic metals in the surface waters of North Carolina; the significance of present findings to human health and aquatic ecosystems; the adequacy of present programs as to coverage, technology, and coordination between monitoring agencies; needed changes in agency programs, laws, and regulations; and research needs. Participants included representatives from industry, public agencies, and the academic community.

Jointly sponsored by the Institute and the N. C. Department of Natural and Economic Resources, the Workshop produced the following general conclusions:

1. Present monitoring for toxic metals in water, sediment, biota and food products is unsatisfactory.
2. Sufficient information covering uses of toxic metals in North Carolina is not generally available.
3. There is no point of coordination at which available information can be assessed as to aggregate effect on aquatic environment and man.
4. Sampling and analytical techniques are unsatisfactory.
5. There is insufficient information with respect to maximum safe limits of metals in drinking water.

WATER RESOURCE LUNCHEONS

Water Resource luncheons have been scheduled at Chapel Hill and Raleigh as follows:

North Carolina State University Room 234, Riddick Bldg. Time: 12 noon to 1 p.m. Dates: Jan. 27, 1972 Feb. 24, 1972 March 23, 1972 April 27, 1972 May 25, 1972	University of North Carolina at Chapel Hill, Room 106, School of Public Health Time: 12 noon to 1 p.m. Dates: Jan. 28, 1972 Feb. 25, 1972 March 24, 1972 April 21, 1972 May 26, 1972
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These are highly informal occasions for academic and public agency personnel to get together and talk about their research and management activities. Bring your own bag lunch. Call Mrs. McClung, 755-2815, in advance of each date if you plan to attend. Please do! There will be no luncheon in December.

ENVIRONMENTAL IMPACT STATEMENTS

The Council on Environmental Quality 102 Monitor for October, 1971, lists the following new environmental impact statements for North Carolina projects:

Department of Agriculture

Cooperative federal-state control program for witchweed. Involves herbicides 2, 4-D and paraquat. (Draft).

Department of the Army

Contentnea Creek flood control project, Lenoir and Pitt Counties. Snagging and clearing to reduce flooding. (Draft).

Nahunta Swamp Basin flood control project, Wayne and Greene Counties. Widening and deepening 19.4 miles of stream-channel and constructing storage reservoir for flood control and drainage benefits to farmers. (Draft).

Rockfish Creek flood control project, Duplin, Pender and Sampson Counties. Clearing and snagging and 20.7 miles of deepening and widening of channel. Construction will result in loss of about 80% of standing crop of fish in reaches to be excavated. (Final).

Department of Transportation
(Draft)

US-70: Jones-Craven Counties
US-70-74: Buncombe County
US 421: Lee-Harnett Counties
NC-62: Alamance-Caswell Counties

THE NEW HOPE RESERVOIR

Colonel Albert C. Costanzo, District Engineer of the Wilmington District Corps of Engineers, has announced that the final environmental impact statement for completion of the New Hope Lake, Chatham, Orange, Wake, and Durham Counties, N. C., multipurpose project was filed with the Council on Environmental Quality on 22 October 1971.

The New Hope Lake project, which is currently under construction, consists of a dam and reservoir on the Haw River in central North Carolina, about 10 miles south of Durham and 15 miles west of Raleigh. The lake is a part of the authorized plan of development for the Cape Fear River Basin.

The final environmental statement has been mailed to all Federal and State agencies, environmental groups who have provided comments on the draft impact statement, to the main public libraries in Greensboro, Chapel Hill, Durham, Raleigh, Fayetteville, and Wilmington, N. C., and to the State Clearing House and Information Center in Raleigh, N. C. A copy is also available at the Institute.

WATER LAW STUDIES

The National Water Commission has announced the availability of four legal studies prepared for the Commission. These deal with various aspects of Western water rights and interbasin transfers. The reports have not been approved by the Commission, but are being made immediately available to the public to stimulate general discussion of national water policy issues. The Commission invites the comments and suggestions of interested parties.

One study, entitled "Market Transfers of Water Rights--Toward an Improved Market in Water Resources," was written by Charles J. Meyers and Richard A. Posner. Mr. Meyers is Charles A. Beardsley Professor of Law at Stanford University and Mr. Posner is Professor of Law at the University of Chicago. The report analyzes laws and institutions that presently obstruct free operation

of the market in water resources. Legislative change in some present laws and policies is proposed.

