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WATER RESOURCES NEWS

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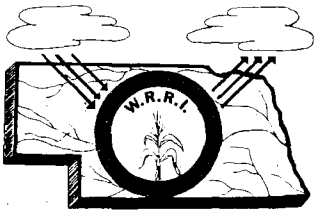

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HOUSE HEARINGS ON WATER POLLUTION CONTROL

On December 7, 1971, hearings by the House Committee on Public Works on amendments to the Federal Water Pollution Control Act opened. The Senate has already adopted similar legislation.

Chairman of the President's Council on Environmental Quality, Russel E. Train, said the Administration supports: the objective of achieving water quality fit for swimming and similar uses in all areas where feasible and appropriate by 1981; the requirement for use of the best practicable technology for control of industrial pollution by 1976; the need for precise effluent limitations tailored to achieve water quality objectives; and the strict limitation or prohibition of the discharge of toxic substances.

The disagreement between the Administration and proponents of the Senate-passed measure is the question of goals and how to achieve them. For example, the Senate bill would drop the water quality standards concept and ask for zero discharge by 1985. It would also ask for swimming water quality in all streams by 1981.

In Train's statement, he said, The heart of the Administration's proposal is to relate treatment requirements to the achievement of ambient water quality goals." This goal would be met by 1976.

Governor Rockefeller of New York told the Committee that the Senate goal of no pollution by 1985 would disillusion the public when it became apparent that this was technically and economically impossible of attainment.

Chairman of the Council of Economic Advisers, Paul McCracken, presented figures on the shrinking amount of unclaimed future production and the alleged inflationary aspects of over-spending on waste treatment facilities. He reported that the rate of growth of treatment construction has been about 25% annually over the past two years with the rate of inflation at about 12%.

NEW PUBLICATIONS AVAILABLE FROM N.W.R.R.I.

The Nebraska Water Resources Research Institute has recently issued two new publications which are available to interested persons. These publications are: Publication #5, "Water Resources Research in Nebraska, Volume II" (a publication which briefly describes the

nature of research studies in progress in Nebraska); and Publication #6, "University of Nebraska Faculty With Competence in Water Resources" (a publication listing University of Nebraska faculty with special competence for research and/or teaching in the water resources field.) These publications may be obtained by writing: Dr. Warren Viessman, Jr., Director, Nebraska Water Resources Research Institute, 212 Agricultural Engineering Building, East Campus, University of Nebraska, Lincoln, Nebraska 68503.

COASTAL ZONE MANAGEMENT

The coastal and estuarine zone management bill was approved on December 1 by the Senate Commerce Committee, but indecision as to committee and agency jurisdiction will hold up further action until next year. Three Congressional Committees (Interior, Banking and Currency, and Public Works) have indicated possible conflicts with their responsibilities.

GROUND WATER POLLUTION

Scientists of the U.S. Geological Survey warned a Symposium on Underground Waste Management which opened in Houston, Texas, on December 6, 1971, that problems arising from the underground injection of liquid wastes would multiply in the years ahead unless there is better knowledge of the underground environment. J. G. Ferris, research hydrologist, told the group that the increasing tempo of "ecological crusades for cleanup of lakes and streams is driving pollution underground."

ECONOMIC DISLOCATION FROM POLLUTION CONTROL

Labor Secretary Hodgson and EPA's Ruckelshaus have announced an early warning system to minimize economic hardships from pollution control enforcement actions. This will also include the resources of the Department of Commerce, Small Business Administration, and Economic Development Administration.

EPA REGULATIONS

The Environmental Protection Agency has republished its regulations on environmental protection in the November 25, 1971 Federal Register. Over 200 pages, the regulations are available through purchase from GPO, Washington, D.C. 20402 at 20¢/copy for Numbers 228 and 229, Vol. 36, November 25 and 27, 1971, respectively.

