



Newsletter

Published Quarterly by the Association of Environmental Engineering Professors.

VOL. 9, NO. 2

APRIL, 1974

FROM THE PRESIDENT'S DESK

The strength of AEEP is directly attributable to the large percentage of the membership who are actively engaged in committee activities. Your enthusiastic service and your many accomplishments are greatly appreciated. The year ahead is expected to bring even greater rewards. After much thought and consideration an attempt has been made to involve the total membership in specific committee functions. Proposed assignments are based on anticipated interest in particular areas. Your willingness to serve should be indicated to the proper committee chairman. If changes are desirable, please bring these to my attention.

E. Joe Middlebrooks

AEEP to Conduct Session on National Policy Issues

The Specialty Conference sponsored by the Environmental Engineering Division of ASCE will be held at Pennsylvania State University, July 9-11, 1974. Through the efforts of Ray Regan, General Program Chairman for the Conference, and Marty Wanielista a session on National Policy Issues — Water Pollution Control has been scheduled. This session is sponsored by AEEP and will provide a forum for presentation and discussion of policy papers which are being prepared by members of the Board of Directors. The papers scheduled for presentation are:

1. Water Quality Goals and Objectives — John T. O'Connor
2. Water Pollution Research — Richard I. Dick and Tom M. Keinath
3. Manpower Needs and Training — E. Joe Middlebrooks and Wesley O. Pipes
4. Administration and Implementation of Pollution Control Policy — Vinton W. Bacon

The preparation of these policy papers by AEEP Board members was announced and discussed at the membership meeting in Cleveland last October and also described in the January issue of the Newsletter. All members of AEEP are invited to submit comments, opinions, and information to the Board Members who are preparing the papers.

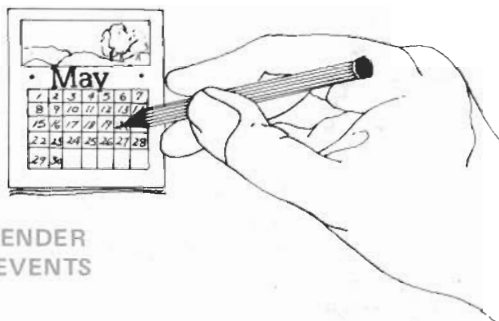
AEEP Workshop on Environmental Impact and Linkages

An AEEP Workshop on "Environmental Impact and Linkage" has been scheduled for December 19 and 20, 1974, in Charleston, South Carolina.

The Workshop will provide opportunities for attendees to become acquainted with the relations between environmental problems and solutions; develop materials which are suitable for classroom use as case studies or examples of the inter-relations among air-water and land resource considerations; and provide opportunities for attendees to learn of significant trends and problems in air pollution.

Preliminary ideas on the workshop program include:

1. Current Priority Problems in Air Pollution
2. Emerging Problems in Air Pollution
 - Discussion may proceed according to topic (fine particles, fugitive dust) or according to viewpoint (medical perspective, the engineering perspective, and the economic perspective).
3. Relations Between Air and Water Pollution Control
 - Air pollution potential of water pollution control methods
 - Community odors from sewage treatment and/or sludge disposal
 - Transfer of pesticides from the water environment to the atmosphere
 - Contribution of atmospheric particulates to water quality deterioration
- 3a. Relations between water pollution control and land utilization
 - Land Reclamation and ground water quality
 - Leachates from landfill and ground water quality
 - Land disposal of sewage and water quality



MARK YOUR CALENDER AEEP UPCOMING EVENTS

AEEP Activities At Purdue

- May 6, 1974 — 9 a.m. AEEP Board Meeting
Senate Room
Campus Inn
- May 7, 1974 — 8 a.m. AEEP Seminar on "Continuing Education — AEEP's Role" Archie McDonnell, Chairman, Room 320, Stewart Center.
- May 7, 1974 — 8 p.m. Meeting of the general membership, Room 214, Stewart Center.

We urge all the AEEP members attending the conference to join us at the Seminar and the general membership meeting.

4. Land Use Planning and Clean Air
Transportation plans for achieving clean air
Land use planning and air quality
5. Air Cleaning and Solid Waste Disposal Methods
Sulfur dioxide scrubbers and solid waste generation
Incineration of solid waste and/or sludge and air pollution
6. Waste and Energy
Incineration of solid waste for production of electric power
Production of methane from sewage sludge and/or solid waste
Energy needs of pollution control methods
7. Public Health Indices and Environmental Quality Indices
8. Other Sessions to be Conceived.