A second closely related study is entitled "Improvement of State Water Right Records" and was prepared by Richard L. Dewsnup and Mr. Meyers. Mr. Dewsnup is on the Commission's legal staff and formerly served as Assistant Attorney General of the State of Utah, where he specialized in water law and water rights administration. This paper describes several deficiencies in state water right records that obstruct market transfers of water rights. Draft legislation to correct the defects is set forth.

A third study, entitled "Functional Analysis of Appropriation Law," was prepared by Mr. Meyers, who is currently serving as Assistant Legal Counsel of the Commission, on leave from Stanford University. This study analyzes the historical evolution and economic function of Western water law. It serves as an introduction and as background for the other two reports.

The fourth study is concerned with the "Law of Interbasin Transfers." It deals with the power of Congress to authorize major water transfers from one state to another. It also considers a number of alternative legal arrangements to protect the interests of the exporting state. Professor Johnson, the author, is a well known lawyer, writer and teacher. He is on the Commission's Panel of Consultants.

The four reports may be ordered from National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22151. The Accession Numbers are, Functional Analysis of Appropriation Law -- PB 202-617; Improvement of State Water Records -- PB 202-618; Market Transfers of Water Rights -- PB 202-620; Law of Interbasin Transfers -- PB 202-619. The price is three dollars each.

CORPS OF ENGINEERS PERMIT SYSTEM UPHELD

The Federal District Court in Chicago has dismissed a suit requesting an injunction against issuance of permits under the 1899 Refuse Act by the Corps of Engineers. Plaintiffs charged that the permits are a license to pollute and that industry should be required to install the best equipment available regardless of the standards. The basis for the Court's action was that it had no jurisdiction because the suit challenged the program in theory rather than a specific case.

CORPS DAM CONSTRUCTION HALTED

At the request of Chairman Russell Train of the Council on Environmental Quality, the Corps of Engineers has agreed to halt construction of Tocks Island Dam across the Delaware River between New Jersey and Pennsylvania.

CEQ asked for further information on oxygen depletion and reservoir draw-down effects.

WATER RESOURCES LEGISLATION OF THE 1971 GENERAL ASSEMBLY OF NORTH CAROLINA

by
Warren J. Wicker
Assistant Director
Institute of Government
(final installment)

G. BEACH AND COASTAL PROTECTION

✓ Estuaries Study. In 1969 the General Assembly (Ch. 1164) directed the Commissioner of Commercial and Sport Fisheries to make a thorough and detailed study of the estuaries of North Carolina "with a view to the preparation of a comprehensive and enforceable plan for the conservation of the resources of the estuaries, the development of their shorelines, and the use of the coastal zone of North Carolina." The sum of \$94,000 was appropriated to finance the study. The Commissioner was directed to file an interim report with the Director of the Department of Conservation and Development by January 1, 1971, and a final report by November 1, 1973. In order that the 1973 General Assembly would have before it the results of the study, the 1971 General Assembly directed that the final report be completed by January 1, 1973. (H33 - Ch. 103)

✓ Beach Erosion Control. A number of different measures relating to beach erosion control and coastal protection were incorporated in Ch. 1159 (H705). Of major interest to coastal counties and communities is the creation within the North Carolina Board of Water and Air Resources, of a Hurricane Flood Protection and Beach Erosion Control Project Revolving Fund. The Board is directed to make advances from the Fund to counties and municipalities for advance planning and engineering work to promote the "development, construction or preservation of hurricane flood protection and beach erosion works or projects" and for the "maintenance and nourishment" of the constructed works or projects. Advances are to be made in accordance with standards set forth in the Act and rules and regulations established by the Board. All are to be subject to repayment. In the past, coastal municipalities and counties have frequently encountered difficulty in raising sufficient funds for advance planning. The purpose of the Fund is to aid the municipalities and counties in overcoming their financial restraints pending completion of studies, the issuance of bonds, or the making or final arrangements for financing projects.

