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SENATE BILL EXTENDS WRC AND PROVIDES TECHNICAL ASSISTANCE FUNDS TO STATE

On September 20, the Senate, under bill S480, authorized funds for water resource management programs and an extension of the Water Resources Council through fiscal year 1981.

The Senate passed the Water Resources Planning Act of 1979 with an amendment to include a $10 million authorization of funds for use by states for water conservation planning programs during fiscal year 1980. The additional authorization for water conservation planning funds could be used by states on a 50 percent matching grant basis for a water conservation technical assistance program.

STUDY COMMISSION ON ALTERNATIVES OF WATER MANAGEMENT

House Bill 1310 of the last session of the General Assembly created a 12-member Legislative Study Commission to study the State's present organization for planning and management of water resources and the present and future trend in regard to water use and management. This includes a study of the feasibility of creating a State water authority to furnish water throughout the State. House Speaker Carl J. Stewart, Jr., appointed six members of the Commission on September 24. The remaining members are to be appointed by the President of the Senate. Stewart's appointments included Daniel Okun, Kenan Professor of Environmental Engineering at the University of North Carolina at Chapel Hill and David Howells, former Director of the Water Resources Research Institute.

UNIVERSITY FACULTY MEMBERS APPOINTED TO STATE ENVIRONMENTAL MANAGEMENT COMMISSION

Governor James Hunt has announced the appointment of two Emeritus Professors from North Carolina State University to the State Environmental Management Commission. They were Dr. Fred Barkalow, a noted conservationist and Professor Emeritus in the Departments of Zoology and Forestry, David Howells, former Director of the Water Resources Research Institute, and Professor Emeritus in the Department of Biological and Agricultural Engineering at N.C. State University and the Department of Environmental Sciences and Engineering at the University of North Carolina at Chapel Hill. Barkalow was recently elected first member to the North Carolina Wildlife Federation's Hall of Fame. Howells received the Governor's Water Conservation Award in 1978 and the Secretary of Interior's Conservation Award in 1976. Both took office on October 11, 1979.

NORRIS NAMED SCS DEPUTY IN NORTH CAROLINA

George C. Norris of West Virginia has been appointed Deputy State Conservationist of the USDA-Soil Conservation Service in North Carolina, it was announced by State Conservationist Jesse L. Hicks of Raleigh.

He will report to Raleigh, November 5. He succeeds Lynn A. Brown in the Number Two SCS position with the federal conservation agency. Brown now heads SCS activities in the State of Washington.

A native of Zebulon, Georgia, George Norris graduated from the University of Georgia in 1959 with a B.S. in agriculture, majoring in agronomy. He joined the SCS as a student trainee in 1957, and began full-time work after graduation.

He served in positions of increasing responsibility in Georgia, including work as an area conservationist, RC&D coordinator, and district conservationist. After taking time out for the Master of Public Administration degree from Harvard University, he was appointed assistant state conservationist at Morgantown, West Virginia, in 1975, and has held that position until his new appointment.

SEPTEMBER FLOODS SEVERE IN NORTH CAROLINA

Flooding during September caused extensive damage in areas of North Carolina, most notably in the northwestern counties. Five deaths were blamed on the flooding, which began with heavy rains on Friday, September 21, and continued through the weekend as rivers left their banks. The flooding forced 376 people to leave their homes and destroyed or damaged 47 bridges and 28 roads.

Mount Airy in Surry County was hardest hit, with damage estimates of $40 million according to local officials. Flood waters from the Ararat River and Lovill's Creek caused damage to area businesses and industries, many with no flood insurance, and to Surry County farm crops. According to local officials much of the flooding occurred outside the city's designated flood areas. Mount Airy's flood plain ordinance requires stricter construction standards for property developed in these areas, thereby entitling the owners to federally subsidized insurance.

President Carter has declared Surry County a federal disaster area. Governor James B. Hunt, Jr., has requested federal assistance for the 14 other counties hit.

Earlier in September, rains from Tropical Storm David caused flooding in Lumberton in Robeson County. About 50 families were evacuated as the Lumber River rose to 14.4 feet, 3.4 feet above its flood stage of 11 feet. Lumberton residents say flooding has become a chronic problem there due to inadequate drainage facilities. City officials say that the drainage canals that flooded were not designed to handle the increased runoff caused by rapid urbanization.

FLOOD DAMAGE REDUCTION GROUP HOLDS FIRST MEETING

The first meeting of the recently formed North Carolina Flood Damage Reduction Task Force was held September 25 in Raleigh.

The meeting called by Neil Grigg, Assistant Secretary of Natural Resources for the N.C. Department of Natural Resources and Community Development, brought together representatives from a number of state and federal agencies concerned with flood control.

Responsibilities for flood damage reduction programs in North Carolina are presently shared by many different agencies, and local governments seeking assistance find programs fragmented. One purpose of the Task Force activity is the creation of a clearinghouse for flood damage reduction programs to refer local governments to state and federal agencies for assistance.

At the meeting each agency's responsibilities, resources and current priorities related to flood damage reduction were explained, and suggestions were made concerning future Task Force plans.

Activities suggested were:
- -To keep better data on floods: amount of rainfall, extent of damage, extent of development in the flooded area, etc.
- -To establish a flood report archives and keep a bibliography of published flood data.
- -To develop pilot projects in communities--one each in the N.C. mountains, Piedmont and coastal plains--to demonstrate the comprehensive approach to flood hazard reduction.
- -To increase communication between Task Force members and with the public through such mechanisms as the Institute's "North Carolina Stormwater Manager."
- -To use highwater markers on utility poles, buildings, etc., to show water levels from past or potential future floods (e.g., to show where the 100-year flood would come). This tangible means of flood delineation would show prospective developers and the general public possible flood levels.