Anyone interested in presenting a paper at the workshop should send title and 200 to 500 word abstract of proposed paper to the attention of:

J. E. Quon
Department of Civil Engineering
Northwestern University
Evanston, IL 60201

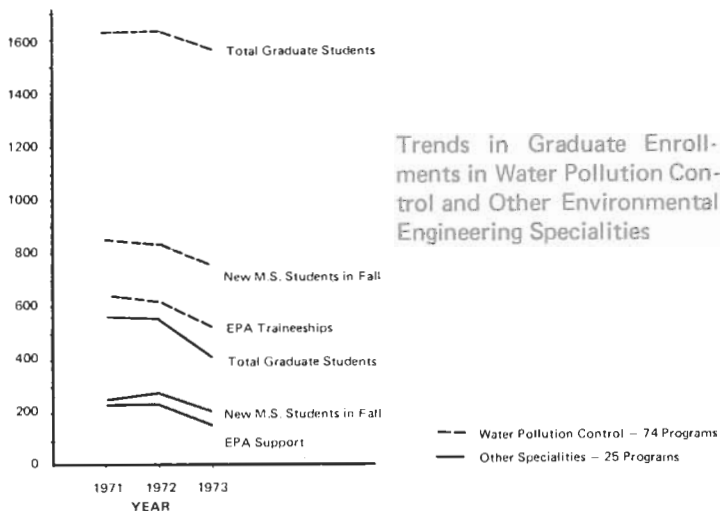
Suggestions of speakers and topics for the workshop are welcome. Send information and comments to J. E. Quon.

ENGINEERING SCIENCE AWARD

The Engineering Science award of \$1000 for an outstanding Professor that has previously been awarded biannually will undergo significant changes. Starting in 1974, the award will be made annually for the best Doctoral thesis relevant to practice produced in the preceding academic year. The award will be \$500 for the primary research Supervisor and \$500 for the Ph.D. Candidate both to be spent at the individual's discretion. Three copies of the Candidates thesis must be submitted to David Jenkins, 11 Circle, Kensington, California, 94707, to arrive prior to June 30 of the academic year. For this year's award, thesis should arrive before June 30, 1974 and be dated between July 1, 1973 and June 30, 1974. It is anticipated that the Engineering Science Award will be made at the AEEP general membership meeting held in conjunction with the annual Water Pollution Control Federation.

REDUCING GRADUATE ENROLLMENTS

Information on 74 graduate programs designated either as environmental engineering or sanitary engineering were obtained from 70 universities and colleges (4 schools have programs in two different departments). Of the programs reporting 49 offer specialization only in water pollution control and 25 offer more than one area of specialization. The decrease in graduate enrollments in these 74 programs is represented in the figure below.



The decrease in the number of new M.S. students enrolling in the fall was 10.5% for the water pollution control specialty and 27% for other environmental engineering specialties. It is interesting to note that in both cases the percentage decrease in the number of new M.S. students was greater than that for the total number of graduate students in the programs and less than that for the students supported on EPA traineeships. Apparently, the average program is finding some other sources of funding and is holding on to more continuing students. Many program directors commented that the comparison of the numbers of students supported on EPA traineeships in the fall of 1973 with those in the fall of 1972 was very misleading because stipends are much lower this year and many students are getting only tuition. Several program directors indicated that they expected a more precipitous drop in graduate enrollments next fall because of further reductions in EPA support.

The average program with a specialty in water pollution control had 21.2 graduate students in the fall of 1973 of which 10.1 were new M.S. students and 7 were supported on EPA traineeships. The largest program had 60 graduate students specializing in water pollution control. The distribution of schools according to the number of students specializing in water pollution control is given in the table below.

Number of Graduate Students	Number of Schools	
	With EPA Traineeships	Without EPA Traineeships
more than 40	10	0
31 to 40	10	1
21 to 30	11	1
11 to 20	15	8
less than 10	9	9

The distribution of numbers in the table indicates either that it is necessary to have EPA traineeships to run a large graduate program or that EPA favors funding training grants for larger programs over smaller programs.

The other specialties for graduate study in environmental engineering included air pollution, solid wastes, radiological health, environmental health, environmental systems, and others. The figures received on these 25 programs indicate that we are falling very far short of meeting the manpower needs in these fields.

There are a few schools which have received questionnaires as a part of this survey but have not returned them. Any other schools which have been inadvertently omitted from the survey are urged to contact AEEP Vice-President, Wesley O. Pipes, at Northwestern University.

EPA TRAINING GRANTS AND FELLOWSHIPS

In the face of the increasing demand for environmental engineers and other engineers and scientists to work in the fields of pollution control and environmental protection, the U.S. Environmental Protection Agency has, for the third consecutive year, requested a reduction in the appropriation of funds for training grants and fellowships. In FY 1972 the funds appropriated for these programs was \$10.4 million. For FY 1973 the EPA requested \$7.4 million but Congress saw fit to appropriate \$10.4 million. For FY 1974 EPA requested only \$4.47 million and Congress appropriated \$6.723 million. This reduction was somewhat compensated for by the carryover of some unused funds from FY 1973 which EPA was directed to use in FY 1974 by the House Appropriations Committee. As shown in the table below the EPA's budget request for training funds for FY 1975 is again down to the \$4.47 million level.