The Board had originally requested \$1,000,000 in initial capital for the Revolving Fund. The General Assembly appropriated directly to the Revolving Fund the sum of \$250,000 for the 1971-73 biennium. (H1069 - Ch. 1043) And it

further authorized the Board to use up to \$500,000 from the funds appropriated to it in 1969 to meet the State's share of beach erosion and hurricane flood protection projects. Thus in the coming biennium there could be as much as \$750,000 made available in advances to local units. The General Assembly also appropriated \$79,700 to the Board of Water and Air Resources to aid in implementing the Revolving Fund and to support other work of the Department in the preservation of natural sand dunes and shore protection. (H1072 - Ch. 1046)

The authority of municipalities to provide for beach erosion control and hurricane flood protection was also increased by Ch. 1159. Express authorization was granted for municipalities to levy taxes and appropriate non-tax funds for these purposes. Since cities may issue bonds for purposes for which they are authorized to levy taxes, this authorization carries with it authority to issue general obligation bonds for the same purposes.

Sec. 3 of the Act broadens county authority with respect to beach erosion control and hurricane flood protection by rewriting G. S. 153-9 (56). As rewritten, it is now clear that the section authorizes counties to appropriate funds not only for the acquisition and construction of protective works, but also for their maintenance. Previously, this section limited the authority of counties in levying taxes to a maximum levy of 10 cents on the \$100. As rewritten the limit has been removed.

✓ Shoreline Protection. Legislation to provide protection for sand dunes along the outer banks of North Carolina, now codified as Art. 3, Chapter 104B of the General Statutes of North Carolina, was enacted in 1965. That Act makes it unlawful to remove any sand dunes or parts thereof lying along the outer banks of the State, or to kill, destroy or remove any trees, shrubbery, grass or other vegetation growing on a dune without first obtaining a permit. Under the Act, the board of county commissioners in each county is authorized to establish rules and procedures for issuing the permit and for designating a shoreline protection officer to carry out this function. Sec. 4 of Ch. 1159 amends this general law to give to the Board of Water and Air Resources the same powers previously vested in the boards of county commissioners. Under the new law, the Board of Water and Air Resources may exercise these powers in any county that has not adopted regulations and appointed a shoreline protection officer by December 31, 1971. Once the Board of Water and Air Resources has acted in any county it has exclusive jurisdiction thereafter. The boards of county commissioners may reclaim jurisdiction by notice to the Board with a plan for carrying out the duties and responsibilities for protection of the shoreline. The effect of the act is to make it possible for the Board of Water and Air Resources to undertake a protection

program in those counties where the boards of county commissioners have failed to act, and to make clear which agency has jurisdiction at any given time.

The 1965 legislation provides for appeals from decisions of shoreline protection officers with respect to the issuance of a permit. The applicant was authorized to appeal in case the permit was denied, and any property owner whose property might be damaged was also given the right to appeal in the case of approval of a permit. The 1971 Act further amends the law to give any interested State agency the right to appeal in the case of approval of a permit, giving an additional source of protection against the possible unwarranted issuance of permits.

✓ Dredge and fill permits. Procedures for issuing permits to dredge or fill-in estuarine waters, tidelands, marshlands, or state owned lakes were established by the 1969 General Assembly, with administrative responsibilities vested in the Department of Conservation and Development. (G. S. 113-229) Ch. 1159 rewrote several sections of this Act to further define its terms, to make more explicit the basis for denying permits, and to broaden the authority of the State to take protective action in the public interest. Most significant in the broadened powers is the new authority vested in the Director of the Department of Conservation and Development who, with the approval of the Board of Conservation and Development, is empowered to "adopt, amend, modify, or repeal orders regulating, restricting, or prohibiting dredging, filling, removing or otherwise altering coastal wetlands." Violation of an order of the Director thus imposed is made a misdemeanor and other enforcement provisions are provided. The new provisions are to be codified as G. S. 113-230.

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H. SEDIMENT AND SOIL EROSION

Concern over both stream pollution and general degradation of the landscape has brought increased interest in recent years in sediment control and the prevention of soil erosion in urban areas. Work to prevent soil erosion, of course, has a long history in agriculture and most county governments in the State have long participated in soil conservation programs.

