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**American
Association
of
Professors
in
Sanitary
Engineering**

**APRIL 1971
VOLUME 6, NUMBER 3**

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WQO-EPA AND A.A.P.S.E. SPONSOR MEETING

On June 3 and 4, 1971, the Water Quality Office of the Environmental Protection Agency and the American Association of Professors in Sanitary Engineering will sponsor a two day meeting in Washington, D. C. to discuss research, development, demonstration and training activities, and their aims and directives.

During the past few years, directives from Congress and the needs of the nation have resulted in a change of approach toward federally supported activities. Many in the academic community have expressed a desire to more fully understand current philosophy as well as to become acquainted with on-going and future activities in the environmental engineering area.

This meeting has been arranged to provide a forum for discussion of the water quality activities of EPA by members of the academic community, to better understand EPA needs and desires, and to establish dialogue with members of EPA so that they may better understand the assistance that can be provided by the academic community. Specific programs and on-going projects of the Water Quality Office will be presented. Discussion of the programs and projects will be encouraged and time made available following the presentations for such discussion. An outline of the topics has been circulated.

All members of environmental engineering programs are welcome to attend. No financial support for attendance will be available from EPA or AAPSE. Because an estimation of the attendance is necessary, it is requested that individuals who plan to attend notify Dr. F. G. Pohland, School of Civil Engineering, Georgia Institute of Technology, Atlanta, Georgia 30332, by May 15, 1971. At least one representative from each program is encouraged to attend. The meeting will be held in the Crystal Mall area, 1900 block of Jefferson Davis Highway, Arlington, Virginia.

NEW FEDERAL DEPARTMENT OF NATURAL RESOURCES

A bill to implement the President's proposal to establish a new Department of Natural Resources has been introduced in the House as H.R. 6959 which was referred to the Committee on Government Operations. H.R. 6959, introduced by Mr. Chet Holifield (Calif.), Chairman of the Government Operations Committee, occupies 35 printed pages beginning with Title I, A Declaration of Purpose.

Title II would establish the Department and its organization of a Secretary, Deputy Secretary, two Under Secretaries, and these functions, each headed by an Administrator: Land and Water Resources, Water Resources Administration, Energy and Resources Administration, Oceanic, Atmospheric and Earth Sciences Administration, an Indian and Territorial Administration. In addition, the Department would include one Assistant Secretary and General Counsel. Title III would transfer to the Department functions of the Interior Department, functions of the Department of Commerce relating to the National Oceanic and Atmospheric Administration, functions of the Corps of Engineers relating to Civil Works, functions of the Agriculture Department relating to Forest Service and the Soil Conservation Service as well as some other special activities, functions of the Water Resources Council and certain functions of the Civilian Power Program of the Atomic Energy Commission. And from the Department of Transportation, also would come the activity related to pipeline safety.

Title IV relates to definitions and administrative provisions. Title V relates to Transitional and Conforming Provisions. Title VI relates to Savings Provisions. Title VII relates to Separability and Title VIII relates to Effective Dates and Interim Appointments. [Conservation Report]

A.A.P.S.E. BOARD MEETING

The next meeting of the AAPSE Board of Directors will be on Monday, May 3, 1971, prior to the Purdue Industrial Waste Conference. Arrangements have been made for a meeting room at the Campus Inn in Lafayette, Indiana. Because of the amount of business to be conducted, the meeting will start at 9:30 a.m.

All Committee chairmen are requested to submit a report of their present and future activities for discussion at the meeting. We would be pleased to have the chairmen present the reports personally. However, should you be unable to attend, will you please see that your Board contact member has a copy of the report so that he may present it.

All members of the Board should be sure that the committees they are responsible for will have a report, either by the chairman directly or by the Board contact.

A.A.P.S.E. MORNING SEMINAR AND EVENING MEETING TO BE HELD MAY 4

An AAPSE Seminar will be held in conjunction with the annual Purdue Industrial Waste Conference as usual. The seminar will be held from 8:00 a.m. until 9:15 a.m. on Tuesday, May 4. The subject of the seminar will be "Engineers and Scientists--Their Future in Environmental Quality Control." This will be a panel discussion.

The evening meeting will begin at 8:00 p.m. and will last until about 9:30 - 10:00 p.m. depending upon the quantity of the questions from the audience. Mr. Eugene T. Jensen, Assistant Commissioner for Operations, WQO-EPA, will speak on "Current Trends in Water Quality Management."

All AAPSE members are urged to attend these two events.