WASTE TREATMENT PLANT GUIDELINES

The Environmental Protection Agency has now issued supplements to the Federal Guidelines for Design, Operation, and Maintenance of Wastewater Treatment Facilities for the guidance of consulting engineers. These are:

1. Plant Operation Manual and Guidance for Proper Operation and Maintenance
2. Responsibility for Design, Operation, and Maintenance
3. Sample Plan for Operation and Maintenance

These expand on EPA instruction for the operation of municipal

waste treatment plants being constructed with federal grants under the Federal Water Pollution Control Act.

WRC POLICY ON REVISION OF REGIONAL & RIVER BASIN PLANS

Director of the U.S. Water Resources Council, W. Don Maughn, has announced a new policy, approved by the Council, for the revision of Completed Regional or River Basin Plans. The new policy recognizes that after regional or river basinplans have been completed and transmitted to the President and the Congress, modification or revision may be warranted from time to time in order to reflect changes in economic and social goals to be served, and to accomodate technological advances and other circumstances or events that affect both the problems and their solutions.

The new statement sets forth the policy of the Council regarding the initiation, development and submission of, and Council action on, proposed revisions of completed regional or river basin plans.

Copies of the following Policy Statements are available upon request:

1. Water and Related Land Resource Planning--7/22/70
2. Environmental Statements - Framework Studies and Assessments and Regional or River Basin Plans--2/10/71
3. Revision of Completed Regional or River Basin Plans--9/8/71.

WATER RESOURCES COUNCIL OUTLINES NEW PRINCIPLES AND STANDARDS

The Water Resources Council unveiled broad, new procedures to weigh environmental and economic impact in considering proposed land and water resources programs.

Noting that past decisions had been based primarily on monetary considerations, the Council said its new principles and standards for water and land resource planning adopt a multi-objective approach.

The standards will give full consideration to national economic development, environmental quality and regional development.

In addition, procedures provide for broad-based cooperation between multigovernmental units and private groups in establishing regional objectives, measuring existing resources, formulating alternative land and water resource plans, evaluating beneficial and adverse effects of each plan, and selection and implementation of the final program.

Recognizing the value of public participation, the Council said its new proposals encourage increased involvement of private individuals and groups in planning activities to efficiently and effectively develop meaningful plans for the management of the nation's land and water resources.

The principles and standards represent a marked departure from past consideration of primarily economic impact of land and water resource plans. They result from a two-year study and review of decision making practices undertaken by a Special Water Resources Council Task Force.

The Council explained there will be a regionalized approach to implemention of land and water resource programs to provide for expression of locally set priorities.

In considering economic, environmental, and regional impact of proposed plans, all positive and negative aspects will be weighed in either quantitative or qualitative terms. The new standards will require development of alternative plans for each project, the Council said, to provide maximum opportunity to compare advantages and disadvantages of each approach.

The discount rate to be used in planning would be set at 7% for the next five years.

A public hearing has been scheduled for March 20, 21, 1972, in Washington, D.C. to air public comments and recommendations on the proposals. The new standards are scheduled for implementation in late Spring of 1972.

EXPERTS ADVISE EPA ON SEWAGE PLANT CONSTRUCTION

The Environmental Protection Agency announced in early November that it had formed a permanent technical advisory group to provide expert engineering advice in EPA's multimillion-dollar grants program for construction of new, expanded, and updated municipal treatment facilities throughout the nation. Among the members are representatives of the American Society of Civil Engineers, the Water Pollution Control Federation, the Association of Metropolitan Sewerage Agencies, the Water and Wastewater Equipment Manufacturers Association, and the American Public Works Association.

POLLUTION PREVENTION GUIDE FOR COTTAGE OWNERS

A governmental and university research team in Toronto, Ontario has produced a fifteen page pamphlet directed at the needs of the conscientious lake shore dweller. Entitled "Sewage Disposal in the Cottage Country", the pamphlet is full of useful data on such devices as the outhouse, chemical toilets, incinerator toilets, flush toilets, septic tanks, tile fields and holding tanks. Order from: Pollution Probe, the University of Toronto, Toronto 181, Ontario (no cost specified).