Two local acts relating to sediment control deserve mention here since they constitute the first direct legislative grant of authority in the area. One act supplies to Forsyth and the municipalities of Winston-Salem and Kernersville. (H857 - Ch. 501) The other applies to Wake County and the City of Raleigh. (H1513 - Ch. 1210) The two acts are essentially identical. Each authorizes the board of county commissioners to establish by ordinance a sediment control program whereby "prior to any alteration of the land mass within the unincorporated portion of the county, a permit must be obtained from the Board

of County Commissioners, in the manner prescribed by the ordinance, and in accordance with the criteria and standards for proper sediment control as established by the Board of County Commissioners." The acts expressly authorize the Board of County Commissioners to adopt such ordinances. The same authority is conferred on the municipalities with respect to territory inside the cities. In both cases, the ordinances may prescribe procedures to "control sediment erosion at the site of any construction, landscaping, clearing projects or any other project except normal agricultural operations which in any manner alters the natural structure of the land mass within (the jurisdiction)." The county ordinances may apply county-wide, including the areas within the municipalities, if the affected municipal governing board agrees. The only differences in the two acts came about as the result of a floor amendment which, in the case of the Raleigh/Wake bill, exempted not only agricultural actions, but also actions by an electric membership corporation and any public utility subject to regulation by the Utilities Commission.

In addition, by Senate Resolution 961, the Legislative Research Commission was authorized to study the prevention and abatement of pollution of the State's waters by sedimentation and siltation, particularly that occurring from run-off of surface waters and from erosion.

I. SMALL WATERSHEDS

Districts Discontinued. Art. 2 of G. S. Chapter 139, providing for the establishment of watershed improvements districts, was enacted in 1959. Under its provisions a number of watershed improvement districts were established in North Carolina. In time, however, watershed improvement work tended to move to support on a county-wide basis. Ch. 1138 (enacting S825 introduced by Senator Allen) amends North Carolina's watershed improvement laws in several respects. One of the most significant amendments is to G. S. 139-16 and provides that after January 1, 1972, no watershed improvement district may be established.

Watershed Work by Soil and Water Conservation Districts. Where the support has been through the county government, boards of county commissioners have been previously authorized to operate watershed improvement programs directly or to create watershed improvement commissions for that purpose. Both were alternatives to the creation of watershed improvement districts. Ch. 1138 amends G. S. 139-41 and gives to boards of county commissioners an additional alternative; allowing the commissioners by resolution to designate the soil and water conservation district having jurisdiction in the county as the agency to exercise the authority for the county commissioners with respect

to carrying out watershed improvement programs. The normal provisions of the watershed improvement law apply to activities carried out by the soil and water conservation district.

Channelization. Recently, one of the more controversial aspects of watershed improvement work has been that of stream channelization. Ch. 1138 has established additional study and review procedures with respect to planned channelization work. It requires (in a new G. S. 139-47) that a public hearing be held on every preliminary project investigation or recommended watershed improvement project or drainage project that includes channel excavation. Furthermore, all such preliminary plans must be submitted to the Board of Water and Air Resources for review and for approval or disapproval. No work of improvement may be constructed or established without the approval of the preliminary investigation or recommended report by the Board of Water and Air Resources. These review and approval procedures for channelization projects were made applicable to all drainage projects by the Act through an amendment to the drainage laws. Subchapter III of G. S. 156. Channelization under this Act means the construction or enlargement of a channel by the removal of material by excavation to facilitate run-off of flood water or drainage of water. It does not include channel clearing and snagging involving the removal of trees, snags, drifts, or other obstructions from the flow area of a natural or excavated channel.

J. OTHER LEGISLATION

Sales Tax Refunds - Metro Sewerage Districts. For some time cities, counties, towns and sanitary districts have been eligible for a refund of State sales taxes paid on the purchases of tangible personal property under the provisions of G. S. 105-164.14. Ch. 89 (H103) amended this statute to make metropolitan sewerage districts also eligible for refunds. (This Act was adopted prior to the Act authorizing the creation of metropolitan water districts. When organized, water districts would not be eligible for refunds, pending legislative action expressly so authorizing refunds.)