Agencies represented at the meeting included: the U.S. Army Corps of Engineers, USDA Soil Conservation Service, Federal Emergency Management Agency, League of Municipalities, Association of County Commissioners, U.S. Geological Survey, Department of Crime Control and Public Safety, Department of Administration, Department of Insurance, Department of Transportation, TVA, Yadkin-Pee Dee Level B Study and WRRI.

The N.C. Department of Natural Resources and Community Development sent representatives from the divisions of Land Resources, Community Assistance, Soil and Water Conservation, Housing, the Office of Coastal Management and the Office of Water Resources.

Participants agreed that a highlight of this first meeting was the spirit of cooperation evident among all agency representatives.

METHOD FOR ESTIMATING FLOOD HEIGHTS DESCRIBED

A technique for estimating the height of the 100-year flood for a stream is described in a report prepared by the U.S. Geological Survey, Department of the Interior. This method has been used in North Carolina to outline the approximate areas that likely will be inundated by a flood of the magnitude that has a recurrence interval of 100 years.

According to R. W. Coble, hydrologist with the Geological Survey, "this method can be used to estimate the 100-year stage for nontidal streams with unregulated flows draining areas between 1 and 10,000 square miles." Separate flood-height drainage-area regression equations were developed for the three physiographic areas of the State--mountains, Piedmont and Coastal Plain. The amount of error one might expect in making these flood-height estimates is also described. This technique can be used in conjunction with topographic maps to delineate flood-prone areas, and an illustrated example of how this is done is also presented in the report.

The report titled, "A technique for estimating heights reached by the 100-year flood on unregulated, nontidal streams in North Carolina," Water-Resources Investigation 79-69, may be obtained at no charge from: District Chief, U.S. Geological Survey, P.O. Box 2857, Raleigh, N.C. 27602.

WATERSHED PLANNING TASK FORCE ORGANIZED FOR FALLS OF NEUSE AND B. EVERETT JORDAN RESERVOIRS

A joint State and local government Watershed Protection Task Force met September 25 at the offices of Triangle J Council of Governments to discuss comprehensive planning for the two major reservoirs in Region J. The Task Force will focus on the B. Everett Jordan Reservoir (New Hope arm) in Chatham, Orange and Wake Counties and the Falls of the Neuse Reservoir affecting Region J counties of Wake, Durham and Orange and Region K counties of Granville, Franklin and Person. The Corps of Engineers is developing these projects for the multiple uses of flood control, recreation and water supply.

The Task Force is composed of planners and technical staffs from Region J governments, the N.C. Dept. of Natural Resources and Community Development, the Triangle J Water Quality staff and invited experts from universities and research organizations such as WRRI.

The first priority of the Task Force is to refine a work program to direct the respective staffs of

Triangle J and NRCD. Triangle J has been progressing on a watershed planning element funded jointly by EPA and HUD. This work centers on growth management and water quality. Triangle J, working with appropriate state agencies, will compile a generalized data base. Through an active public participation program, policy makers and citizen interests will be identified and utilized in ranking goals and objectives for the watershed planning program. Work by Triangle J will then evaluate growth management techniques and opportunities for development. After best management practices are agreed upon, a growth management plan will be developed including recommendations for specific action by appropriate agencies.

NRCD will assume the major responsibility for the water resource management component of the comprehensive plan for the Falls and Jordan projects. Task Force members will assist TJCOG with ongoing programs designed to include citizen participation and obtain input by local policymakers.

The U.S. Army Corps of Engineers is the major group responsible for the development of the two reservoir projects. A Corps resresentative on the Task Force will provide critical input on planned actions relating to the reservoirs.

For additional information, please contact Sue Snaman, Public Participation Coordinator, TJCOG, P.O. Box 12276, Research Triangle Park, NC 27709. Telephone (919) 549-0551.

PRELIMINARY INVENTORY OF HYDROPOWER RESOURCES PUBLISHED

The Water Resources Research Institute has received from the U.S. Army Corps of Engineers' Institute for Water Resources a six volume set of reports on hydropower potential. Volume 5 includes a summary of all facilities in North Carolina.

The report provides a preliminary estimate of the existing and potentially feasible hydroelectric power resources in the United States, and it briefly evaluates their regional significance. The estimates of existing, incremental and undeveloped hydropower potential have been grouped in three categories which are based on megawatt (MW) capacity. These include small-scale (.05-15 MW); intermediate (15-25 MW); and large-scale (greater than 25 MW).

A copy of this report may be borrowed from the Institute for review.

MAJOR CAUSES OF POOR WASTEWATER PLANT PERFORMANCE IDENTIFIED IN STUDY

The USEPA has undertaken a national survey to determine the major problems relating to performance of wastewater treatment plants.

Based on the results of the comprehensive surveys, the 10 highest ranking causes of poor plant performance result from inadequate plant operation and plant design deficiencies. The highest-ranking factor was inadequate operator application of concepts and testing to process control. This, coupled with the fourth-ranked factor, inadequate understanding of wastewater treatment, indicates that for various reasons operators were not applying the proper concepts of operation to process control. These reasons are attributable to inadequate or incorrect sampling and testing procedures for process control, improper technical guidance, ineffective O&M manual instruction and significant design deficiencies, all of which prevent an operator from controlling and "tuning" his treatment system to varying influent hydraulic and pollutant loading characteristics.

Specific recommendations are provided in the report prepared by Francis L. Evans III, Urban Systems Management Section, Municipal Environmental Research Laboratory, USEPA, Cincinnati, Ohio. An EPA Technology Transfer summary of the work is available from the Environmental Research Information Center, Cincinnati, OH 45268.

POCOSINS CONFERENCE

What's a pocosin? It's a freshwater wetland occurring along the southeastern coastal plain from Virginia to north Florida. The name comes from the Algonquin Indian word meaning swamp-on-a-hill.