	FY 1974	EPA Planned Use of Funds for FY 1974			FY 1975
	Appropriations	from	from	Total	Request
		FY 1974	FY 1973		
		Appropriations	Appropriations		
Air	\$2,100,000	\$2,000,000	\$ 800,000	\$3,658,000	\$1,700,000
Water	3,340,000	3,340,000	491,000	3,831,000	2,770,000
Solid Wastes	0	0	0	120,000	0
Radiation	83,000	83,000	66,000	371,000	0
Interdisciplinary	1,200,000	0	1,200,000	0	0
Total	\$6,723,000	\$5,423,000	\$2,557,000	\$7,980,000	\$4,470,000

*Apportioned to total expenditures as follows

Air	\$ 858,000
Solid Waste	120,000
Radiation	222,000
	\$1,200,000

It is clear that the efforts of the AEEP Training Support Committee and of individual professors in writing to Congress, OMB, and EPA and presenting testimony to the House Appropriations Committee has met with some modest success. However, the battle is not yet won and the appropriation for FY 1975 could be a turning point. State agencies are really feeling the manpower pinch as they try to implement the NPDES permit program and other environmental legislation passed by the 92nd Congress. The one person in EPA who most strongly opposed continuing the training program has now moved to another federal agency. Congress has listened sympathetically for two years and now has a good understanding of the problems. *Get your letters off to your Representatives and Senators* protesting this further proposed reduction in training funds and requesting a return to the \$10.4 million funding level of FY 1972 and FY 1973. This is the year in which persistence could overcome this major problem of the past two years.

FY 1975 EPA BUDGET RELEASED

The Environmental Protection Agency (EPA) has proposed a \$731 million budget for FY 1975 that includes \$161.9 million for water quality programs, a \$1.4 million decrease from the previous year's budget. The budget request was contained in the President's budget which was transmitted to Congress early this month.

Water quality research programs sustained the heaviest loss, receiving \$2.4 million less than in FY 1974. Alvin L. Alm, assistant administrator for planning and management, said that the reduction would affect all research activities, but especially research in industrial control technology. However, he added there were no plans to close any of EPA's laboratories.

In responding to questions concerning the agency's water quality research budget, which was criticized by a recent Government Accounting Office report as being insufficient to meet the goals of PL 92-500, Russell E. Train, EPA administrator, said, "While we recognize the need for strong support of water quality research, we feel that research in air pollution has a higher priority."

EPA PUBLISHES BIBLIOGRAPHY OF RESEARCH REPORTS

The U.S. Environmental Protection Agency has published the second edition of *Bibliography of R & D Research Reports*. This 101 page publication is a cumulative listing of some 400 research reports issued from April 1972 through June 1973, by EPA's Office of Research and Development. The first edition was published in January 1973. The reports described are grouped into five categories: Environmental Health Effects Research, Environmental Protection Technology, Ecological Research, Environmental Monitoring, and Socio-economic Environmental Studies.

The bibliography series, which supersedes previously existing

publications that are grouped around specific pollution control programs, is organized to reflect the Office of Research and Development's integrated research program. It is part of OR & D's effort to shorten the information lag in environmental research and speed the application of new or proven technology.

Single copies of the bibliography, which also contains source information for procuring the listed reports, are available from the Publications Staff, Office of Program Management, Office of Research and Development, U.S. Environmental Protection Agency, Washington, D.C. 20460.

MEMBERS IN THE NEWS

Middlebrooks Named Dean of Engineering

The AEEP President, Dr. Eddie J. Middlebrooks, has been named Dean of the College of Engineering at Utah State University effective March 18, 1974. Dr. Middlebrooks joined Utah State in 1970 as Professor of Sanitary and Water Resources Engineering. He then became the head of the Division. AEEP extends sincere congratulations to Joe and wishes him a continued success in his new and challenging career.

Russell F. Christman Appointed Department Head

Dr. Russell F. Christman has been appointed Professor of Environmental Sciences and Head of the Department of Environmental Sciences & Engineering at the University of North Carolina. Dr. Christman comes to the University of North Carolina from the University of Washington in Seattle where he has been a member of the faculty since 1962, holding a joint appointment as Professor of Environmental Studies and Professor of Civil Engineering.

Robert O. Sylvester Heads New Environmental Institute

The University of Washington recently announced the creation of an Institute for Environmental Studies as a University-wide educational unit for interdisciplinary program development. The Institute now has its first Director, Robert O. Sylvester, an AEEP member and former head of the Water and Air Resources Division of the Department of Civil Engineering. The Institute will focus on three major areas: undergraduate and graduate teaching, research, and public service. Sylvester sees the Institute as providing a mechanism through which these interests can be brought together.

Peter A. Krenkel Joins TVA

Dr. Peter A. Krenkel, Professor of Environmental and Water Resources Engineering at Vanderbilt University, has resigned, effective May 1974, to become Director of the Division of Environmental Planning of the Tennessee Valley Authority. He will replace F. E. Gartrell, who retired in January.

Krenkel, a native of San Francisco with three degrees from the University of California, went to Vanderbilt in 1959, and started a graduate program in sanitary engineering in 1962. It became a separate department in 1967 and he served as chairman until 1972. Dr. Krenkel was a charter member of AEEP and served as one of the earliest members of the Board of Directors.