Water and Sewer Associations -- Non-Taxable. The real and personal property of non-profit water and sewer associations and corporations was classified as being not within the tax base, and thus not subject to property taxation. (Ch. 1121 - H275).

Regulatory Powers - Kerr Lake Commission. The Kerr Lake Development Commission (S289 - Ch. 464) was authorized, by amendment to G. S. 143-286, to make reasonable rules and regulations for the public use of property under its jurisdiction, the rules to have the force and effect of law.

Cat Fish Creek Easement. The Department of Administration, with the approval of the Governor and the Council of State, was authorized to grant an easement for the utilization and impoundment of the waters of Cat Fish Creek in New Hanover County for the purpose of developing a reservoir to be used in connection with the generation of electric power.

Environmental Problem Studies - LRC. Senate Resolution 961 was adopted by the Senate and authorizes the Legislative Research Commission to study the need for legislation relating to a number of environmental problems. As noted above, the work of the Legislative Research Commission in the last biennium produced much of the current water resources legislation. Thus authorization for study by the Legislative Research Commission could lead to significant legislative proposals in 1973. Moreover, some of the areas to be studied are those that were the subject of legislation introduced in 1971, but that failed of passage (See section "K" below). Among the topics for which studies were authorized are the following:

1. Regulation of septic tanks waste
2. Prevention and abatement of oil pollution
3. Regulation and management of animal and poultry wastes
4. Prevention and abatement of pollution of the state's waters by nutrient waste, particularly compounds of phosphorous and nitrogen
5. Prevention and abatement of pollution of the state's waters by sedimentation and siltation, particularly that occurring from run-off of surface waters and from erosion
6. Recovery by agencies providing water services of damages from persons polluting the water supply
7. Reporting on industrial wastes and other wastes containing toxic materials discharged into public waste disposal systems
8. Other environmental protection or natural resources management subjects not specifically assigned by law or resolution to another study commission

Marine Science Council. Increased interest in marine science was reflected by the establishment of the North Carolina Marine Science Council (S851 - Ch. 1191). The Council is composed of a chairman and twenty members, all appointed by the Governor from "the public and private academic and scientific institutions in the State and from the various industries and professions in the State concerned with the exploration and use of the sea." The chairman serves at the pleasure of the Governor. Members will serve six-year, overlapping terms. Serving on the Council ex-officio are the Director of the State Department of Conservation and Development, the State Planning Officer, the State Health Officer, the State Property Officer, the Director of the State Department of Water and Air Resources and the Director of the State Ports Authority or their designees.

The Council is charged with responsibility (1) for encouraging the use and study of the ocean, estuarine and coastal waters; (2) to foster education and training in ocean science; (3) to work with similar agencies in nearby coastal

states; (4) to develop and maintain a continued inventory of the ocean resources for the State and of the industries and institutions that have competence in the science and industry in the oceans; (5) to coordinate efforts toward full development of the State's marine resources "with proper attention being given to the need for conservation"; (6) to coordinate plans for and implementation of legislation relating to coastal or marine resources; (7) to review all research, education, and management programs relating to coastal and marine resources; and (8) to report annually to the Governor on its activities, together with any recommendations for new legislation the Council feels needed in the area of its work.

Pesticide Regulation. The North Carolina Pesticide Law of 1971 (S445 - Ch. 832) was adopted for the purpose of regulating in the public interest "the use, application, sale, disposal and registration of insecticides, fungicides, herbicides, defoliantes, desiccants, plant growth regulators, nematocides, rodenticides, and any other pesticides designated by the North Carolina Pesticide Board." The Act, a very long and complex one, established the North Carolina Pesticides Board composed of seven members appointed by the Governor. The Pesticide Board and the Commissioner of Agriculture share responsibilities in carrying out the provisions of the Act. The details of the Act, not reviewed here, will be codified as Article 52 of G. S. 143.

Interstate Environmental Compact. To enable North Carolina to engage in cooperative efforts with other states with respect to the environment, the Legislature approved the Interstate Environmental Compact (H1230 - Ch. 805).