DESALTING PLANT FOR ORANGE COUNTY, CALIFORNIA

The Department of the Interior announced in early November that construction has begun on a desalting plant that will produce 3 million gallons of fresh water a day for Orange County, California. Work on the facility had been delayed pending clearance of an environmental impact statement submitted to the Council on Environmental Quality by the Office of Saline Water. A 30-day waiting period is required for such statements under the National Environmental Policy Act of 1969. The initial contract of $98,830 was to the A.C. Paving Co. of Los Angeles, California, for preparing the plant site in Fountain Valley near Santa Ana.

U.S. IS ACCELERATING DESALTING PROGRAMS

James R. Smith, Interior's Assistant Secretary for Water and Power Resources, told a joint desalting panel, in a recent speech in Japan, that the U.S. will accelerate its desalting programs with construction of prototype plants to improve our existing technology and guarantee the performance of very large distillation plants. He told the panel that we were considering a 30-50 mgd seawater conversion prototype plant in California, were studying the possibility of an 8-mgd distillation plant in Texas, and were sponsoring work that should eventually provide reverse osmosis membranes that desalt seawater as well as brackish water. He also noted that development of new sources of fresh water to meet growing demands is a problem faced by many nations of the world and said that cooperation in these matters could hasten the day when the solution to these problems would provide the fresh water needed.

FARM CLEANUP IS HINDERED BY EPA BIAS FOR SEWAGE

The General Accounting Office suggests that an attack on agricultural water pollution is being held back by the EPA's emphasis on secondary sewage treatment plants.

A brief report on the status of farm-related pollution research was included in a GAO report that criticizes EPA for insisting on secondary treatment of sewage discharged into the Missouri River.

GAO auditors said EPA regional officials had told them that a comprehensive study of agricultural water pollution was needed in the Missouri Basin but that this should not be allowed to delay programs to control municipal wastes. They complained of a shortage of funds and manpower that they said had restricted such research work in the area.

The GAO summary further stated that examiners were told by EPA regional officials in October 1969 that little effort had been devoted to agricultural pollution "because they considered these problems to be primarily the responsibility of State pollution control authorities."

GAO examiners visited the Agricultural Research Service office in Lincoln, Nebraska to look into projects on feedlot pollution under way in cooperation with the University of Nebraska's Agricultural Engineering Department. The report said that no definite conclusions had been reached by the researchers, but the chief of the research team said tests of the activated-sludge method of secondary treatment had resulted in less than 50% removal of oxygen-demanding materials and that the method might not be practical.

SOURCES SOUGHT

Sources are being sought to develop well construction specs, suitable for distribution to consulting engineers, water well contractors, municipalities, industries, farmers and individual

home owners to complement existing state and local regulations, educate the Nation's population, improve well construction techniques and encourage protection of ground water resources. This would require assembling four regional panels of experts competent in the field of water well design and construction to review existing national, state and local construction standards and prepare a comprehensive set of general specs., for water well construction. Corporate brochures and extensive resumes of personnel are not acceptable. Acknowledgment of receipt of evaluation information will not be given. Only those sources deemed most qualified for the specific requirement under consideration will be invited to submit proposals when and if requests for proposals are initiated. An original and one copy of each response should be mailed to: Washington Contract Operations (CM 2) Attn: G. Phillips, Environmental Protection Agency, Contracts Management Div., Arlington Contract Operations, Washington, D.C. 20460.

RESEARCH REVIEW

Project Title: Concurrent Growth of Bacteria and Algae in a Closed Vessel

Principal Investigator: Dr. Peter J. Reilly

Dates: July, 1970 to June, 1973

One of the most challenging water quality problems facing man relates to the over-enrichment of natural waters by nitrates and phosphates. Various aspects of eutrophication are under study. An important consideration which has largely been neglected, however, is that of the interactions between various microbial species in eutrophic waters. This study is designed to evaluate the concurrent growth of bacterial and algal species. Effective control of eutrophication will be possible only when we have a complete understanding of the physical and biological systems composing the environment in which algae are produced. This research should provide a better understanding of these biological systems and hopefully lead towards measures which may be effectively used to control this significant water quality problem. The research proposed is of regional and national significance.