WELCOME TO AEEP NEW MEMBERS

Mr. Stanley L. Klemetson
Ph.D. Candidate
Division of Environmental
Engineering
Utah State University
Logan, Utah

Dr. Harold B. Gotaas
Walter P. Murphy Professor
The Technological Institute
Northwestern University
Evanston, Illinois

Dr. William J. Grenney
Utah Water Research Lab.
Logan, Utah

Dr. Donald B. Porcella
Associate Professor
Division of Environmental
Engineering
Utah State University
Logan, Utah

Dr. Ronald D. Neufeld
Assistant Professor
Department of Civil Engineering
University of Pittsburgh

Pittsburg, PA 95261

Dr. K. Daniel Linstedt
Associate Professor
Department of Civil and
Environmental Engineering
University of Colorado
Boulder, Colorado

INTERSTATE AND FOREIGN COMMERCE

Democrats

Harley O. Staggers, (W.Va.), Chairman
Torbert H. Macdonald, (Mass.)
John Jarman, (Okla.)
John E. Moss, (Calif.)
John D. Dingell, (Mich.)
Paul G. Rogers, (Fla.)
Lionel Van Derlin, (Calif.)
J. J. Pickle, (Tex.)
Fred B. Rooney, (Pa.)
John M. Murphy, (N.Y.)
D. E. Satterfield, III, (Va.)
Brook Adams, (Wash.)

W. S. Stuckey, (Ga.)
Peter N. Kyrös, (Maine)
Bob Eckhardt, (Tex.)
Richardson Preyer, (N.C.)
Bertram L. Podell, (N.Y.)
Henry Helstoski, (N.J.)
James W. Symington, (Mo.)
Charles J. Carney, (Ohio)
Ralph H. Metcalfe, (Ill.)
Goodloe E. Byron, (Md.)
William R. Roy, (Kans.)
John Breckinridge, (Ky.)

Republicans

Samuel L. Devine, (Ohio)
Ancher Nelsen, (Miss.)
James T. Broymill, (N.C.)
James Harvey, (Mich.)
Tim Lee Carter, (Ky.)
Clarence J. Brown, Jr., (Ohio)
Dan Kuykendall, (Tenn.)
Joe Skubitz, (Kans.)
James F. Hastings, (N.Y.)
James M. Collins, (Tex.)

Louis Frey, Jr., (Fla.)
John Ware, (Pa.)
John Y. McCollister, (Neb.)
Richard G. Shoup, (Mont.)
Barry M. Goldwater, Jr., (Calif.)
Norman F. Lent, (N.Y.)
H. John Heinz, III, (Pa.)
William H. Hudnut, III, (Ind.)
Samuel H. Young, (Ill.)

SAFE DRINKING WATER LEGISLATION

On February 21, 1974, Representative Paul G. Rogers of Florida introduced H.R. 13002, the "Safe Drinking Water Act." This bill is similar to a bill introduced last year by Representative Rogers but, in addition, contains a provision (Section 1432) for the mandatory allocation of chlorine for the treatment of drinking water. Several other bills have been introduced in both the House and Senate in the last two months which would require mandatory allocation of chlorine for water treatment. This particular bill appears to be the one which would be most helpful in solving some of the present problems of public water supply and is worthy of support.

The "Safe Drinking Water Act" is an amendment to the Public Health Service Act. The legislation requires the Administrator of EPA to publish primary and secondary drinking water regulations. The primary drinking water regulations are related to feasibility of treatment and the secondary drinking water regulations are related to health effects. The States are to have the initial responsibility for enforcement of the regulations, but in case of failure to enforce, the Administrator of EPA may bring civil suit to require compliance or he may issue an order to comply and assess fines for violation of the order. The bill contains extensive sections on variances and exemptions to the drinking water regulations. The Administrator of EPA is also authorized to promulgate regulations for protection of underground sources of drinking water.

Section 1433 of the bill provides for research, technical assistance, information and training of personnel. The Administrator of EPA would be permitted to carry out such programs, but he would not be directed to do so. The legislative authorizations for such programs would be \$15 million for FY 74, \$25 million for FY 75, and \$35 million for FY 76. Of course, FY 74 ends on June 30, 1974, and there is essentially no chance of the bill being passed and the funds appropriated by that time. Even if the bill is passed there is no assurance that Congress would appropriate the authorized funds for FY 75 and FY 76, or that EPA would allocate, appropriation and approve expenditure of them.

The proposed legislation has several other provisions which will not be described here. At the present time the Administrator of EPA has the responsibility to carry out a program for the development and protection of public water supplies, but he does not really have the authority to put it into effect. The water works industry is suffering somewhat from the neglect of the federal government and there is really no program of research and training in the public water supply field. H.R. 13002 would provide the legislative authority for EPA to solve some of these problems and should be vigorously supported by environmental engineers.

The bill is now pending before the House Interstate and Foreign Commerce Committee. Below is a list of the members of that Committee. If you happen to live in the home district of one of these Representatives, write to him in support of the bill.

