

# NEWSLETTER

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**DECEMBER 1986** 

# PRESIDENT'S CORNER

The membership meeting and the Board of Directors Meeting at the WPCF conference in Los Angeles were both well attended and accomplished their missions. Special thanks are due Bill Batchelor and Mike Saunders, retiring members of the Board of Directors for their excellent service as Secretary-Treasurer and Past President over the past year. John Andrews, who continues on the Board as Past President, gave yeoman's service in planning and executing an aggressive program of membership development. We started the year with 354 members and ended with 380, gaining 11 regular members, 4 new affiliates, 2 new emeritus and 9 new sustaining members. We now have a total of 15 sustaining members in AEEP.

Eastman Kodak Co.
Brown and Caldwell
Century Engineering
Engineering Science
CH2M Hill
Aware, Inc.
Culp Wesner Culp
Proctor & Gamble Co.
D. W. Pyckman Associates
National Sanitation Foundation
Lewis Publishers, Inc.
Amoco Oil Company
PSC Environmental Services, Inc.
James M. Montgomery
Camp, Dresser, McKee

AEEP had a successful year in serving our members by support of programs in support of environmental engineering education:

- AEEP and AAEE, with support from NSF and Michigan Technical University, had a well attended Education Conference in July, 1986. Bob Baillod was commended by our Board for his work in organizing the conference, which included an excellent prepublication display of the new AEEP Computer Manual prepared by the Computer Software Committee under the chairmanship of J. B. Neething. A conference report will be coming soon. About 120-125 attended the Conference, including 18 young faculty members who received travel support from AEEP and the Conference fees.
- Workshops were held at Purdue, and the AWWA (Kansas City) and WPCF (Los Angeles) Conferences. The Workshop Planning Committee and the Workshop Presenters deserve our commendations.
- Dr. Don O'Connor served as our "Distinguished Lecturer" for 1986. He visited a number of schools and presented new insights in modeling of water quality.

During 1987, the Board of Directors will devote a major effort to developing a greater availability of funds for support of academic research in environmental engineering. Assuming that our 300 regular members are engaged in research

(Continued on page 2)

# AEEP NEWS AND ANNOUNCEMENTS

#### **AEEP Member Honored**

AEEP is pleased to congratulate our past President. Dr. John F. Andrews, Professor of Environmental Sciences and Engineering at Rice University, was conferred Honorary Membership at the 13th Biennial Conference of the International Association on Water Pollution Research and Control (IAWPRC) held in Rio de Janeiro, 17-22 August 1986. He was so honored in recognition of his long-term service as the U.S. Editor of Water Research, his extensive leadership activities in eight IAWPRC workshops, and his national and international expertise in water pollution research. He joins 12 eminent researchers from around the world who have been accorded Honorary Membership, the Association's highest award, since IAWPRC was founded nearly 25 years ago. Mr. Bertil Hawerman of Stockholm was accorded similar honors in Rio.

# Special Sale: AEEP - Purdue Workshop Notes

Copies of the workshop notes produced for this year's AEEP - Purdue Workshop on Engineering the Biofilm Environment are now being distributed through Purdue at a nominal cost of \$10. These notes, articles, etc. (150 pgs; plastic wrapped and 'drilled' for 3-ring binding) provide an excellent review of biofilm morphology, growth characteristics, and related process design procedures.

Send your requests and appropriate checks made out to AEEP to the following address:

Professor James E. Alleman School of Civil Engineering Purdue University West Lafayette, Indiana 47907 (317) 494-7705

#### President's Corner

on a half-time basis and can successfully direct the work of 3 M.S. and 2 Ph.D. students, a reasonable average research budget might be developed as follows:

#### Research Funding Needed

P.I., \$45,000 A.Y. Salary, 1/4-time A.Y.	\$ 11,250
2-mo. summer	\$ 10,000
3 M.S. students @ \$850/mo C.Y.	\$ 30,600
2 Ph.D. students @ \$1100/mo C.Y.	\$ 26,400
Benefits, P.I. @ 23%	\$ 4,888
Equipment - Variable, of course	\$ 5,000
Current Expense	
Supplies, 5 @ \$250/mo x 12	\$ 15,000
Travel	\$ 3,000
Direct Costs	\$106,138
Indirect Costs @ 40%	\$ 42,455
Total Annual Research Budget	\$148,593 say \$150,000

This means AEEP members alone could use  $300 \times $150,000$  or \$45 million/year.

