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STATE HEARING ON PROPOSED CHANGES IN STREAM CLASSIFICATION SCHEDULED

The State Board of Water and Air Resources has scheduled a public hearing to consider the adoption of proposed amendments to strengthen stream classifications and water quality standards and related rules and regulations pertaining to the surface waters of North Carolina for 10:00 a.m. on Thursday, November 16, 1967. The hearing will be held in the Auditorium, First Floor, State Board of Health Laboratory Division Building, 214 West Jones Street, Raleigh, N. C. All interested persons are invited to attend. Persons desiring to be heard should give notice in writing to the Board. Copies of the proposed amendments are available in the office of the Water Pollution Control Division, Department of Water and Air Resources, P. O. Box 9392, Raleigh.

The more substantive of the proposed amendments include:

The addition of Rules 5, 6, 7 & 8 to The Rules Applicable to Classes and Standards.

5. The governing flow, which shall be the criterion for the standards and for the design of waste treatment facilities, shall be the minimum average flow for a period of seven consecutive days that have an average recurrence of once in ten years. In cases where the stream is regulated, the governing flow shall be the instantaneous minimum flow.

6. In the interest of maintaining and enhancing water quality, secondary or equivalent treatment shall be considered the minimum acceptable treatment for all significant discharges of sewage, industrial wastes or other wastes, regardless of the assigned classification and applicable water quality standards. Advanced waste treatment processes shall be required, insofar as practicable, in instances where a higher degree of treatment is required to maintain the assigned water quality standards.

7. The maximum limits for toxic substances in receiving waters shall not exceed one-tenth of the 48-hour median tolerance limit (TLM_{48}) where known and in cases where such values are not known bioassays will be conducted to determine same for the particular waters in question.

8. It is recognized that unusual conditions may exist making it impossible or impractical to immediately bring the quality of the receiving waters into compliance with the general or specific requirements of the applicable water quality standards. Such a situation shall be deemed to exist where no adequate or practical method of disposal or treatment for a particular waste is presently known. Under such conditions and with justifiable proof, deviations from such standards, as the public interest may require or permit, may be authorized for such period as may be required to develop an effective method of disposal or treatment. Deviation will be granted only after hearing and upon written approval of the Board.

The addition of specific quality parameters for organisms of the coliform group, temperature, and radioactivity for each of the water use classifications.

The deletion of Class E and Class SD from the Regulation. These recognized best usage for navigation and waste disposal with quality standards set to prevent offensive conditions. The lowest classification of water usage will be Class D which provides a best usage for agriculture, industrial cooling and process water supply, fish survival, navigation, and any other usage, except fishing, bathing, or as a source of water supply for drinking, culinary or food-processing purposes. The quality standards for Class D waters--the proposed new minimum--would be as follows:

1. Floating solids; settleable solids; sludge deposits.	Only such amounts attributable to sewage, industrial wastes or other wastes as will not, after reasonable opportunity for dilution and mixture of same with the receiving waters, render the waters unsuitable for agriculture, industrial cooling purposes and fish survival, or cause an offensive condition.
2. pH.	Shall be normal for the waters in the area, which generally shall range between 6.0 and 8.5, except that swamp waters may have a low of 4.3.
3. Dissolved oxygen.	Not less than 3.0 parts per million.
4. Toxic wastes; oils; deleterious substances; colored or other wastes.	Only such amounts attributable to sewage, industrial wastes or other wastes as will not render the waters unsuitable for agriculture, industrial cooling purposes, navigation, and fish survival, or cause offensive conditions.
5. Organisms of coliform group. (Applicable only to waters used for irrigation of fruits and vegetables)	Not to exceed an average of 5,000/100 ml (either MPN or MF count) based on at least five consecutive samples examined during any 30-day period and not to exceed 20,000/100 ml in any sample examined during such period.
6. Temperature.	Not to exceed 7°F. above normal stream temperature for the season, and in no case to exceed 95°F.

A STRATEGY FOR CLEAN WATER

In a speech before the American Society of Civil Engineers Annual Meeting and Water Resources Conference in New York City on October 16, 1967, Frank C. DiLuzio, Assistant Secretary of the Interior for Water Pollution, expressed the view that the selection of a complete water strategy for a river basin must be based on a complete systems analysis for the entire river basin and include the following:

1. Alternative goals

2. Means of achieving them in terms of dollars, manpower, facilities, time, organizations, laws, etc.
3. The complete costs, benefits and effects--for this and future generations--of choosing particular goals and means.

In order of priority, DiLuzio cited waste prevention, treatment and dilution as actions to attain water quality. "First," he said, "you prevent pollution." "If you cannot prevent wastes, you treat them." "Only if that fails--only when you have exhausted the full economic viability of all other alternatives--do you dilute the wastes in the water."