A NOTE FROM THE EDITOR

In addition to the membership of the American Association of Professors in Sanitary Engineering, the *AAPSE Newsletter* is sent to other key persons in education, government, consulting, and industry who are actively concerned with the environment and environmental engineering education. Non-members who qualify by virtue of their involvement in environmental matters receive the *AAPSE Newsletter* on a complimentary basis as a service to the profession of AAPSE.

If you have items which are of interest to any facet of the environmental community, please send them to the Editor at the address given inside the cover of this issue. Contributions such as activities of agencies and others that support environmental education and research, legislative developments, new or changed educational programs, pertinent conferences and calls for papers, positions available, personal items, etc., are solicited for consideration for inclusion in future issues. Also, please send any recommendations or requests for additions to the *AAPSE Newsletter* mailing list, as well as address changes, to the Editor.

RUCKELSHAUS CRITICIZES LAYOFFS DUE TO POLLUTION RULES

Industries that threaten to lay off workers when forced to install anti-pollution devices are "not acting responsibly," says William D. Ruckelshaus, Environmental Protection Administrator. "This is the crudest approach I know of to the environmental crisis that faces us all," he told a Boston news conference.

Some marginal industries in economically depressed areas have legitimate financial problems in meeting pollution abatement programs, Ruckelshaus acknowledged. To help them, he said EPA is trying to arrange a low-interest loan program with the Small Business Administration. Very few industries are threatening to fire workers when ordered to abate pollution, he said, commenting: "Responsible industries just don't take that approach." [Environmental Health Newsletter]

THERMAL POLLUTION RULES ON LAKE MICHIGAN ADOPTED

Indiana, Michigan and Wisconsin have adopted Federal recommendations preventing discharge of heated wastes into Lake Michigan, but Illinois rejected the proposal. The Environmental Protection Agency proposed that power plants on the lake or under construction should be required to build cooling towers or alternate closed-cycle cooling systems to prevent them from warming surface waters by more than three degrees within 1,000 feet of their discharge pipes. David P. Currie, chairman of the Illinois Pollution Control Board, voted against the proposal. He said the real issue is stop the proliferation of power plants, which now number 26, on the lake. Nine are operating or are under construction.

Commonwealth Edison Co. has stated it would cost nearly \$117 million to install wet cooling towers at its nuclear plant under construction at Zion, Ill., and \$19 million a year for operating expenses. Currie's position put him at odds with Illinois Attorney General William Scott, who wrote EPA Administrator William D. Ruckelshaus that he fully supports the Federal standards and implied that he believes Commonwealth Edison should be forced to build cooling towers. [Environmental Health Newsletter]

ALL CANS ARE RETURNABLE

The "Can People" — American Can Co., Continental Can Co., National Can Corp. and the Heekin Can Co. — are setting up recycling centers all over the country that will recycle *any* kind of metal can. Only a few are currently in operation but the can people say they hope to have nearly 200 in operation by the end of the year. Most will be set up at can company factories. A spokesman for one company explained that the can people are working out plans for consumers in communities without factories to get their cans into a recycling program. [Conservation News]

"Until the President appoints an advisory pollution council composed of independent citizens with nothing at stake but their lungs and the balance of nature, the goats will continue to guard the cabbage patch." [McCarthy, The Washington Post]

McGAUHEY TO RECEIVE HONORARY DOCTORATE

At the June commencement this year, Utah State University will present an Honary Doctorate to Professor P. H. "Mack" McGauhey for his outstanding contribution in the field of sanitary engineering and water resources.

Professor P. H. McGauhey is Director Emeritus of the Sanitary Engineering Research Laboratory of the University of California. The Laboratory was established in 1950 for the purpose of conducting research in environmental management problems, with particular reference to solid wastes. It soon became the research arm of the Sanitary Engineering program of the Department of Civil Engineering (College of Engineering) and of the Environmental Health Sciences group of the School of Public Health. It has from the beginning been interested in all aspects of the air, water, and land environments.

Professor McGauhey was educated in the hydraulic and sanitary engineering specialties of Civil Engineering at Oregon State University, Virginia Polytechnic Institute, and the University of Wisconsin. He began his teaching career at Virginia Polytechnic Institute in 1927, where he later served as Head of the Department of Civil Engineering. In 1951 he joined the staff of the University of California at Berkeley, becoming Director of the SERL and Chairman of the Division of Hydraulic and Sanitary Engineering in 1956. Subsequently, he served as Chairman of the Department of Civil Engineering at the University of California. He is a Diplomate of the American Academy of Environmental Engineers, a certified professional engineer in California and Virginia, and an active member of many professional societies. His research in water reclamation, solid wastes, **detergents**, and other aspects of environmental management have led to more than 100 publications, including a textbook on Engineering Management of Water Quality, as well as numerous awards. He took early retirement from the University in July, 1969, in order to pursue a number of interests in the field of environmental control.