Until recently, pocosins have been viewed as having marginal development potential. Now, however, spurred by soaring prices for wood products, food, energy and minerals, intensive development is taking place in many pocosin areas. These activities often are carried out without a clear understanding of either ecosystem response or external effects.

A conference is being planned as a first step in developing management guidelines for these valuable and threatened natural resources, which once covered over a million acres in North Carolina alone. Sponsored by the Case Studies Program at the Duke University School of Forestry and Environmental Studies, the conference will be held at the Duke Marine Laboratory in Beaufort, North Carolina, on January 3 and 4, 1980. The conference fee is $30.

The conference is designed to inform members of the academic, scientific and conservation communities as well as planners in industry, state or federal agencies; private consultants; and policy experts. Speakers represent multidisciplinary backgrounds. Papers will address the economic, political and ecological aspects of consumptive uses (forest plantation, mining and agriculture) and nonconsumptive uses (recreation and interpretation, natural areas) of procosins.

For further information, write: Pocosins Conference Coordinator, Integrated Case Studies Program, School of Forestry and Environmental Studies, Duke University, Durham, NC 27706. Registrations should be postmarked by December 15.

RESEARCH AND STUDY IN THE PEOPLE'S REPUBLIC OF CHINA The Committee on Scholarly Communication with the People's Republic of China (CSCPRC) announces opportunities for research scholars and graduate students in all fields for grants in support of research projects in China and fellowships for advanced language training and coursework at Chinese universities for academic year 1980-81. A detailed announcement on all programs can be obtained by writing to:

Committee on Scholarly Communication with the People's Republic of China (CSPRC)
Educational Exchange Program
National Academy of Sciences
2101 Constitution Avenue
Washington, D.C. 20418

WATER RESOURCES CONDITIONS IN NORTH CAROLINA Heavy rains on the 21st and 22nd caused severe flooding in the north-central and northwestern Piedmont region. Rainfall amounts in the 13-county flood area ranged from 4 to 8 inches. Provisional estimates of flood damages ranged up to 26 million dollars.

The most severe flooding occurred in Mr. Airy and other areas in Surry County where damages were estimated at over 21 million dollars. Damages exceeding one million dollars were also reported in the counties of Guilford, Alleghany and Rockingham. Five deaths were attributed to the flood. The floodwaters also damaged or destroyed over 47 bridges, forced the evacuation of 376 people, and left over 100 people homeless.

Flood peaks in several areas equalled or exceeded those expected to occur only once in 100 years. Flood peaks at 5 USGS stream-gaging stations located in Surry and Stokes counties were the highest for the period of record, which began as early as 1916. The storm caused only minor flooding in the mountain region where peaks generally ranged from 2 to 10 year recurrence intervals. Only small rises occurred on most streams elsewhere across the State.

...U.S. Geological Survey

POSITIONS AVAILABLE <u>Environmental Engineer I</u>, with a B.S. in Civil, Environmental, or related engineering, to work in various aspects of the water planning program. Salary range is $16,188 - $22,428. Applicants should send applications to Arthur Mouberry, Water Planning and Development Section, Division of Environmental Management, Natural Resources and Community Development, P.O. Box 27687, Raleigh, NC 27611

<u>System Coordinator II</u>, with B.S. in Computer Science or Engineering, to do computer modeling for the Yadkin-Pee Dee project in water resources and management. Salary range is $14,722 - $19,920. Applicants should send applications to Hai C. Tang, Water Planning and Development Section, Natural Resources and Community Development; P.O. Box 27687, Raleigh, NC 27611

The Geological Survey is accepting applications for the positions of <u>Supervisory Hydrologist</u> and <u>Supervisory Economist</u> with Water Resources Division, Systems Analysis Group, Reston, Virginia. For details contact : Recruitment and Placement Section, Branch of Personnel, U.S. Geological Survey, Mail Stop 215, 12201 Sunrise Valley Drive, Reston, VA 22092.

<u>Assistant Professor</u>, with Iowa State University of Science and Technology. Qualifications required are: Ph.D. in Civil, Sanitary, Hydraulic or Water Resources Engineering with a strong background in quantity-quality aspects of water resources. Applicants should submit resumes to: C. E. Ekberg, Head, Department of Civil Engineering, Iowa State University, Ames, Iowa 50011.

The Department of Environmental Sciences and Engineering, University of North Carolina at Chapel Hill, invites applications for a tenure track position at the <u>Assistant Professor</u> level in the Water Resources Engineering Program of the Department. Candidates must have a doctorate in engineering with interests in water quality and water resources engineering. Duties include graduate teaching and research. The position is open in the 1979-80 academic year. The University of North Carolina is an affirmative action, equal opportunity employer. Send resume to Professor Charles R. O'Melia, Dept. of Env. Sciences and Engr., University of North Carolina, Chapel Hill, NC 27514.

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TOXIC HAZARDOUS SUBSTANCES AND SOLID WASTES LEGISLATION

North Carolina's recent PCB incident, and similar incidents throughout the country have greatly heightened public concern over toxic and hazardous substances, particularly the dangers of oil spills and environmental contamination from hazardous chemicals. The General Assembly responded this session by enacting a strong package of toxic and hazardous substance bills.