✓ Mining Regulations. Another important Act affecting water resources was the Mining Act of 1971. (H650 - Ch. 545) The Act has two major purposes. First, "that the usefulness, productivity, and scenic values of all land and waters involved in mining within the State will receive the greatest practical degree of protection and restoration." And secondly, "that from the effective date of the act, no mining shall be carried on in the State unless plans for such mining include reasonable provisions for protection of the surrounding environment and for reclamation of the area of land affected by mining." Responsibility for carrying out the Act is vested in the Department of Conservation and Development and in the Mining Council created by G. S. 74-37, 38.

Fisheries Study. The North Carolina Commercial Fisheries Study Commission was established by Senate Joint Resolution 876 (R103). It is to be composed of a chairman and ten members. Three shall be Representatives appointed by the Speaker of the House and three are to be Senators appointed by the Lt. Governor. The Governor appoints the chairman and four other members, all of whom must have specialized knowledge. The Commission is charged with the responsibility for

studying services now provided by the State for the commercial fishing industry, the needs of the industry and the individuals who work therein, and to recommend legislation it deems appropriate to further the best interests of the commercial fishing industry. The report of the Commission is scheduled to be made to the Governor, the Lieutenant Governor and the Speaker of the House on or before December 1, 1973. Thus any legislative proposals it recommends should be available for action during either the 1973 or the 1975 sessions of the General Assembly.

TURNKEY CONSTRUCTION OF WASTE TREATMENT WORKS BRINGS SHARP RESPONSE

EPA's proposed "turnkey" approach to the construction of sewage treatment facilities has raised strong opposition. (See p. 11, October News for description).

The agency has received hundreds of inquiries from members of congress. Letters are reported to be running 12 to 1 against the proposal.

SINGLE SET OF RULES FOR EPA GRANTS

The Environmental Protection Agency is drafting a single set of rules for all grant and contract programs -- more than 20 are involved. These are scheduled for release early in December.

FEDERAL GRANTS FOR WATER PROJECTS

<u>Agency</u>	<u>Community</u>	<u>Grant</u>	<u>Project</u>
EPA	Durham	\$212,190	Pumping station and interceptor sewers
EPA	Durham county	\$204,270	Tertiary treatment plant
EPA	Long View	\$257,920	Plant additions
EPA	Mooreville	\$165,000	Chlorination facilities
EPA	Newport	\$ 54,300	Plant addition
EPA	Reidsville	\$ 22,440	Pumping station
EPA	Winston-Salem	\$259,710	Interceptor sewers
		\$201,300	Plant addition

STATUS OF STREAMS AND GROUNDWATER IN NORTH CAROLINA

Average stream flow for October was excessive for most streams in the state. Heavy rains associated with Hurricane Ginger caused flooding in the Coastal Plain during the first week in August. There were only a few days without rain during the remainder of the month. Total rainfall for the month of October was the highest ever recorded in Raleigh. Some coastal stations recorded more than 20 inches.

Groundwater levels fell in the mountains, but rose in the Piedmont and Coastal Plain. Levels throughout North Carolina remained above the long term average and well above the levels of one year ago.

WATER RESEARCH ACT PASSED BY THE CONGRESS

The Congress has passed bills amending the Water Resources Research Act to authorize increases in annual allotments to Water Resources Research Institutes from \$100,000 to \$250,000 and new water research application programs.

Sponsored by the Universities Council on Water Resources and the National Association of State Universities and Land Grant Colleges, the legislation has been under consideration for the past two years. It received the strong support of Governor Scott and the North Carolina Congressional delegation.

WATER POLLUTION CONTROL BILL PASSES SENATE

Swift passage of the tough omnibus water pollution control bill by the Senate on Nov. 2 has aroused opposition to similar action in the House.

The bill drops water quality standards as the basis for enforcement, substitutes uniform effluent limits, sets a 1981 goal of water quality in all waters high enough to support water-based recreation and fish and wildlife propagation, and asks for the elimination of all discharges by 1985. Amendments adopted by the Senate authorize licensing agents to accept certification of state agencies or permits under the 1899 Refuse Act as evidence of acceptability for environmental aspects of a project, interstate in addition to state agencies to set limits more strict than EPA, federal loans to small businesses affected by pollution controls, issuances of permits by Corps of Engineers for discharges of dredging spoil, research and development towards measurement of social costs and benefits of activities regulated by the bill, and other actions.