OYSTERS FOR LUNCH?

Excerpt from Aminco Laboratory News: ". . . nuclear wastes once dumped into one of our southern rivers in amounts . . . considered negligible, until oysters growing (there) . . . were found to glow in the dark."

ONE PLANT'S WASTEWATER

Industry should take a fresh look at polluted water for its possible utility and value, according to an article reprint made available by Nalco Chemical Company. Waste streams from one operation or process can often do another job in the plant efficiently. In some cases, independent companies can work out an arrangement whereby all or part of the outfall from one is diverted to the other. The benefits of such schemes are reductions in overall water-treatment costs and a lessening of stream pollution loadings, according to the article.

Municipal sewage plant effluent has been used to good advantage for cooling and other purposes in industrial plants. The reprint cites several successful cases. Some interesting characteristics of sewage plant effluents--such as sequestration of calcium and resistance to softening--are described in the article.

Copies of Reprint 187 are available from Nalco Chemical Company, 180 North Michigan Avenue, Chicago, Illinois 60601. [Clean Air and Water News]

REGIONAL ENVIRONMENTAL TRAINING AND RESEARCH ORGANIZATION ORGANIZED

Project RETRO, organized by Congressman Louis Frey, Jr. (R-Florida), is currently coming into being and carries an important assist to displaced aerospace personnel in its retraining program. RETRO stands for Regional Environmental Training and Research Organization. It represents a joint effort by Florida Technological University, Orlando, Florida Institute of Technology, Melbourne, and Brevard Junior College, Cocoa, to present a structured program for retraining about 3,300 aerospace personnel for work in environmental quality control. Variations will extend from the vocational and two year AS degree levels to the MS. The latter work will be offered at the two senior institutions and will include a Master of Science in Environmental Systems Management. This program represents a mix of environmental engineering and management systems courses to fit engineers for a variety of positions in the environmental quality control field. RETRO programs are receiving initial funding of about \$150,000. The entire effort is projected to cost about \$15 million.

TEXTS AVAILABLE

AEROBIC BIOLOGICAL TREATMENT OF WASTE WATERS-PRINCIPLES AND PRACTICE by A. W. Busch is available at \$16.00 per copy, postpaid. A reduced price is available for students. Send for copies from the following address: Oligodynamics Press, P. O. Box 35774, Houston, Texas 77035.

ADVANCED WASTEWATER TREATMENT by Russell L. Culp and Gordon L. Culp, published by Van Nostrand-Reinhold.

WATER RESOURCES SYSTEMS ENGINEERING by Warren A. Hall, University of California, Riverside and John A. Dracup, University of California, Los Angeles is available through McGraw-Hill for \$13.50.

ECONOMICS OF WATER RESOURCES PLANNING by L. Douglas James, Georgia Institute of Technology and Robert R. Lee, Idaho Water Resource Board is available through McGraw-Hill for \$16.50.

RHINE GOLD

A news item from Hamburg, West Germany, passed on to us by Peter J. Liddell, Chairman, River Board Authorities, Great Britain, conveys what may be among the most significant news to have come out of the European Conservation Year! According to the item, Dr. Jurgen Bernhold, 36, head of a Hamburg shipping firm, has been sentenced to a year in jail and a £11,000 (\$26,400) fine for polluting the Rhine. Eleven other members of his firm were given sentences ranging from seven to twelve months in prison and fines of up to £750 (\$1,800).

The pollution — the case is unique in West German legal history — happened in October, 1969, when millions of fish were killed as detergents were pumped into the Rhine. The prosecution maintained that Dr. Bernhold knew his employees were pumping 20,000 tons of poisonous liquids into the Rhine. The prosecution claimed: "Bernhold had a financial interest in keeping overheads as low as possible. He knew he could only do this if his barges pumped the detergent straight into the Rhine instead of transporting it to Rotterdam as regulations stipulated and as he was contracted to do."

The defense claimed that what the Hamburg shipping firm had done was, literally, just a drop in the ocean. Other firms operating on the Rhine were said to be polluting the river just as much every day — and getting away with it. [SFI Bulletin]

AAPSE AWARD

"The Award for Excellence in Sanitary Engineering Education" of the American Association of Professors in Sanitary Engineering and Engineering-Science, Inc. this year has been granted to Dr. Richard E. Speece, Professor of Environmental Health Engineering at the University of Texas at Austin. Dr. Speece will receive the \$1000 award at the Association's meeting to be held at Purdue University in May.