IMPACT OF ENVIRONMENTAL CONTROL TECHNOLOGIES ON THE ENERGY CRISIS*

Although environmental concern has caused and will cause some small increases in U.S. energy demand and has restricted energy supply to some extent, other factors have been more significant. Not the least of these has been the public's continually escalating demand for energy.

Four major environmental control practices exemplify the magnitude of the impact on energy demand: (1) emission control for automobiles; (2) sulfur dioxide (SO₂) control for power plants; (3) municipal wastewater treatment; and (4) solid waste collection and disposal.

The energy required to operate the last three control processes would be only 1.04 percent of today's total U.S. demand, even in the most power-consuming example studied. This low energy-consumption rate assumes all the Nation's power plants have SO₂ scrubbers, all municipal wastewaters are treated to the tertiary level, and all municipal solid waste is properly collected and landfilled. This power consumption would approximate 747 trillion Btu's per year — less than twice the amount of energy used in 1968 to air condition our homes.

Regarding the energy needed for emission control for automobiles, the 10 percent average loss in fuel economy due to first-generation control devices should very nearly be recouped in the 1975 model year. At that time, engine modifications compatible with the new catalytic converter emission control devices should make this possible.

Environmental concern has had an impact on energy supply. If we are to have clean air and water, caution must influence how we supply our energy and prudence must influence how we use our supply.

It is time to recognize that practically everything we do, including environmental control, has an energy cost. Bringing this to the public's attention may be a benefit of the "Energy Crisis". Environmental control does have a cost; we should recognize it, base our buying and living preference accordingly, and recognize that the costs must be paid.

*A summary of a paper co-authored by T. W. Bendixen, Environmental Consultant, and G. L. Huffman, Research Chemical Engineer with EPA's NERC-Cincinnati and published in "News of Environmental Research in Cincinnati" January 11, 1974.

ACADEMIC MARKETPLACE

POSITIONS AVAILABLE

University of Canterbury—New Zealand

Applications are invited for the position of Lecturer of Public Health Engineering in the Department of Civil Engineering, University of Canterbury, New Zealand. Inquiries should be directed to Professor I. R. Wood, University of Canterbury, Christchurch 1, New Zealand.

University of Houston

The Department of Civil Engineering at the University of Houston is seeking applications for the position of Director of C.E. Environmental Laboratories. Candidates should possess a Ph.D. in Environmental Engineering with experience and teaching interests in water quality laboratory courses, municipal and industrial waste treatment, and possibly solid waste management and/or air pollution. Contact Dr. Jerry R. Rogers, Department of Civil Engineering, University of Houston, Houston, Texas, 77004.

North Carolina State University

The Department of Civil Engineering is seeking a qualified engineer to teach laboratory courses in Sanitary Chemistry and Sanitary Microbiology. The PhD degree is required for this position. Inquiries should be directed to Professor Charles Smallwood, Jr., Department of Civil Engineering, North Carolina State University, Raleigh, North Carolina, 27607.

University of Delaware

The Department of Civil Engineering at the University of Delaware has two faculty positions available in the area of Environmental Engineering. The first position is in Air Pollution with a rank of Assistant Professor. The candidate must be interested in chemical, physical or biological aspects of air pollution. The second position is at the Assistant or Associate Professor level. The candidate must be interested in biological and chemical processes for Water and Wastewater Systems and Solid Wastes. **Preference will be given to those with demonstrated maturity, professional and/or academic experience, and research.**

Both positions require the Ph.D. degree. A background in Civil or other Engineering discipline is preferable. Duties for both positions will include undergraduate and graduate teaching, research, committee or other service roles. Reply to Professor Eugene Chesson, Jr. Chairman, Department of Civil Engineering, University of Delaware, 132 Dupont Hall, Newark, Delaware, 19711.

Worcester Polytechnic Institute

Two faculty positions are open in the areas of Water Resources/Sanitary Engineering in the Department of Civil Engineering, Worcester Polytechnic Institute. The first position is a temporary one for the academic year starting September 1974, with a possibility of extending the appointment beyond one year. Rank is at the Assistant or Associate Professor level and salary commensurate with qualifications. A Ph.D. in Environmental Engineering is preferred and prior teaching experience is desirable. Duties include participation in the undergraduate and graduate program in the Water Quality area. The second position is in the area of Water Resources Engineering. Rank is at the Assistant or Associate Professor level. A Ph.D. in Water Resources Engineering with appreciable background in systems analysis is required. Duties include participation in undergraduate and graduate programs. Send curriculum vitae to Dr. Armand J. Silva, Head, Department of Civil Engineering, Worcester Polytechnic Institute, Worcester, MA 01609.

Vanderbilt University

Faculty position for Assistant Professor in environmental engineering available August, 1974. Vanderbilt University is seeking a candidate with a background in waste treatment technology, with emphasis on physical-chemical treatment. Some background in the area of water quality management is also preferred. Position involves teaching, research, and continuing education activities. Send detailed resume to Barry A. Benedict, Associ-

ate Professor and Program Director, Environmental and Water Resources Engineering, Vanderbilt University, Nashville, Tennessee 37235. Vanderbilt University is an equal opportunity affirmative action employer.