Within 90 days of enactment of the bill, EPA must publish lists of categories of industrial groups for which "best available technology" standards will be developed. After one additional year the Agency would be required to publish regulations setting performance standards. Standards would be promulgated within 60 days thereafter. This is the first time the concept of "standard of performance" has ever appeared in the Federal Water Pollution Control Act.

WATER RESOURCES LEGISLATION IN THE CONGRESS

Bills Enacted:

H.R.10203. To amend the Water Resource Research Act of 1964.

Bills Passed:

Senate

S. 2770. Federal Water Pollution Control Act Amendment of 1971, amended.

House

H.R.11423. To extend the Federal Water Pollution Control Act until January 31, 1972.

Bills Introduced:

Senate

S. 2764. To authorize the Secretary of Interior to establish programs and regulations for the protection of the fishery resources of the U.S., including the freshwater and marine fish cultural industries, against the dissemination of serious diseases of fish and shellfish.

House

- H.R.11147. To amend the Land and Water Conservation Fund Act of 1965, as amended, and for other purposes.
- H.R.11364. To authorize the Secretary of Interior to classify and inventory wetland resources, to measure wetlands degradation, to evaluate the environmental contribution of natural wetlands, and for other purposes.
- H.R.11365. To amend the Water Bank Act (PL 91-559) to provide for the conservation of additional wetland areas.
- H.R.11369. To authorize the Secretary of Interior to conduct a study to determine the best and most feasible means of protecting and preserving the Great Dismal Swamp and the Dismal Swamp Canal.

H.Con.

Res.448. To express the sense of Congress that the U.S. Bureau of Reclamation should accelerate its investigations of geothermal resources as a potential major new source of fresh water supplies for the Western U.S.

NEW PUBLICATIONS RECEIVED BY THE INSTITUTE

(These may be borrowed from the Institute for a two-week period. Where individual copies are desired, readers are encouraged to request copies from the organizations issuing the publication. The addresses are provided by the News for this purpose.)

Water Resources Planning

- "The Effect of Channelization on the Environment," (Hearing before Subcommittee on Flood Control-Rivers and Harbors of Comm. on Publ. Works, U.S. Senate, 92nd Congress, 1st Session), by USGPO, Wash., D.C. 20402, July 27, 1971.
- "Enhancement of Ecologic and Aesthetic Values of Water Associated with Interstate Highways," by C. A. Carlozzi, WRRRC, Univ. of Mass., Amherst, Mass. 01002, Pub. No. 19.
- "Preliminary Analysis of the Ecological Aspects of Deep Port Creation and Supership Operation," by IWR, The Nat'l. Tech. Inf. Serv., Dept. of Comm., Springfield, Va. 22151, Oct., 1971.
- "Effect of Water Resources on Economic Growth in the Tennessee Valley Region," by C. B. Garrison, WRRRC, Univ. of Tenn., Knoxville, Tenn. 38916, Jan. 1971.
- "Environmental Quality: A Survey of Costs, Benefits, Citizens' Attitudes," (Rep. for Second Alabama Env. Conf.), by The Dept. of Civ. Engr., Auburn Univ., Auburn, Ala. 36830, Oct. 6-7, 1971.
- "Management Problems in Metropolitan Water Resource Operations," (ASCE Urban Wat. Res. Res. Program, Tech. Memo. No. 14), by M. B. McPherson, ASCE, 345 E. 47th St., N. Y., N. Y. 10017, Sept. 1971.
- "International, Regional, Federal-State, Interstate and Federal Organizations with Water and Related Land Resources Programs in Minnesota, 1971," by W.C.Walton, et al, WRRRC, Univ. of Minn., Minneapolis, Minn., (Bull. 42), Sept., 1971.

- "The Susquehanna Communication - Participation Study," by the Univ. of Mich., Env. Simulation Lab., et al, Clearinghouse for Fed. Sci. and Tech. Infor., Springfield, Va. 22151, Dec. 1970.
- "Public Participation in Water Resources Planning," by U. S. Army Engr. Inst. for Water Res., Clearinghouse for Fed., Sci. and Tech. Infor., Springfield, Va. 22151, Dec. 1970.
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