The award, given biennially, is made to an engineering educator under the age of 37 who has made an outstanding contribution in the field of water research and development and/or demonstrated exceptional professional work and leadership. The recipient was selected by the board from nominations made by members of the sanitary engineering and science teaching profession.

Dr. Speece, who was the 1968 recipient of the Harrison Prescott Eddy Medal for Noteworthy Research, has previously taught at the University of Illinois and at New Mexico State University. He is the author of 23 professional papers, and specializes in biological treatment of polluted water, treatment and recycle of used fish hatchery waters, and oxygen transfer processes related to supplemental reaeration of streams, impoundments and wastewater treatment systems.



"OUR ANTI-POLLUTION OPERATION IS VERY COSTLY, GENTLEMEN!... SO FAR, WE'VE SPENT \$10,000 REDUCING OUR POLLUTION AND \$200,000 PUBLICIZING OUR EFFORTS!"

MERCURY SHIPMENT SPOILED

"The Union Chemical Co. has announced that a shipment of 5000 gallons of ultrapure mercury, destined for its giant petrochemical facility in Stumfton, Ind., was spoiled when a worker, during a routine inspection, inadvertently dropped a tuna fish sandwich into the tank car in which it was being transported. Company spokesmen said the mercury was found to contain 0.5 p.p.m. tuna and is considered totally unfit for industrial use." [National Lampoon]

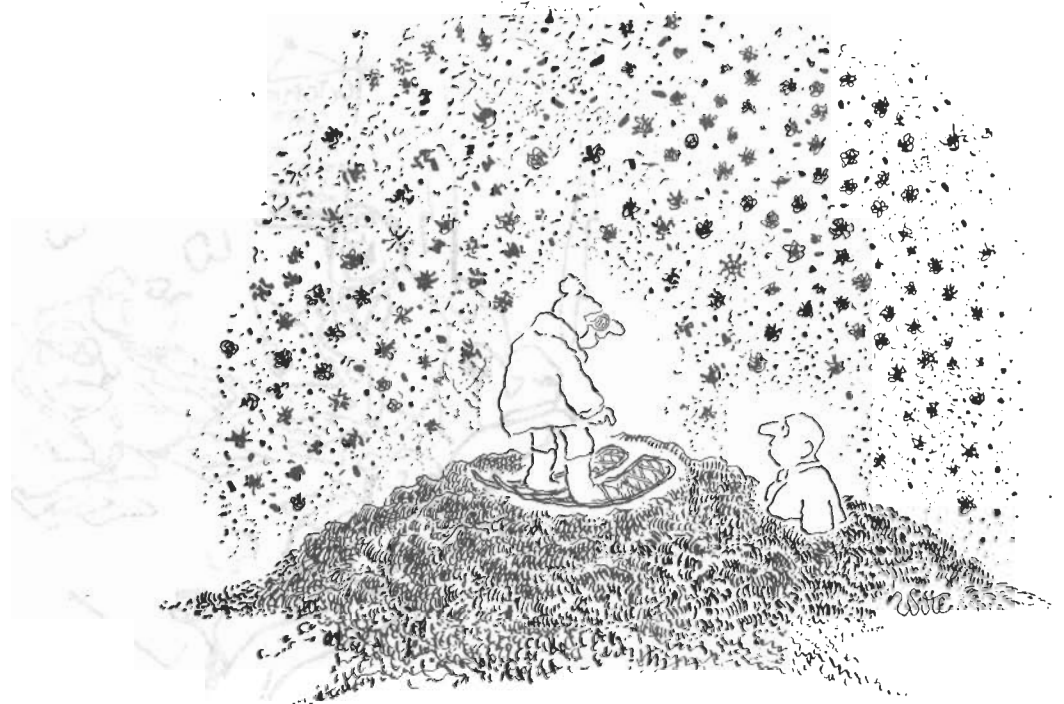
STAYING OUT OF TROUBLE

The debate over the cutting of Santee-Cooper timber, coupled with recurring controversies over rural development and urban redevelopment throughout the state (and nation) should indicate the need for greater involvement of ecologists in governmental decision-making.

It may well be that ecologists themselves are in somewhat short supply as their services and knowledge are sought by a public increasingly concerned over environmental protection. Nevertheless, there are at hand--and more often than not already in government service--many experts in soil and water conservation, forest management, pollution control, and land use.