Cornell University

Several faculty positions are open to men and women in the Department of Civil Engineering with training in one or more of the following areas: sanitary engineering, water resource systems, systems ecology, hydraulics and hydrology. Applicants should write to: Chairman, Department of Environmental Engineering, Hollister Hall, Cornell University, Ithaca, N.Y. 14850.

University of Missouri — Columbia

A faculty position is open in the Department of Civil Engineering. Candidates must have an undergraduate degree in Civil Engineering and a Ph.D. in Sanitary Engineering. Specialization in physical-chemical treatment is preferred. This position involves teaching at undergraduate and graduate levels and directing graduate-student research. Graduate program is established; rank and salary are open. Send resume to: J. J. Cassidy, Chairman, Department of Civil Engineering, University of Missouri — Columbia, Columbia, Missouri 65201.

University of Southern California

The University of Southern California Environmental Engineering Program has an immediate opening for an Assistant Professor of Civil and Environmental Engineering with specific duties in developing programs for teaching and research directed to the following areas.

- a) Environmental systems planning and resource management.
- b) Applications of operations research techniques in environmental impact analysis.

The successful candidate is expected to have a background in **environmental engineering, water resource development, economics, and operations research.**

Please contact Professor Frank R. Bowerman, Director, Environmental Engineering Programs, University of Southern California, University Park, Los Angeles, California 90007.

Montana State University

A faculty position will be open for the 1974-1975 academic year to fill vacancy left by professor on sabbatical. Responsibilities include instruction in environmental and environmental health engineering at the graduate and undergraduate level. Reply to the Civil Engineering and Engineering Mechanics Department, Montana State University, Bozeman, Montana, 59715.

POSITIONS WANTED

Teaching and/or Research Position Desired

B.A. Science, M.S. Molecular Biology, Ph.D. candidate, Environmental Science, seeking a teaching and/or research position in Environmental Engineering. Areas of interest include water quality, radiological health, environmental impact, ecosystem modeling, and environmental biology. Contact Mr. Jerry J. Nelson, 214 East Ridge Road, Norman, Oklahoma, 73069.

CONTINUING EDUCATION

University of Michigan

1974 Summer Institute Course

The University of Michigan is again offering a one-week Summer Institute Course on "Industrial and Municipal Water Pollution Control-Physicochemical Processes" August 19-23, 1974, in Ann Arbor, Michigan. The course considers an in-depth analysis (process concept, specific applications and economics) of conven-

tional and advanced physicochemical processes for treatment and reclamation of industrial and municipal wastewaters. Tuition: \$275.00. Contact Professor Walter J. Weber, Jr., Department of Civil Engineering, The University of Michigan, Ann Arbor, Michigan, 48104.

Tulane-Vanderbilt Announce A Two-Day Seminar

A two-day seminar on "Effluent Variability from Wastewater Treatment Processes and Its Control" will be held June 6-7, 1974, at Le Pavillon Hotel in New Orleans. The Seminar, sponsored by Tulane University and Vanderbilt University, will explore design and operative considerations for defining and minimizing effluent quality variability. Both secondary and tertiary wastewater treatment processes will be considered for municipal and industrial wastewaters. Registration fee is \$125.00. Contact Professor A. J. Englande, Jr., Department of Environmental Health, Tulane Riverside Research Labs, Belle Chasse, Louisiana, 70027.

Clemson University

A Shortcourse entitled "Industrial and Municipal Wastewater Treatment: Process Design and Operation" is being offered May 20-24, 1974 by Department of Environmental Systems Engineering, Clemson University, Clemson, SC (Professor T. M. Keinath, Department of Environmental Systems Engineering, Clemson University, Clemson, SC 29631).

ASSOCIATION OF ENVIRONMENTAL ENGINEERING PROFESSORS

1974 COMMITTEE STRUCTURE

Advisory Committee to the Board of Directors

Task: Recommend AEEP activities to the Board of Directors; critique actions of the Board
Chairman: Raymond C. Loehr
Board Contact: E. Joe Middlebrooks
Members: John H. Austin, E. Robert Baumann, Jack A. Borchardt, Richard S. Engelbrecht, Earnest F. Gloyna, E. A. Pearson

Archives Committee

Task: To assemble in one location a record of AEEP activities including: Membership, legal papers, history of organization, bylaws, board of directors membership, etc.
Chairman: Norman E. Jones
Board Contact: E. Joe Middlebrooks
Members: All past presidents and secretary-treasurers

Arrangements Committee

Task: Arrangements for 1974 meetings of the members and the Board
Chairman: Billy H. Kornegay
Board Contact: Billy H. Kornegay

Audit Committee

Task: Audit 1973 financial records and report at the 1974 Purdue meeting
Chairman: John J. Gannon (1973 records)
Board Contact: Billy H. Kornegay
Member: Thomas M. Keinath (1974 records)