The Oil Pollution Control Act. Ch. 535 (H 175) addresses some gaps that had become apparent in the Oil Pollution Control Act of 1973, which established the state's response mechanism for cleaning up oil spills and allocating the costs of cleanup. Four principal deficiencies had been identified in the course of implementing the serious environmental damage; a weakness in the spill reporting procedure that provided an incentive not to report spills; the lack of a workable procedure for collecting damages to public resources from spills; and the lack of a smoothly working procedure for involving some local agencies in cleanup activities. Ch. 535 addresses there issues, as follows:

(1) The scope of the law is expanded to include hazardous substances as well as oil. ("Hazardous substances" are defined generally as presenting an imminent and substantial danger to public health, welfare and natural resources. More specifically, hazardous substances are equated with a list of substances and quantities designated by the federal government, under Section 311 of the Federal Water Pollution Control Act unless the Environmental Management Commission objects to a particular federal designation. The current federal list numbers more than 250 chemicals, and the designated quantities vary from one pound to 1,000 pounds (40 CFR's 119.5)

(2) The new law requires that notice of oil spills be given to the Department of NRCD by anyone owning or controlling the oil, unless they are acting pursuant to existing state regulations. This slightly expands the existing notice requirement to cover persons in control of an oil spill even though they might be able to avoid liability under a defense of third party liability or act of God.

(3) The provisions concerning liability for damage to public resources are amended to:

   (a) allow the Environmental Management Commission to recover the expenses of its investigation as part of a damage award;

   (b) establish a new procedure for administrative assessment and collection damages to public resources, prior to possible appeal to the courts. Under this procedure the departmental estimate of resource replacement and restoration costs is prima facie evidence of the actual costs.

   The act also makes some minor changes in the statutory standards for assessment of damages to public resources.

(4) The Environmental Management Commission is expressly authorized to designate local government agencies (such as fire departments) to participate in cleanup activities and be reimbursed for their expenses.

In the course of lengthy consideration of the bill by the House Committee on Water and Air Resources a provision was eliminated from the original bill that would have put an end to the practice of road oiling. Provisions were eliminated also that would have shifted from the general public to the handler or transporter of oil or hazardous substance a greater degree of the risk of incurring cleanup costs. (The original bill, in effect, would have made this an "absolute liability" statute instead of a "strict liability" statute subject to third party and force majeure defenses.) And, amendments were added to the bill at the request of the Pesticide Board to keep pesticides entirely under the jurisdiction of the Pesticide Board, except where pesticides are misused and enter the waters of the State, and to require coordination between the two agencies in responding to spills that might involve pesticides.

The Toxic Substances Act. Early in the session H 56 was introduced, embodying the DNRCD response to the much publicized 1978 dumping of PCB along North Carolina highways. In its original form H 56 created a new felony of dumping toxic substances anywhere in the state, subject to heavy criminal penalties. The only toxic substance expressly listed in the bill was PCB; a detailed machinery modelled after the controlled substances (drug) law contemplated the addition of other toxic substances as they become federally listed, subject to review by the Environmental Management

Commission. The original bill also contained civil penalties for violations and provisions enabling the state to recover cleanup costs from those responsible.

A House Judiciary #2 Subcommittee, chaired by Representative DeRamus, "worked" the bill for three months with the assistance of an informal advisory group coordinated by the Secretary of Crime Control and Public Safety. The result was a thoroughly rewritten substitute bill that, with minor amendments, was enacted as Ch. 981. The final product consists of the following principal provisions:

(1) Ch. 981 makes it a felony, subject to a fine of up to $100,000 per day or imprisonment or both, to dump or burn or otherwise dispose of toxic substances or radioactive materials (as defined in G.S. 104E-5) into the atmosphere, in the waters or on land, except where the disposal is conducted pursuant to federal or state law, regulation or permit. Toxic materials are defined to include two halogenated hydrocarbons (PCB's and Kepone) and five heavy metals (mercury, plutonium, selenium, thallium and uranium). This list was developed after many meetings of the expert interdepartmental advisory group and on the recommendation of North Carolina State University scientists. The original bill's elaborate machinery for administrative supplementation of the list was deleted, as were its civil penalty provisions. The exemption for disposal "pursuant to law" is broadly expressed so as to make it plain that the law is not intended to reach otherwise regulated business (such as licensed pesticide spraying) or everyday activities, such as turning on the drinking water tap or driving one's car (which might technically involve emiting heavy metals through the exhaust pipe).

(2) Ch. 981 makes the oil spill and hazardous substances act, reviewed earlier, apply to intentional dumping of hazardous materials <u>on the ground</u>, and not merely into waters, as is now the case. (These "hazardous materials" include all of the toxics listed in Ch. 981, and many more, as noted earlier.)

(3) It makes the Department of Crime Control and Public Safety responsible for the initial response of state agencies to incidents involving toxic or hazardous substances.

(4) It creates an Interdepartmental Task Force to coordinate further incident response and to conduct ongoing study of toxic and hazardous substances, and it authorizes the Governor to create local or regional task forces. The Interdepartmental Task Force will be responsible for monitoring implementation of the act and developing legislative recommendations on such matters as disposal and storage sites for toxic and hazardous substances, transportation of these substances, coordination of state agency programs and toxic and hazardous waste management generally.

(5) It appropriates $100,000 to administer the act.

<u>Solid and Hazardous Waste Management</u>. The 1978 special legislative session enacted a comprehensively revised solid waste management law (G.S. Ch. 130, Art. 13B), including new provisions concerning management of hazardous wastes through a system of state-developed criteria, recordkeeping requirements, facility design and location provisions, and permits governing establishment and operation of facilities. Concern about the relationship of the state hazardous waste management system to anticipated federal regulations led the General Assembly to include provisions that the state program be no more comprehensive than the federal program and that state regulations (to be adopted by the Health Services Commission) be no more stringent than federal standards and not become effective until the federal regulations are made effective. Continuing delays in promulgation of the federal regulations have kept the state program "in suspense" under this last limitation.