Up to this point, however, they have been called into play only after some crisis or near-crisis has developed with respect to a given situation. Our recommendation is that such ecologists should be made a part of planning boards, zoning agencies, development commissions and the like so that they might provide guidance--or at least informed and concerned viewpoints--before decisions are made.

We can think of no better application of the "ounce of prevention" theory than in the business of planning for mankind's future. [Editorial, The State, Columbia, SC]



"Soot shoes."

EASY WORDS SAVED THE PIPES

A New York City plumber wrote to the Bureau of Standards in Washington saying he had found hydrochloric acid good for cleaning out clogged drains. The bureau wrote him: "The efficacy of hydrochloric acid is indisputable, but the corrosive residue is incompatible with metallic permanence."

The plumber replied he was glad the bureau agreed. The bureau tried again, writing: "We cannot assume responsibility for the production of toxic and noxious residue with hydrochloric acid and suggest you use an alternative procedure."

The plumber again said he was pleased the bureau agreed with him. Finally the bureau wrote to the plumber: "Don't use hydrochloric acid. It eats hell out of pipes."

MEETING FOR COMMITTEE ON MANUAL

The committee on the preparation of the AAPSE Laboratory Manual will meet during the Purdue Conference to evaluate the first draft of the manual and to initiate revisions. The committee will have a brief organizational meeting on Tuesday evening following the AAPSE general meeting. This will be followed by a working meeting on Wednesday evening.

BANKER'S POLLUTION CODE

Reports filtering in through the smog in recent months indicate the powerful banking industry is getting environmental religion. There could scarcely be a more welcome convert to the cause of environmental quality. First evidence came when the Chemical Bank of New York ran a full-page newspaper ad announcing its plan to make low-cost loans to apartment house owners who need money to install pollution control equipment required by new New York city laws. The ad was a real attention grabber, with a headline reading, "The road to emphysema is paved with good intentions" over a picture of a flower-laden hearse.

Then a new environmental investment — the earth bond — began to appear. The idea apparently originated with the First Pennsylvania Bank of Philadelphia and was adapted to local conditions in Northern Virginia, and perhaps at other banks as well. Earth bonds are sold in several denominations for varying lengths of time. The bank then doubles the amount brought in from bond sales to create a fund available for anti-pollution loans. The Arlington Trust in Virginia says it is particularly pleased with its two-year, \$300 bond. The bank wanted to have a bond small enough that most people could buy and the \$300 bond has been a success in meeting that goal.

Most interesting development on the high finance scene is the Bankers Pollution Code created by Maine banker Halsey Smith and promoted by the Maine Natural Resources Council. The code has been signed by about half of the banks of Maine and has been adopted by the bankers' associations of Vermont and New Jersey. The code is very simple. It acknowledges the virtues of economic well being and the necessity of "balancing economic development with the maintenance of the highest quality physical environment and the highest order of human livability." It pledges that no significant air, land or water pollution will result from activities financed with bank money. The bank also agrees to seek alternative solutions if a project is found to result in pollution and to urge customers who are presently polluters to abate their polluting activities. [Conservation News]

ELEMENTS

By Henry Gibson

I used to like fresh air
When it was there.
And water--I enjoyed it
Til we destroyed it.
Each day the land's diminished.
I think I'm finished.

THE TENTH ANNUAL ENVIRONMENTAL AND WATER RESOURCES ENGINEERING CONFERENCE

The Tenth Annual Environmental and Water Resources Engineering Conference, sponsored by Vanderbilt University, the Tennessee Department of Public Health, and the Tennessee Stream Pollution Control Division, will be held June 3 and 4, 1971. For further information, contact Dr. Edward L. Thackston, Associate Professor of Environmental and Water Resources Engineering, Vanderbilt University, Box 133, Station B, Nashville, Tennessee 37203.

SEMINAR ON CONTROL OF BIOLOGICAL PROBLEMS IN WATER SUPPLIES

Dr. Edgar Allen Jeffrey, Sanitary Engineer Director, USPHS, who is responsible for the development and administration of the training program for the Bureau of Water Hygiene, together with the AWWA staff, organized this worthwhile seminar on nuisance organisms.

This one-day seminar will have a limited attendance and registration will be on a first come, first served basis. The fee is \$35.00 and covers tuition, instruction materials, refreshments, and luncheon. If you plan to attend, send a check payable to AWWA along with the title of the seminar to: Director of Education, AWWA, 2 Park Avenue, New York, New York 10016.