Awards Committee

Task: Review reports of previous Awards Committees and present recommendations on AEEP policies concerning awards in general and the Distinguished Professor Award prior to the October 1974 meeting of the Board of Directors
Chairman: David Jenkins
Board Contact: Wesley O. Pipes
Member: Vinton W. Bacon, David W. Hendricks, Frederick G. Pohland, Donald B. Porcella, and Robert White (Engineering-Science Award)

Education Committee

Task: Coordinate the activities of the various sub-committees
Chairman: George P. Hanna, Jr.
Board Contact: Wesley O. Pipes
Members: Donald B. Aulenbach, John H. Austin, Raymond J. Kipp and Phillip Singer

Sub-Committee: Continuing Education
Task: Advise the AEEP Board of Directors on desirable courses of action in the area of environmental engineering continuing education; to respond to such matters as may arise concerning operator training; and to implement the recommendations resulting from the Third National Conference on Environmental Engineering Education

Chairman: Raymond J. Kipp
Members: Donald Anderson, Richard H. Berg, W. W. Eckenfelder, Jr., Robert A. Gearheart, Kenneth D. Kerri, Michael D. LaGrega, Joseph F. Malina and James N. Patterson

Sub-Committee: Environmental Chemistry
Task: Advise the AEEP Board of Directors on desirable courses of action in the area of environmental chemistry; to implement the recommendations resulting from the Third National Conference on Environmental Engineering Education; and to prepare a Register of Environmental Chemistry Programs

Chairman: Phillip Singer
Members: David Jenkins, G. Fred Lee, K. H. Mancy, Roger A. Minear, Alan H. Molof, Alan J. Rubin and Vernon L. Snoeyink

Sub-Committee: Technician Training
Task: Advise the AEEP Board of Directors on desirable courses of action in the area of technician training; and to implement the recommendations resulting from the Third National Conference on Environmental Engineering Education

Chairman: John H. Austin
Members: R. A. Gearheart, W. M. McLellon, L. B. Merritt, Joe Miller Morgan, John T. Novak, Vladimir Novotny, Wayne L. Paulson and P. W. Purdom, Sr.

Sub-Committee: Undergraduate Environmental Engineering Education
Task: Advise the AEEP Board of Directors on the desirable courses of action in the area of undergraduate education; and to implement the recommendations resulting from the Third National Conference on Environmental Engineering Education

Chairman: Donald B. Aulenbach
Members: Richard H. Berg, James E. Foxworthy, C. P. Leslie Grady, Harold J. Jebens, Waldron M. McLellon, Ray W. Shade, Vernon L. Snoeyink and Robert O. Sylvester

Sub-Committee: Graduate Environmental Engineering Education
Task: Advise the AEEP Board of Directors on the desirable courses of action in the area of graduate education; and to implement the recommendations resulting from the Third National Conference on Environmental Engineering Education

Chairman: George P. Hanna, Jr.
Members: Takashi Asano, Vaughn C. Behn, John Bell, Francois Briere, John L. Cleasby, Richard S. Engelbrecht, James E. Etzel, John F. Ferguson, Walter K. Johnson, Gerald A. Rohlich and Robert V. Thomann

Membership and Eligibility Committee

Task: Develop recommendations for the Board of Directors concerning a new category of membership for users of our product and/or for former professors; consider specific membership applications when eligibility is questionable
Chairman: Herbert A. Bevis
Board Contact: Billy H. Kornegay
Members: C. Robert Baillod, Carl E. Burkhead, Raymond P. Canale, John L. Carter, James E. Etzel, N. Bruce Haimes, Robert L. Johnson, Norman B. Jones, E. Corbin McGriff, Alan H. Molof, Wayne L. Paulson and Tom D. Reynolds

Industrial Relations Committee

Consider development of a clearing house for faculty exchanges with industry; prepare recommendations for consideration by the Board at their October 1974 meeting concerning AEEP's posture with industry

Chairman: Francis A. DiGiano
Board Contact: Anthony F. Gaudy, Jr.
Members: John Ball, Emil J. Gentelli, Roy W. Hann, Jr., Francis C. Lutz, Edward L. Thackston and Gerald B. Ward

Legislative Analysis Committee

Task: Review pending federal legislation and (as appropriate) state legislation which has an impact on environmental engineering education; report to the President in cases where action by the Association is appropriate

Chairman: Wesley O. Pipes
Board Contact: E. Joe Middlebrooks
Members: E. Robert Baumann, Raymond C. Loehr, Wayne F. Echelberger, Jr. and Erman A. Pearson

Manpower Needs Committee

Task: Investigate future manpower needs of the profession and develop suggestions for meeting those needs; coordinate activities with Training Support Committee

Chairman: E. Joe Middlebrooks
Board Contact: Wesley O. Pipes
Members: Edwin R. Bennett, Carl E. Burkhead, John J. Gannon, Millard W. Hall, Timothy Tilsworth, A. T. Wallace and Martin P. Wanielista

Newsletter Committee

Task: Edit, publish, and distribute the AEEP Newsletter quarterly

Editor: Adnan Shindala
Board Contact: Paul King
Members: Nicholas L. Clesceri, Benjamin C. Dysart, Robert A. Gearheart, J. Martin Hughes, Joseph V. Hunter, Kenneth D. Kerri, Roger A. Minear, Calvin P. C. Poon, Robert L. Sanks, Robert E. Selleck, Edward L. Thackston and Martin P. Wanielista

Nominating Committee

Task: **Nominate** members for election to the Board of Directors in accordance with the Bylaws; submit nominations to President prior to the October meeting of the members

Chairman: Richard I. Dick
Board Contact: E. Joe Middlebrooks
Members: John F. Andrews, Wayne F. Echelberger, Jr., George P. Hanna, Jr., Harold J. Jebens, Waldron M. McLellon and Walter J. Weber, Jr.