Ch. 464 (H 290) puts an end to the continuing suspension of the Commissions's rulemaking power for hazardous waste management by deleting from G.S. 130-166.21D the stipulation that the rules and regulations promulgated by the act not become effective prior to the effective date of the hazardous waste rules and regulations prescribed under the federal act. It also eliminates a provision that would have required any regulations issued under G.S. Ch. 130, Art. 13B subject to automatic review by the proper committees of the next General Assembly. The Commission for Health Services, pending the adoption of federal rules, is authorized to adopt hazardous waste rules no more stringent than those proposed standards for "Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities" proposed to be part of the <u>Code of Federal Rules</u> as contained in the <u>Federal Register, Volume 43, Number 243</u>. The Department of Human

Resources, in accordance with federal rules, may issue permits for the establishment and operation of hazardous waste facilties. As rewritten, this section (G.S. 130-166.21.D(b)) and the rules promulgated under its authority are to be repealed on March 1, 1981. Finally, the act increases the maximum penalty for a continuing violation involving hazardous wastes from one thousand dollars ($1,000) per day to five thousand dollars ($5,000) per day.

With enactment of Ch. 694 (H 886), the Department of Human Resources must give public notice prior to issuing a license related to sources of ionizing radiation. The act, as it amends G.S. 104E-10, requires that the Radiation Protection Commission, or a designee, hold a public hearing in any county where a proposal has been made to operate or enlarge a radioactive waste processing or disposal facility. The act also amends G.S. 130-166.18 to require that the Department of Human Resources give public notice and conduct a public hearing before issuing a permit for a hazardous waste facility. Authorization is given to the Radiation Protection Commission to make any rules, regulations or standards relating to nonradioactive, toxic or hazardous aspects of radioactive waste disposal as it considers necessary to protect public health and safety, and to the Department of Human Resources to implement the Radiation Protection Act and regulations promulgated under it. The act also allows the Secretary of Human Resources to intitute a civil action for injuctive relief to prevent a threatened or continuing violation of the Radiation Protection Act. The introduction of H 886 was generated by litigation that challenged the issuance of a license by the Radiation Protection Commission, without a public hearing, to a facility located in Wilkes County, a challenge that was rejected by Superior Court Judge Rousseau. The Act does not affect any litigation pending on July 1, 1979, presumably including that suit.

Ch. 1065 (H 1468) reduces the penalty for a first offense of littering under G.S. 14-399, from a $200.00 maximum to $50.00. It retains the $200.00 maximum fine for subsequent offenses.

S 807, introduced late in the session, would have required the EMC to develop a statewide solid waste management plan emphasizing materials recovery and production of energy from solid wastes. The bill would have also empowered the Commission to contract to provide solid waste management services and facilities to local governments for a fee and to undertake solid waste collection and storage operations. The bill was inspired by a Western North Carolina plan for recycling of industrial and municipal solid wastes, and industrial utilization of steam heat generated from garbage and trash burning. The Tennessee Valley Authority had expressed interest in supporting such a project.

Although S 807 never moved out of Senate Committee, it generated sufficient interest to stimulate a search for alternative approaches. But of this search for alternative approaches, out of this search came two bills that were enacted, and which will facilitate interlocal cooperation on projects similar to those contemplated by S 807. Ch. 774 (S 851) deletes two statutory restrictions on interlocal cooperation under G.S. Ch. 160A, Art. 20, Part 1: the clause that has limited interlocal cooperation to "administrative or governmental" powers and the section (G.S. 160A-465) that has made this law inapplicable to undertakings that are subject to approval by a State department or agency. Ch. 791 authorizes joint agencies created pursuant to the interlocal cooperation law to issue bonds under the Local Government Revenue Board Act.

Recognizing the need for an integrated approach to the management of North Carolina's solid and hazardous wastes, toxic substances, air quality noise and pesticides, the General Assembly ratified S 373 (Ch. 916) authorizing the Legislative Research Commission to study the State's present organization for planning and management of these programs. Responsibility for these interrelated problems is now divided among several Departments. The commission may file an interim report with the 1979 General Assembly (Second Session, 1980) and may file its final report with the 1981 General Assembly. The final report should contain along with a summary of the commission's findings, recommendations for administrative or legislative actions necessary for effective and efficient management of the State's programs in these areas. If the Research Commission elects to undertake this study, the study itself will need to be coordinated with related studies authorized this session for the Toxic and Hazardous Substances Task Force (Ch. 981, above) and the Water Management Study Commission (Ch. 1019, below).

<u>Bills That Did Not Pass</u>. Discarded bottles and cans were the target of two litter bills introduced this session, neither of which were ratified. H 857 renewed an attempt to apply economic incentives in dealing with the litter problem. Similar to the Oregon "bottle bill", the bill would have placed a five-cent deposit on most beverage containers holding less than two liters of beverage, excluding dairy products and vegetable juices. Like the beverage deposit bill introduced in previous sessions, H 857 faced strong opposition from the beverage industry and ultimately failed in House committee.

A second litter bill, H 1012, would have made the finding of identifying material in litter prima facie evidence that the identified person was responsible for its unlawful disposal. At the session's close the bill had been reported favorably in the House, but re-referred to a Judiciary Committee.

One other bill, S 231, would have established a Hazardous Substance Act for the purpose of reducing risks of injury from hazardous household substances. The bill, which failed in Senate committee, would have been administered by the State Board of Agriculture.

. . . *Milton S. Heath, Jr.*
Sandi Postel

Editors Note: The next issue of the NEWS will carry a summary of water resources legislation.

NEW PUBLICATIONS RECEIVED BY THE INSTITUTE

(Residents of North Carolina may borrow these from the Institute for a two-week period. Where individual copies are desired, readers are encouraged to request copies from the organization issuing the publications. The addresses are provided by the News for this purpose.)