Diluzio called attention to the limited assimilative capacity of many streams and the low dissolved oxygen values in some reservoirs. "There is in fact," he said, "some evidence that impounding reservoirs on a previously unregulated river may reduce that river's organic waste assimilative capacity." "One study conducted on the Coosa River in Georgia in 1964 claims that the combined effect of Allatoona Dam and Weiss Dam Reservoir has reduced waste assimilative capacity of the Coosa River to 20% of pre-project conditions."

STATUS OF STREAM FLOWS AND GROUND WATER LEVELS IN NORTH CAROLINA

The October 1, 1967, issue of Water Resources Review, U.S.G.S., reported that streamflow in the Tennessee River basin was excessive for the fourth consecutive month and was about twice the normal for September. The high runoff was due to carryover from the floods of late August. Streamflow was below normal in the eastern and central parts and was deficient at the index station on the South Yadkin River in north-central North Carolina. Flow at this index station was below normal for the 11th consecutive month, and the cumulative runoff since October, 1966, was the lowest since the drought of 1956.

Contents in High Rock, Narrows, and Bridgewater Reservoirs had a net loss of 1.7 billion cubic feet during September and were 79% of capacity and about 103% of average.

Ground-water levels rose in mountain areas and were slightly higher than at the end of September, 1966. Levels in the Piedmont declined slightly and were below the long-term average. Levels in the Coastal Plain also declined but were above the long-term average.

NATIONAL ESTUARINE POLLUTION STUDY

The Federal Water Pollution Control Administration recently released a report providing additional information on the National Estuarine Pollution Study authorized by the Clean Water Restoration Act of 1966.

Objectives and scope are closely allied to the requirements of the authorizing legislation--summarized in November, 1966, issue of the News. The method of study provides for the collection of data through five principal avenues:

1. Files of the FWPCA.
2. Consultation with other agencies of the Department of the Interior.
3. Consultation with other Federal agencies, State agencies, interstate agencies, private organizations, universities, etc.
4. Public hearings in each "coastal State," under the direct sponsorship of the FWPCA.
5. Contracts for information on socio-economic values, ecological, demographic and industrial trends, and application of new technology. A National Conference on Estuarine Research needs will be scheduled for January, 1969, to provide interested engineers, scientists, and public administrators with a "last minute" opportunity to outline and discuss research and study needs and areas of opportunity.
6. Supplemental in-house technical studies on estuarine pollution problems.

The study schedule is as follows:

Cut-off date for project data	Feb. 1, 1969
Completion of Preliminary Draft	Apr. 1, 1969
Completion of Final Draft	June 1, 1969
Approval by Secretary	July 1, 1969
Submission to Congress	Nov. 1, 1969

FEDERAL GRANTS FOR WASTE TREATMENT IN NORTH CAROLINA

The following grant for the construction of municipal waste treatment works in North Carolina was announced by Secretary Udall during the past month:

Dillsboro	$23,160	(Total project cost $79,200) For new extended aeration secondary type sewage treatment plant and intercepting sewer.

FEDERAL STUDIES OF INDUSTRIAL POLLUTION CONTROL INCENTIVES

Dr. James F. Flannery, Chief Economist, Federal Water Pollution Control Administration, has reported that U. S. industry must spend about $1 billion annually on pollution control. Studies of industrial incentives are now underway and a report will be submitted to the Congress early in January, 1968. The incentives under consideration include tax credits, accelerated depreciation, user charges, effluent charges, waste acceptance service, and grants and loans. Flannery indicated that industry favors both tax credits and accelerated depreciation. Holding little hope for the acceptance of effluent charges by government, he said there is considerable support for waste acceptance service and user charges tying industry into municipal sewer systems.

WATER RESOURCES LEGISLATION IN THE CONGRESS

Bills Signed into Law

S. 602 (Conf. Report) Appalachian Regional Development

Bills Passed - Senate

S. 1985 (amended) To provide a national program of flood insurance.

Bills Introduced

H.R. 12841 H.R. 13027 H.R. 13043 H.R. 13146 H.R. 13202	To amend the Federal Flood Insurance Act of 1956 to provide for a national program of flood insurance.
H.R. 12888 H.R. 13000	To require consultation with local planning agencies with respect to proposed Federal construction projects within their jurisdiction.
H.J.Res. 830 H.J.Res. 839 H.J.Res. 854	To provide for a study of the resources of the ocean floor by the National Council on Marine Resources and Engineering Development, and to prevent certain premature actions which might adversely affect the interest of the U. S. in such resources.
S. 2415 H.R. 13150	To authorize the Secretary of the Interior to study the most feasible and desirable means of establishing certain portions of the tidelands, outer continental shelf, seaward areas, and the Great Lakes as marine sanctuaries.
S. 2418	To amend the Land and Water Conservation Fund Act.
S. 2445	To amend Part I of the Federal Power Act to clarify manner in which the licensing authority of the Commission and the right of the U. S. to take over a project after expiration of any license shall be exercised.
H.R. 13064 H.R. 13241	To amend the Federal Water Pollution Control Act to authorize certain grants for rehabilitation of the lakes of the U. S.
H.R. 13089	To amend the Internal Revenue Code of 1954 to allow an incentive tax credit for a part of the cost of constructing or otherwise providing facilities for the control of water or air pollution, and to permit the amortization of such costs within a period of 1 to 5 years.