VANDERBILT SEMINAR

A seminar on "Process Design in Water Quality Engineering - New concepts and Developments," will be held June 7-11, 1971, at Vanderbilt University. The registration fee is \$200. For further information, contact Professor W. Wesley Eckenfelder, Jr., Box 6222, Station B, Vanderbilt University, Nashville, Tennessee 37203.

"ADVANCED WASTE TREATMENT PROCESSES" COURSE

"Theory and Design of Advanced Waste Treatment Processes" will be the subject of an intensive two-day course September 30-October 1, 1971, at the University of California Extension Center, 55 Laguna St., San Francisco. Sponsorship is by Continuing Education in Engineering and the College of Engineering, UC-Berkeley, and David Jenkins, associate professor of sanitary engineering and chief chemist in the Sanitary Engineering Research Laboratory at UC is faculty member in charge of the course. The enrollment fee is \$150. Further details are available from: Continuing Education in Engineering, University Extension, University of California, 2223 Fulton St., Berkeley, Calif. 94720; or call (415) 642-4151.

PROCEEDINGS AVAILABLE

Proceedings of the 9th Annual Environmental and Water Resources Engineering Conference are available at a cost of \$4.00 and may be obtained by writing Edward L. Thackston, Box 133, Station B, Vanderbilt University, Nashville, Tennessee 37203.

NEW MEMBERS OF ES&T ADVISORY BOARD NAMED

Editors of all ACS publications each year appoint advisory board members to replace those whose terms on the respective boards have expired. Board members serve for three-year terms without compensation. Official ACS regulations provide that such appointees be selected with proper regard to the various interests and fields covered by the publications. All appointments are reported to the ACS Board of Directors. New members of the advisory board for Environmental Science and Technology are: Dr. Russell F. Christman, University of Washington; Dr. George M. Hidy, North American Rockwell Corporation; Dr. Perry L. McCarty, Stanford University.

O'MELIA RECEIVES BEST LECTURER AWARD

Charlie O'Melia received an award as the best lecturer in the University of North Carolina Department of Environmental Sciences and Engineering. The award was established by the students for the best presentation of subject matter in an interesting manner, instilling interest in the students, and establishing student-teacher dialogue. [Aero and Aquafacs]

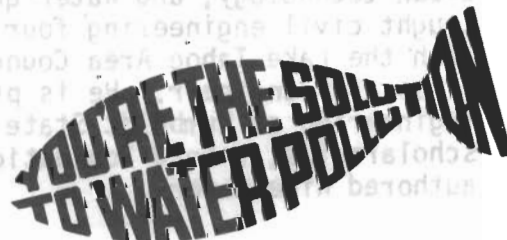
BUTLER TO SERVE AS VISITING LECTURER

James N. Butler, head of the Physical Chemistry Department at Tyco Laboratories, Inc., Waltham, Massachusetts, and author of "Solubility and pH Calculations", will serve as Visiting Lecturer in Applied Chemistry at Harvard University during the academic year 1970-71. He will be teaching the course in aquatic chemistry formerly taught by Prof. Werner Stumm as well as a course in applied electrochemistry with emphasis on environmental problems. [Aero and Aquafacs]

KAPPE APPOINTED EXECUTIVE DIRECTOR

EEIB announces the election of Stanley E. Kappe as Executive Director of the Board and of the Academy. Stan Kappe is a Diplomat of the Academy, a Penn State Sanitary Engineer graduate, and a Registered Professional Engineer. His major assignments include Pennsylvania State Health Department; Corps of Engineers in charge of a pollution abatement survey of the Delaware River and its main tributaries; Eastern Manager, Chicago Pump Company; Consultant, Public Health Service and Headquarters, U. S. Air Force; and currently President, Kappe Associates, Inc. He is a member of many professional societies, lecturer, author of many papers, patentee, Water Utility Man-of-the-Year Awardee (CS AWWA) and for a number of years Assistant and Secretary-Treasurer, Chesapeake Section, AWWA, and a member of the Executive Committee of the Maryland, Delaware, and D. C. Water and Waste Operators Association.

Administrative matters, concerning fees, applications, examinations, and the like, will continue to be addressed to the Executive Secretary, Frank A Butrico, P. O. Box 9728, Washington, D. C. 20016.



STUDENTS STUDY PACKAGING WASTES

A group of students at the University of Illinois has obtained a \$21,280 National Science Foundation grant for research on the effects of food and beverage packaging on household wastes.

This is the first grant to the University of Illinois under the new NSF student-originated research program. Students developed the project proposal and requested funds through the office of the chancellor.