Water Resources Planning

"Conflict Management in Federal Water Resource Planning," (#028), 1979, by W. B. Lord *et al*, avail. from NTIS, USDC, Springfield, VA 22161, $5. (06A)

"A Technique for Estimating Heights Reached by the 100-Year Flood on Unregulated, Nontidal Streams in North Carolina," 7/79, by R. W. Coble, USGS, P.O. Box 2857, Raleigh, NC 27602. (USGS)

"California Water Planning and Policy," 6/79, ed. by E. A. Engelbert, WRRC, Davis, CA 95616. (06B)

"Fragmentation of Public Authority Over Floodplains: The Charles River Response," (#101), 1/79, by R. H. Platt *et al*, WRRC, University of Amherst, MA 01003. (06E)

"Social Impact Studies--Belton and Stillhouse Hollow Reservoirs," 6/79, by Chang, *et al*, avail. from Center for Research in Water Resources, Dept. of Civil Engr., College of Engr., U. of Texas at Austin, Austin, TX. (06B)

"Urbanization and Water Quality Planning: The 208 Experience in Massachusetts," 1/79, (#104) by H. E. Schwarz *et al*, WRRC, U. of Amherst, Worchester, MA 01610. (208)

"Industrial Water Allocation & Conservation in California," 1/78, by the Office of Emergency Services, Dept. of Water Resources, Sacramento, CA 95802. (03)

"Water Conservation," by Water Resource Center, West Palm Beach, FL 33402. (03)

"Water Conservation in California," 5/76, State of California Dept. of Water Resources, Sacramento, CA 95802. (03)

"Water Conservation Papers from the Illinois Interagency Water Management/Conservation Committee," 7/78, Dept. of Local Government Affairs, Springfield, IL 61706. (03)

"A Pilot Water Conservation Program," 10/78, by the State of California Dept. of Water Resources, Sacramento, CA 95802. (03)

"State Agency Efforts in Water Conservation," 12/78, State of California Dept. of Water Resources, Sacramento, CA 95802. (03)

"Water Resources Development," 1/79, by U.S. Army Corps of Engineers in North Carolina, P.O. Box 1890, Wilmington, NC 28401. (Corps of Engineers)

"Civil Works Water Resources Development Program," 7/79, by N.C. NRCD, Office of Water Resources, Water Resources Development Section, P.O. Box 27687, Raleigh, NC 27611. (08A)

"Vermont Water Law and Rights," by M. B. Lapping *et al*, WRRC, U. of Vermont, 601 Main St., Burlington, VT 05401. (06E)

"Heuristic Decision Rules For Water Resources Planning," (#119), 8/79, by V. Akileswaran, *et al*, WRRC, Purdue U., West Lafayette, IN 47907. (06A)

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SPECIAL

NORTH CAROLINA WATER MANAGEMENT--NEW DEVELOPMENTS

by Neil S. Grigg, Assistant Secretary for Natural Resources
N.C. Department of Natural Resources and Community Development

Editor's Note: Presentation made at Water Resources Management Luncheon at NCSU Faculty Club, September 26, 1979.

It has been just a year since we invited Mac McRorie to talk about the reorganization in Environmental Management. He explained how they reoriented Environmental Management into a functional organization from a programmatic organization. This really meant that instead of having an organization that looked at categories labelled "water," "air," and "ground water," we have a consolidated organization that looks at the categories of "permitting," "monitoring," and "enforcement," as functional processes and looks at a media within each of these functions. That organization was put into place, and over a period of time, was followed by several studies in which we sought to improve our water resources management and put a great deal of effort into finding the best ways to do this.

The Water Resources Research Institute sponsored a study by Maynard Hufschmidt which produced a lot of good advice on how to reorganize and to do a better job in water resources planning. Quentin Lindsey, the Governor's Science and Public Policy Advisor, pulled together a group last fall which talked at length about what ought to be done to improve our overall water resources management. After Christmas, there were several other committees within NRCD which studied water management. We reached the point where we decided to take certain steps leading to improved water management. We have concluded all those steps now. So one of my objectives in this talk will be to explain what those steps and their outcome has been.

In July we reached the final decision about what we would do in organizational arrangement and in areas of emphasis which would allow us to address our deficiencies in water management. One of the main deficiencies raised to us was that the State did not place enough emphasis on water planning and management in the sense of comprehensive water planning and water development as well as in the "water linked with land" sense. We examined the possibility of creating a separate Water Resources Division to address these problems. One model that we looked at was based on a system like the State of California has where they have a complete water development authority. We found that it was too early to talk about a separate Water Resources Division because of the functional reorganization of environmental programs. This had made it really difficult to pull apart from an environmental organization the kinds of hydrological study units, the groundwater units, and the other units needed to create another organization, and the State could not afford a separate organization at this time.

So, we elected to create within the Division of Environmental Management a new section devoted to water planning and development. John Wray is heading up that section. He had previously directed the branch which had contracts for water planning and so the net result of that was an elevation of this water planning and management function from the branch to section level. At the same time, President Carter's Water Policy has resulted in a request to Congress for a substantial increase in funding for states to support water planning and management. If those funds come on line next year, then we will be able to raise the level of activity of the water planning and development section quite a bit. We are hopeful that we will be able to do this because we need to give a lot of additional attention to water planning and management functions.

Recognize that when we talk about water management--and there is a lot of rhetoric about needing to improve the different parts of water management--that does not necessarily call for a wholesale reorganization. Since the Division of Environmental Management--which is the key water unit--has just been reorganized, we did not feel that it was appropriate to reorganize. In fact, I myself am not much of a fan of reorganization if it can be avoided. We have avoided it so far pretty well. Still there will inevitably be a time and a need for some reorganization. Now we are trying to improve the management approaches which are already in place to maintain our credibility and improve our response to the challenges we face before we focus on reorganization.