NEW PUBLICATIONS RECEIVED BY THE INSTITUTE

Water Resources Planning

"Analysis of Reservoir Recreation Benefits," R. C. Tussey, Jr., WRI, University of Kentucky, 1967

"A Multipurpose Data Acquisition System for Instrumentation of the Nearshore Environment," W. A. Koontz and D. L. Inman, Tech. Memo. No. 21, U. S. Army Coastal Engr. Res. Center, August, 1967

"Covariance Analysis of Reservoir Development Effects on Property Tax Base," C. M. Vaughan, Jr., WRI, University of Kentucky, 1967

"Derivation of Reservoir Operating Rules by Economic Analysis," Charles O. Dowell, WRI, University of Kentucky, Lexington, Ky., Research Report No. 6, 1967

"Review of the Economic Benefits and Costs Resulting from Dewey Reservoir," D. H. Rosenbaum, WRI, University of Kentucky, 1967

"The Effect of Landowner Attitude on the Financial and the Economic Costs of Acquiring Land for a Large Public Works Project," J. M. Higgins, Jr., WRI, University of Kentucky, 1967

"Tourism in Eastern North Carolina - An Inventory," L. E. Barnes, Eastern N. C. Development Institute, East Carolina University, April, 1967

"Water Resources Planning in Kentucky," Division of Water, Dept. of Natural Resources, Frankfort, Kentucky, 40601

"Water Rights Law and Management in West Virginia - Future Needs and Alternatives, M. F. Lugar, Public Affairs Series No. 4, W. Va. Center for Appalachian Studies and Development, W. Va. University, Morgantown, W. Va.

Water Quality Management

"Analysis of Dissolved Oxygen in Natural and Waste Waters," PHS Pub. No. 999-WP-37, Apr. 1966

"A Reconnaisance of the Technology for Recharging Reclaimed Waste Water into the Las Vegas Valley Ground-Water Basin," R. O. Orcutt and G. F. Cochran, Water Resources Research Center, Desert Research Institute, University of Nevada, July, 1967

"Education in Hydrology - United States Universities - Early 1966," UCOWR Committee on the Survey of Educational Programs in Hydrology

"Pilot Studies on the Anaerobic Treatment of Tannery Effluents," W. E. Gates and Shun-Dar Lin, WRC, Ga. Inst. Tech., WRC-02675, 1967

"Salt-Water Intrusion Effect of a Fresh-Water Canal," M. R. Carstens and G. D. May, WRC, Ga. Inst. Tech., May, 1967

"Solid Waste Disease Relationships - A Literature Survey," PHS - HEW

"Translocation of Growth Regulators in Chara Vulgaris A Nonvascular Aquatic Plant Found in Virginia's Waters," T. O. Evrard and W. E. Chappell, Water Resources Center, Virginia Polytechnic Institute, July, 1967

Water Quantity Management

"Dune Stabilization with Vegetation on the Outer Banks of North Carolina," W. W. Woodhouse, Jr., and R. E. Hanes, Tech. Memo. No. 22, U. S. Army Coastal Engr. Res. Center, August, 1967

"Evaluation of a Duned Bed Under Oscillatory Flow," M. R. Carstens and F. M. Neilson, WRC, Ga. Inst. Tech., WRC-04675, 1967

"The Progress of Hydrology," Ven Te Chow, Introductory Address to International Symposium on Use of Isotopes in Hydrology, Nov. 14, 1966

"Rock Movement in Large-Scale Tests of Riprap Stability Under Wave Action," R. 3-67, U. S. Army Coastal Engr. Res. Center, August, 1967

"Vibration Studies of Monticello Dam," Research Report No. 9, Bureau of Reclamation, Dept. of Interior (available from Supt. Documents, U. S. Gov't. Printing Office, Wash., D. C. 20402 at 20¢ per copy)

"Wave Tests of Revetment Using Machine-Produced Interlocking Blocks," R. 2-67, U. S. Army Coastal Engr. Res. Center, August, 1967

Miscellaneous

"An Annotated Bibliography of Observations on Illinois Water Resources 1673 - 1850," WRC University of Illinois, Urbana, Ill., August, 1967

"Annual Report - Pacific Northwest Laboratory," Battelle Northwest, Vol. 1, Biological Sciences, July, 1967

Annual Reports - Water Resources Research Institutes as follows:

- Auburn University
- Georgia Institute of Technology
- University of Hawaii
- Iowa State University
- University of Illinois
- University of Kentucky
- University of Missouri
- University of Nevada
- University of New Mexico
- University of New Hampshire
- Oklahoma State University
- Pennsylvania State University
- Rutgers - The State University
- University of Tennessee
- University of West Virginia
- University of Wyoming

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