The project will be carried out this summer by 14 students from eight different areas of study. They will canvass housewives for opinions and desires about packaging and use the university's computer facilities to analyze answers.

Faculty advisors are Prof. John T. Pfeffer of civil engineering and Prof. William R. Boggess, forestry department head. The College of Engineering has pledged support and offered facilities.

Objectives are to develop information to evaluate packaging and through interdisciplinary research to develop methods for handling solid-waste environmental problems.

The information is planned for use by communities considering legislation to reduce the quantity of solid wastes generated, and to ease problems of solid landfill space to dispose of the waste, and as a major contribution towards wiser use of national resources.

Using the American household as a base, students will investigate feasibility of alternatives to present packaging. Recycling materials--as is being done some places with glass, metal, and paper--will be among waste-reducing methods studied.

The project proposal grew out of an interdisciplinary honors course in which students are studying problems of technology and the environment.

TRANSFER OF WATER POLLUTION RESEARCH LABORATORY

AAPSE members in correspondence with the British Water Pollution Research Laboratory in Stevenage may be puzzled by recent changes in their letterhead. As a result of changes not unlike those in the U. S., the Laboratory was transferred to The Department of the Environment on January 1, 1971. During the last few months of 1970 the Laboratory was temporarily in the Department of Trade and Industry from which it had been transferred from its former home in the Ministry of Technology. AAPSE's on-the-spot reporter, R. I. Dick, indicates that the location, personnel, and mission of the Laboratory, which is under the direction of Dr. A. L. Downing, were not altered by the change in administrative structure.

POSITION SOUGHT

Dr. Adinarayana Aleti, 4132 Soule Street, Eureka, California 95501 is seeking a position in research and teaching. He has the B. S. degree from Kharagpur, India (1959), the M. S. degree in Sanitary Engineering, University of California at Berkeley (1965), and the Ph.D. degree in Environmental Health Sciences at Berkeley (1969). His major interests include applied photosynthesis, urban technology, and water quality systems design and management. Dr. Aleti taught civil engineering four years in India, has had three years of experience with the Lake Tahoe Area Council, and has had eighteen months experience as a research engineer. He is presently a lecturer in the Department of Civil Engineering at Humboldt State College. He is the recipient of a number of scholarships, a Ford Foundation Research Fellowship, and has authored or co-authored nine papers.

POSITION SOUGHT IN WATER RESOURCES SCIENCE

Mr. Hans S. Posselt expects to complete the requirements for his Ph.D. in Water Resources Science at the U.o.M. this summer. His major is water chemistry, and his minor, sanitary engineering. He holds a M.S. in chemistry from Northern Illinois University and a B.S. in chemistry from Engineering College, Hamburg (Germany).

Among other positions held in the field of chemical research, he previously was employed for over six years by Carus Chemical Co., Inc. as Application Research Supervisor. He has published several articles dealing with water quality and air pollution. His experience and interests lie in the areas of kinetics, chemical equilibria, oxidation, disinfection, coagulation, adsorption, and industrial waste treatment, particularly heavy metal chemistry.

Contact Mr. H. S. Posselt for further information at: 1416 Marlborough, Ann Arbor, Mich. 48104 (Tel. 313-971-7996).

ASSISTANT PROFESSOR SOUGHT

The University of New Mexico is seeking someone to fill the position of Assistant Professor in the Department of Civil Engineering in the general area of Water Resources, Water Quality, and Systems Analysis or some suitable combination in this area. The duties would include teaching at the undergraduate and graduate levels and developing research in the water area. A Ph.D. is required and some teaching or industrial experience is desirable.

For further information contact C. L. Hulsbos, Chairman, Department of Civil Engineering, The University of New Mexico, Albuquerque, New Mexico 87106. Telephone: 505-277-2722.

TEACHING AND/OR RESEARCH POSITION SOUGHT

Mr. Takashi Asano is seeking a teaching and/or research position in Environmental Engineering research and development. A graduate of the University of Hokkaido, Mr. Asano received his M.S.E. from the University of California at Berkeley in 1965 and his Ph.D. from the University of Michigan in 1970. Among his several publications are "The Development of a Steady-State Culturing System for Predicting the Relative Productivity of Natural Waters," (Doctoral Dissertation) and "Investigations of Drainage Disposal to San Francisco Bay," hydraulic model studies and prototype studies undertaken for the State of California Water Resources Department to determine waste dispersive characteristics of the Bay.