One of the recurring issues is the question of overlap in duties between different departments of state government--the Department of Natural Resources has responsibility for this program and that program, and the Department of Human Resources has responsibility for some related programs, and so on, and wouldn't it be nice if we could put all those in one department. There is a lot of merit in that kind of analysis. However, that kind of analysis doesn't usually look at the difficulties of putting programs together and alternative solutions which might be used. So, we have stopped to address that particular issue by assuring better coordination through an interagency group which we are calling the North Carolina Water

Resources Council. On that Council are representatives from the different departments--Agriculture, Human Resources, Natural Resources, and Community Development Administration, Commerce, and so on. We have met twice to date. We are discussing issues that are of concern to us all, which most often turn out to be planning issues, particularly how to relate water planning to the balanced growth in economic development policies. As you know, there are a lot of important linkages between water and balanced growth. Dean Monteith identified one just a minute ago. Water could prove to be the limit to growth in North Carolina. I don't believe that myself, and the reason that I don't believe it is that I came to North Carolina from the State of Colorado where they had been saying for many years that the limit to development in Colorado was water. But people who were involved in the water business were quick to point out that water was not the limit to development there. They said that the only thing you needed to look at was how much people were willing to pay for water. If you are willing to pay enough for water then it can be made available. I noticed in the newspaper the other day that they are all of a sudden now starting to find adequate water supplies for that oil shale development in western Colorado. You know that's kind of surprising since all the water is supposed to already be spoken for out there.

Another part of our reformulation of certain water functions is that we recognize that, in addition to having coordinated councils, we need staff support for those. John Morris' office has been now designated the Office of Water Resources. It used to be the Office of Public Works with emphasis on just water development and public works financing. Now it's called the Office of Water Resources. John has many responsibilities--more than he can handle, and he needs a lot of help. He doesn't have a big staff, but in essence he is the staff or the secretariat for the Water Resources Council as well as for an internal coordinating committee in NRCD which we are calling our Water Resources Management Committee. This group includes the director of the Division of Environmental Management; the director of the Division of Soil and Water Conservation, Joe Phillips, who was stolen from the University over there and is doing a lot of good work for us; the Division of Land Resources, Steve Conrad's group; as well as other divisions in Natural Resources which are closely related to water. Among these are Parks and Recreations, Marine Fisheries, Forest Resources, and Coastal Management. We are relying on John's office to orchestrate and help coordinate staff studies, legislative input, policy input, and in general to provide a lot of coordination. It is still to be determined how well John can respond to all of that because the demands are so heavy.

We anticipate working out a better response mechanism with some of these new federal monies that may come on board through the Water Resources Council. We are real hopeful for those resources. So that's a little bit of a background on where our studies led. The bottom line is that our studies did not result in any drastic reorganization. They led to some reformulation, some reemphasis. Nobody has physically moved from one location to another. In other words, the reorganization that was put in place in Environmental Management last year was a design and made a lot of sense. It came as a result of a study of a number of organizations. Some people don't necessarily like that particular arrangement and other people do like that form. I guess if we went to another one, we would have the same difference of opinion. We have left that in place, and so everyone can keep just moving ahead doing their job as fast as they can.

Now, there is one innovation we will have to put into place in that organization if we are really going to make it work. The objection that we have heard the most often and the loudest--I heard it, and my predecessors heard it, and we are still hearing it--is that certain programs have just "fallen by the wayside" with this reorganization. The kinds of programs that we are talking about are our air quality program, the water quality program, the water planning program and the groundwater program. We could reorganize again and bring all of the units that have to do with those different areas of emphasis together with heightened visibility, but rather than do that right now, we are going to try to approach this with a functional matrix organization. Any of you who have dealt with matrix organizations know that they don't solve problems, they create problems. So we are very skeptical about it. Basically what we are going to do is retain these functional areas--the operations of the division--permitting, emergency response, enforcements, and things like this; our environmental planning; our water planning; and so on. Then those programmatic areas that are common to all of those like groundwater, or air quality, or water quality will be organized in a matrix sense so that we can develop councils that will look after these particular parts of our programs and make sure at the same time that our functions get taken care of--such as permitting and enforcement--and that we continue to improve with our programmatic areas like groundwater. I know that there are a lot of people who are concerned about groundwater. We want to do better on that and air quality. That is going to be our response for the near term and we are hoping it will be effective.

We have got a lot of activities underway in the department. I don't want to spend too long but I would like to take a few minutes and cover with you some of the activities that we have underway. They are important things and the state government really needs your help--industry, the university, consulting firms, local government--because with a small staff, so many demands on it, there is a need for help from colleagues outside.

Let me tell you a few of the things that are coming along. One is a Legislative Study Commission that is being appointed on water management. This came about as an initiative from the House Speaker Carl Stewart and the objective of that is going to be to find ways to improve our water management by adding emphasis on providing a water supply. We are hopeful that it is going to result in some permanent improvements for us and maybe even some additional resources money directed to the right places--local government, particularly--where our droughts and problems like that can be taken care of.

The Governor signed this past Monday, with the EPA Regional Administrator, a State-EPA agreement. I notice it didn't even get into the newspapers; however, it was a big signing--they sat down like Begin and Sadat to sign the agreement. It was the first State EPA Agreement to be signed in the Southeast. So you can say that North Carolina has taken the lead. We are being aggressive on that. What it says is that we are going to work to coordinate our functions and to be more effective in our work with EPA. There was a list of 13 areas that we made commitments in--things like toxic chemicals, hazardous wastes, solid wastes, eutrophication, and emergency response. We are bringing on board, in spite of our organizational status quo mentioned earlier, someone to implement some of these new programs with EPA. New programs include things like taking on more responsibility for running the construction grants program. This is what we call our 205-G program. We are making assessments right now on how we can improve our air quality program with particular emphasis on vegetative damage and other areas that are of so much concern to us that need some specific investigations. We are going to try to do a better job on our 208 program with a continuing planning process and to focus especially on areas where we have some severe water quality problems--like the Chowan River, like the closed shellfish areas, and other places across the State.