Publication Committee

Task: Provide a central depository and distribution service for AEEP publications; recommend policies for orderly development and distribution of AEEP publications

Chairman: Joseph F. Malina
Board Contact: John T. O'Connor
Members: John F. Andrews, Charles R. Jenkins, Waldron M. McLellon, Wesley O. Pipes and Francis C. Lutz

Register Committee

Task: Prepare and publish a new register of graduate programs in environmental engineering

Chairman: John H. Austin
Board Contact: E. Joe Middlebrooks
Members: A. Ray Abernathy, Bernard B. Berger, Russ F. Christman, Robert A. Gearheart, Jon C. Liebman, Daniel A. Okun and Frederick G. Pohland

Relations with USA National Committee of the International Association on Water Pollution Research

Task: Coordinate AEEP activities with USA National Committee, and advise Board of Directors on activities and need for action

Delegates: Richard I. Dick* and Robert O. Sylvester (Through 1974 Conference)

Alternates: Frederick G. Pohland* and David Jenkins (Through 1974 Conference, Delegates through 1976 Conference)

*Appointments necessitated by Warren Kaufman's death.

Research Committee

Task: Recommend research-related objectives of AEEP to the Board of Directors

Chairman: Thomas M. Keinath
Board Contact: Anthony F. Gaudy, Jr.
Members: John L. Cleasby, Billy L. Edge, E. Gus Fruh, C. P. Leslie Grady, Theodore Helfgott, James W. Patterson, Jimmie E. Quon and Dan M. Wells

Seminar Committee

Task: Arrange seminar at the time of the 1974 Purdue Industrial Waste Conference. Recommend seminar topic for 1975

Chairman: Archie J. McDonnell
Board Contact: John T. O'Connor
Members: Roger M. Jorden, Lawrence A. Schmid, Vernon L. Snoeyink, Gerald B. Ward and Dennis W. Weeter

Teaching Aids Development Committee

Task: To prepare a proposal for support to develop a series of lecture notes with slides or transparencies for all of the common unit processes as well as many topics commonly or universally taught in environmental engineering programs

Chairman: Robert L. Sanks
Board Contact: Paul H. King
Members: Walter J. Weber, Jr., John T. O'Connor, A. T. Wallace, Walter A. Weers, Jan Scherfig, Robert W. Seabloom, Calvin R. C. Poon and Edwin R. Bennett

Training Support Committee

Task: Monitor developments relating to external support of environmental engineering education; make recommendations to Board of Directors as appropriate

Chairman: Howard K. Williford
Board Contact: Wesley O. Pipes
Members: E. Joe Middlebrooks and Donald J. O'Connor

Unit Operations and Processes Laboratory Manual Committee

Task: Assemble revisions for future printing of the **Environmental Engineering Unit Operations and Processes Manual**

Chairman: John T. O'Connor
Board Contact: John T. O'Connor
Members: Thomas M. Keinath, Billy H. Kornegay and Waldron M. McLellon

Visiting Lecturers

Task: Arrange for lecture tours for foreign visitors

Chairman: P. Aarne Vesilind
Vice-Chairman: C. P. Leslie Grady, Jr. (Chairman in 1975)
Board Contact: Joseph F. Malina
Members: Millard W. Hall, William J. Jewell, Walter K. Johnson, Khalil H. Mancy, Donald R. Rowe and William A. Sack

Water Chemistry Laboratory Manual

Task: Complete revision of the Water Chemistry Laboratory Manual

Chairman: David Jenkins
Board Contact: Paul King
Member: Vernon L. Snoeyink

Workshop Committee

1974 Workshop

Task: Plan and conduct the 1974 Workshop, set up tentative plans for the 1975 Workshop

Chairman: Jimmie E. Quon
Board Contact: John T. O'Connor
Members: Larry W. Canter, Ninnian E. Hopson, Kenneth Knoll, Otakar T. Melzer, Larry L. Olson, Lyman Ripperton, Robert V. Thomann and Franklin E. Woodard

1975 Workshop

Task: Plan and conduct the 1975 Workshop, set up tentative plans for the 1976 Workshop

Chairman: Donald R. Anderson
Board Contact: E. Joe Middlebrooks
Members: James E. Foxworthy, Tim Haug, Marty Wanielista, Tom Keinath and Richard I. Dick



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