NEW PUBLICATIONS RECEIVED BY INSTITUTE - JANUARY

1. "Water Resources Research in Nebraska - Volume II," Prepared by Warren Viessman, Jr., Water Resources Research Institute, University of Nebraska, December 1971.

2. "Hydrology, Geology and Erosion by Leachin in Skillman Basin on the Western Highland Rim, Lawrence County, Tennessee," R. G. Stearns, J. M. Wilson, Department of Conservation and Division of Water Resources, 1971.

3. "Thermal Conductivity of Water at High Pressures," A. W. Lawson, R. Lowell, A. L. Jain, University of Chicago, reprinted from the JOURNAL OF CHEMICAL PHYSICS, March 1959.

4. "Research Reports supported by the Office of Water Resources Research Under the Water Resources Research Act of 1964," July - September 1971, U.S. Department of the Interior.

5. ""Phosphorus Removal and Disposal From Municipal Wastewater," University of Texas

Medical Branch, for the Environmental Protection Agency, Water Quality Office, February 1971.

6. "Stream Faunal Recovery After Manganese Strip Mine Reclamation," Virginia Polytechnic Institute and State University, for the Water Quality Office, Environmental Protection Agency, June 1971.

7. "Control of Pollution From Outboard Engine Exhaust: A Reconnaissance Study," Rensselaer Polytechnic Institute, for the Environmental Protection Agency, Water Quality Office, September 1971.

8. "DDT in Water - A Bibliography," U. S. Department of the Interior, October 1971.

9. "The Effectiveness of A Contact Filter for the Removal of Iron From Ground Water," University of Alaska, January 1971.

10. "The Economics of Water-Based Outdoor Recreation: A Survey and Critique of Recent Developments," Institute for Water Resources, Department of the Army, Corps of Engineers, March 1971.

11. "Storm Water Problems and Control in Sanitary Sewers, Oakland and Berkeley, California," for the Environmental Protection Agency, Water Quality Office, March 1971.

12. "Advanced Waste Water Treatment as Practiced at South Tahoe," for the Environmental Protection Agency, Water Quality Office, August 1971.

13. "Chromatographic Concentration of Pesticides from A Large Mass of Water," Takeru Ito, East Carolina University, University of North Carolina, North Carolina State University, August 1971.

14. "Water Quality Criteria Data Book - Volume I -- Organic Chemical Pollution of Freshwater," for the Water Quality Office, Environmental Protection Agency, December 1970.

15. "Floating Oil Recovery Device," for the Environmental Protection Agency, Water Quality Office, February 1971.

16. "Shallow Seismic Refraction Mapping of Eocene Water Tables, Northern Mississippi," F. E. Followill, Mississippi State University, July 1971.

17. "Oceanography of the Nearshore Coastal Waters of the Pacific Northwest Relating to Possible Pollution - Volume II," Oregon State University, July 1971.

18. "Oceanography of the Nearshore Coastal Waters of the Pacific Northwest Relating to Possible Pollution - Volume I," Oregon State University, July 1971.

19. "Seventh Annual Report of the Oklahoma Water Resources Research Institute, July 1970 - June 1971, Part I," Oklahoma State University.

20. "Onondaga Lake Study," for the Environmental Protection Agency Water Quality Office, April 1971.

21. "Estuarine Modeling: An Assessment," for the Water Quality Office, Environmental Protection Agency, February 1971.

22. "Multi-Time Period, Facilities Location Problems: A Heuristic Algorithm with Applications to Waste Water Treatment Systems," H. S. Bhalla, R. F. Rikkers, University of Massachusett at Amherst, 1971.

23. "Seventh Annual Report - Program Activities for Fiscal Year 1971," University of Massachusetts.

24. "A Methodology for Determining Optimal Longitudinal Spacing of Effluent Discharges into A River," R. W. Deacon, R. J. Giglio, University of Massachusetts 1971.

25. "Phytoplankton Species and Populations in the Pamlico River

Estuary of North Carolina," J. E. Hobbie, North Carolina State University, University of North Carolina, September 1971.

26. "Catalog of Pesticide NMR Spectra," Environmental Protection Agency, April 1971.