We've got some substantial new activities coming on line with our Level B Study funded through the Water Resources Council. Many of you probably know Tom Nelson who is our Manager for the first Level B Study in the State--the Yadkin-Pee Dee study. Tom's headquarters are in Winston-Salem and he is here today. That is a substantial study of important implications for the State. A lot of controversy is attached to these kinds of studies, but we think they are a good idea and we are moving ahead if nothing happens to the President's budget. We have a study like that on the Cape Fear Basin and we have another application in for a similar study in the Albemarle area where we have had so many problems like the Chowan--groundwater depletion, and withdrawal of surface waters. We are doing a lot more with the North Carolina-Virginia Water Management Committee. Through the Water Resources Council, we have been able to get a position funded to serve as a staff person to the North Carolina-Virginia Water Management Committee. If we could get that position filled and keep it up there then we will be able to turn that committee into a group that will meet more frequently and more productively. We may be looking, too, at our formal Interstate Compact Commission between North Carolina and Virginia for all of the water problems that we have on that border, which are many as you know.

Through legislation that had something to do with the Department of Natural Resources and Community Development and very much to do with Milton Heath who is here, we have now a Toxic Substances Task Force that is chaired by the Secretary of Crime Control and Public Safety through his Assistant Secretary, David Kelly. This group is looking at what needs to be done in the State to tackle toxic substances and hazardous wastes products.

We are developing a response to our flood problems in the State, bigger than we have developed before, we hope. Floods that just happened in Surry County and in that area bring more attention to the flood problems. We met yesterday for the first time with a large interagency Flood Damage Reductions Task Force. The units that are already so active in that area were there such as the Soil Conservation Service and the Corps of Engineers. We scheduled it before today's luncheon, in fact a few of the Corps' people stayed with us today for the luncheon. It looks like we may be able to do a lot more in the way of our total flood programs by working together. Also, we are developing within NRCD (in cooperation with local government and with Human Resources) more emphasis on water supply systems. We know that this is going to be one of the areas that will be of great concern to the Legislative Study Commission. Those are some of the things we have underway.

In closing I would like to tell you what we view as really substantial challenges ahead in our water management. First, is the area of industrialization. If what Dean Monteith says is true, and I really can't see how we could have that many people here, but if you ever plot a curve of pollution vs. standard of living or GNP or anything like that, there doesn't seem to be a way to separate pollution control and environmental management from industrialization. We are going to face a lot of hard decisions in the State about that in the future. I know that we've got Don Blackman here from Duke Power and some others who are very aware of the need for more electrical generating capacity and looking for those real difficult ways to get that without sacrificing the environment. This is going to be a challenge to all of us working together. So one response to that is going to be the programs that the State puts into place in regulatory reform. Regulatory reform has now been talked about in Washington long enough. We are looking for ways to reform our regulations, but that doesn't mean to throw the regulations out. What that means is that we want to find a way to make sure that our regulations are fair and equitable, but right. I have to be real careful not to say that we are going to throw any out because Anne Taylor makes sure that the door is locked and we are not able to throw anything out. Anne is very much in there making sure that we do the right job on the environment and with our regulatory programs. But I would have to say that she, just like the rest of us, is completely in tune with the need to make our regulations fair and equitable but not to give the environment away for the purpose of perceived growth and perceived benefits that don't really happen. Trying to meet these challenges is going to be really tough because among other reasons we have a real funding crunch right now. The 208's funding program is tight. Now I find that what we call the 106 program which is the money that comes from EPA to operate our basic water quality management program has been level for some time and this year we've got a 7 percent cut. Salary increases and inflation make our demand for that money go up. But it's an old story where the federal government brings new programs on board and then they fund them lavishly in the beginning. With inflation they could keep their funding level and the demands go way up and then it is left to the states to pick it up.

We ran into the same thing with the Water Resources Research Institute. When they first started that up back in 1964 and 1965 they brought on board \$100,000 a year to start the basic allotment program. It's still just \$110,000 a year and it looks like we are keeping a level program, but we are not. We are being squeezed little by little and that's what has happened to our Water Quality Management Program. We've really got to get into gear to do something about that. I mentioned what we are doing in organizational reform trying to make that work better, but I have to say that we have a continual challenge in our organization to make it work better in spite of the difficulties of attracting and holding good people in state government. Those difficulties are well known. They are not necessarily anybody's fault. The federal government as well as the private sector pay a lot better. The working conditions can be difficult. It is really challenging in state government. Sometimes things are not understood and I'd have to say about all the publicity that you've been reading in the newspapers lately, that didn't help any. There are pros and cons to some of those statements, but as you look into our organization, I'd have to tell you that as far as I am concerned it's a solid organization and it's a good place to work.

And the challenges we face are substantial. I did a study not long ago on who did what in water management and what my study showed me was that the biggest actors in water management were local government, industry--with emphasis on utilities, because of all the expenditures on cooling and processing and so on. The federal government and the state governments are kind of sitting in a real awkward position and not sufficiently funded so that they can do a lot of things. A lot of folks are waiting for the state government to do things, and it is going to be a long wait sometimes because there is so much that has to be done. I guess what I am saying is that we need to develop better partnerships and need coalitions and have initiatives in all sectors so that we can work to solve our problems.

ITEMS OF INTEREST:

Senate Bill Extends WRC and Provides Technical Assistance Funds to States, page 1

Study Commission on Alternatives of Water Management, page 2

Flood Damage Reduction Group Holds First Meeting, page 2

Watershed Planning Task Force Organized for Falls of the Neuse and B. Everett Jordan Reservoirs, page 3

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