Mr. Asano has held positions with Maruzen Gas Development Co. Ltd. of Osaka, Japan; Sanitary Engineering Research Laboratory of the University of California; Engineering-Science, Inc. Research and Development Laboratory; State of California Department of Water Resources; and Brown and Caldwell, Consulting Engineers.

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"All vainglory to the contrary, man cannot conquer nature. We are a part of nature, bigger and more noisy and destructive than a mouse, but subject to the same inexorable laws. When the good water is gone, the good soil covered or wasted, the good air tainted, we shall surely perish. This has happened in many times and places."

"We now send food to peoples whose ancestors failed to realize that without soil and trees on the hillside the town in the valley dies, without recognizing that we ourselves are busily engaged in emulating the ancient error." [Dr. M. Graham Netting, Director, Carnegie Museum]

EPA OFFICES BEING REALIGNED

William D. Ruckelshaus, Administrator of the Environmental Protection Agency, has announced the reorganization of the agency's regional offices which will go into effect on July 1, 1971. The purpose of the reorganization is to bring the agency's offices into conformity with the uniform regional boundaries specified by President Nixon for five major domestic federal agencies. Scheduled for completion by September 30, 1971, the shifting of personnel and activities is not expected to disrupt the agency's normal flow of business because field components will continue to report through existing channels of command during the interim period.

The following list shows the headquarters cities of each EPA region and identify the interim regional coordinators:

List of States and Territories by Region

- Region I Headquarters, Boston, Massachusetts
Connecticut, Maine, Massachusetts, New Hampshire,
Rhode Island, Vermont
- Region II Headquarters, New York, New York
New Jersey, New York, Puerto Rico, Virgin Islands
- Region III Headquarters, Philadelphia, Pa.
Delaware, Maryland, Pennsylvania, Virginia, West
Virginia, District of Columbia
- Region IV Headquarters, Atlanta, Georgia
Alabama, Florida, Georgia, Kentucky, Mississippi,
North Carolina, South Carolina, Tennessee
- Region V Headquarters, Chicago, Illinois
Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin
- Region VI Headquarters, Dallas, Texas
Arkansas, Louisiana, New Mexico, Texas, Oklahoma
- Region VII Headquarters, Kansas City, Missouri
Iowa, Kansas, Missouri, Nebraska
- Region VIII Headquarters, Denver, Colorado
Colorado, Montana, North Dakota, South Dakota, Utah,
Wyoming
- Region IX Headquarters, San Francisco, California
Arizona, California, Hawaii, Nevada, American
Samoa, Guam, Trust Territories of Pacific Islands,
Wake Island
- Region X Headquarters, Seattle, Washington
Alaska, Idaho, Oregon, Washington [Clean Air and Water News]

THERMAL POLLUTION FISH KILL

A 720-megawatt generation unit at Pennsylvania Power and Light's steam-electric station (fossil-fuel) at Brunner's Island, in the Susquehanna River developed a water leak on February 4, 1971. Company officials immediately shut down the unit to avoid risking severe damage to or complete destruction of vulnerable generating equipment. The shutdown resulted in a sudden drop of water temperature, which caused an estimated fish kill of 15,388 fish of value. The generator was repaired and put back in operation on February 6 and no further trouble has been experienced. The fish kill involved approximately 2½ miles of York County shoreline.

Being a steam-electric generating station (in this case, fossil-fuel), there is a hot-water discharge. It is normal for fish to congregate in the 80°F. warm water below the dam during the cold winter months. A sudden 44°F. temperature drop – to 36°F. – caused the kill. It might not have been so severe, perhaps not even have happened, if it had been possible for PP&L to reduce water temperatures gradually below their plant. This was not possible in this instance, owing to the emergency nature of the problem.

A study sponsored by the Sport Fishing Institute at Vanderbilt University has shown that rapid rates of change in water temperature can be deadly to fish life. For example, an increase of 27°F. in three hours resulted in 100 per cent mortality among bluegills – readily possible in terms of power-plant operations at temperatures below the legal maximum. Similarly, the rate of temperature decrease that will kill all bluegills living in water of 80°F. was shown to be far less than that obviously experienced on February 4 by the fish living in the thermal discharge of PP&L's Brunner's Island station.

This was clearly a thermal-pollution-caused fish kill because the fish accumulated below the plant in response to the thermal discharge that provided a warmwater haven during the cold winter months. Thus, having been attracted there and acclimated to prevailing temperatures, they were the victims of a man-made thermal trap. The fish simply died of exposure to the cold when the artificial heat that enticed them to the area was suddenly cut off. [SFI Bulletin]