27. "Groundwater Availability in Piatt County," E. W. Sanderson, Illinois State Water Survey, 1971.

28. "Design and Operation of An Information Center on Analytical Methodology," Battelle Memorial Institute, for the Environmental Protection Agency, June 1971.

29. "Responses of Some Estuarine Fishes to Increasing Thermal Gradients," J. J. Gift, J. R. Westman, Rutgers University, June 1971.

30. "Demonstration of Rotary Screening For Combined Sewer Overflows," for the Environmental Protection Agency, Water Quality Office, July 1971.

31. "Hydraulics of Long Vertical Conduits and Associated Cavitation," University of Minnesota, for the Environmental Protection Agency, June 1971.

32. "Water As A Potential Organizing Concept in Urban Regions," J. R. Sheaffer, G. W. Davis, H. Bonus, University of Chicago, September 1971.

33. "Contrasts in Energy Balances Between Individual Leaves and Vegetated Surfaces," K. R. Knoerr, Duke University, reprinted from International Symposium on FOREST HYDROLOGY, Proceedings of a National Science Foundation Advanced Science Seminar held at the Pennsylvania State University, August 29 - September 10, 1965.

34. "A General Model for the Energy Exchange and Microclimate of Plant Communities," C. E. Murphy, Jr., K. R. Knoerr, School of Forestry, Duke University, Proceedings, 1970 Summer Computer Simulation Conference June 10, 11, 12, Denver, Colorado.

35. "Partitioning of the Radiant Heat Load by Forest Stands," K. R. Knoerr, Duke University, reprinted from PROCEEDINGS, SOCIETY OF AMERICAN FORESTERS, Denver, Colorado, 1964.

36. "Preliminary Analysis of the Ecological Aspects of Deep Port Creation and Supership Operation," Institute for Water Resources, Department of the Army, Corps of Engineers, October 1971.

37. "Hydrogeology of a Playa Near Amarillo, Texas," Texas A&M University, September 1971.

38. "The Radiochromatographic Analysis of Fresh Water Resources," S. P. Cram, University of Florida, October 1971.

39. "Movement and Adsorption of Pesticides in Sterilized Soil Columns," R. S. Mansell, L. C. Hammond, University of Florida, August 1971.

40. "Uranium and Tritium as Natural Tracers in the Floridan Aquifer," J. K. Osmond, B. F. Buie, H. S. Rydell, M. I. Kaufman, and E. I. Wallick, Florida State University, University of Florida, August 1971.

41. "Long-Run Costs and Policy Implications of Adjusting To a Declining Water Supply in Eastern Washington," W. R. Butcher, J. W. Crosby, III, N. K. Whittlesey, D. L. Bassett, E. C. Weakley, A. C. Mueller, L. D. Kloster, Washington State University, October 1971.

42. "The Application of Value Theory to Water Resources Planning and Management," R. E. Deal, M. H. Halbert, Institute for the Study of Inquiring Systems, November 1971.

43. "Annual Report 1970-1971," University of Hawaii.

44. "Investigation of the Effects of Urbanization on Precipitation Type, Frequency, Areal and Temporal Distribution - Phase I,

M. D. Shulman, A. R. Greenway, Rutgers - The State University, October 1971.

45. "Projected Wastewater Treatment Costs in the Organic Chemical Industry," Cyrus Wm. Rice and Company, for the Environmental Protection Agency, July 1971.

46. "Concentrated Mine Drainage Disposal Into Sewage Treatment Systems," for the Environmental Protection Agency, September 1971.

47. "Feasibility Study Upper Meander Creek Mine Drainage Abatement Project," for the Environmental Protection Agency, September 1971.

48. "University of Nebraska Faculty With Competence in Water Resources," prepared by Warren Viessman, Jr., Water Resources Research Institute, University of Nebraska, January 1972.

NEWSLETTER ITEMS

Newsletter items and inquiries should be sent to: Dr. Warren Viessman, Jr., Director, N.W.R.R.I., 212 Agricultural Engineering Building, University of Nebraska - East Campus, Lincoln, Nebraska 68503.