Do you all have your share? We need to work with and toward any opportunity of expanding research dollars for our program. NSF, of course, has significant funding in areas of our expertise. EPA tends to have ups and downs and changing emphasis and we need to work hard to keep research funds available for "unsolicited proposals." We should all support the development and funding of research foundations in AWWA, WPCF, and the American Public Works Association. AWWA has seen its AWWARF budget grow from a few-hundred thousand dollars per year to about \$3 million this year and a planned \$10 million by 1990. APWA research is currently supported at levels of a couple hundred thousand dollars per year. WPCF is really just getting started.

At a "thinkers session" of the National Council on Public Works Improvements I recommended a research budget of \$3 per person per year—\$600 million dollars, with the hopes that with cuts, demonstration grants, and development grants, a significant research support would be available for academia.

Already, AEEP is planning a Research Conference, hopefully with NSF support, in late 1986 or early 1987 in the Washington, D.C. area. Charles O'Melia is Chair of the planning group. AEEP has recommended appointment of James Edzwald as our representative on the AWWA Research Foundation's Public Council on Water Supply Research. His appointment for a 3-year term begins December 16, 1986. Fran DiGiano and his Legislative Analysis Committee have recently issued a report on "Protecting our Environment: The Need for Exploratory Research" just in time for our research emphasis in 1987.

We'll call on you for your help!

E. Robert Baumann President

# **Bylaws Changed**

The AEEP membership approved the bylaws change that split the office of secretary-treasurer into separate offices. The Board set the first term of the treasurer (Dave Stensel) at one year and the first term of the secretary (Desmond Lawler) at two years. Subsequent terms for both offices will be two years.

#### **New Board Members and Officers**

Jim Alleman, Dave Stensel and George Tchobanogolous have been elected to the AEEP Board of directors for 1987-89. In addition, at the October Board Meeting in Los Angeles, the AEEP Board of Directors elected new officers. They are:

> President: E. Robert Baumann Vice President: Richard G. Luthy Secretary: Desmond F. Lawler Treasurer: H. David Stensel Past President: John Andrews

Special thanks are extended to Bill Batchelor, David Jenkins and Mike Saunders who are leaving the Board after three years of service. Bill served as treasurer and Mike served as President during their terms.

# Remote Computer Network Linking for AEEP - Environmental Engineering Colleagues

by James E. Alleman, Purdue University

As a means of promoting electronic interaction among our association's members, an experimental AEEP Network User Group is now being formed. Membership is open to anyone who has access to either the BITNET or ARPANET networks (i.e. if you use electronic mall at your school or location, you'll probably have one or the other). Individuals interested in joining this nationwide network and participating in its related opportunities for software/information/ete, exchange should send an initial 'electronic' message to either of the following Purdue addresses:

alleman@cb.ecn.purdue.edu.BITNET alleman@cb. ecn.purdue.edu.ARPA

#### **AEEP Members Honored**

Dr. G. Lee Christensen, professor of civil engineering at Villanova University, has received the 1986 American Society of Civil Engineers (ASCE) Rudolf Hering Medal for his research paper, "Specific Resistance Measurements: Methods and Procedures," published in the June, 1985 Journal of Environmental Engineering.

Both he and the paper's co-author, Dr. Richard I. Dick, a civil engineering professor at Cornell University, received the bronze medal and certificate on October 29 at ASCE's Annual Fall Convention in Boston.

Endowed and instituted in 1924 by ASCE's Sanitary Engineering (now Environmental Engineering) Division, the medal is named for ASCE past president Rudolph Hering. The medal is given annually to ASCE members who publish original papers on subjects such as water works, sewerage works, drainage and refuse collection and disposal, or any branch of environmental engineering that advances the profession or its body of knowledge.

In their paper, the researchers studied one aspect of a costly, complex issue: treatment and disposal of sludge from

municipal and industrial wastewater.

From 1982-84, Lee was a member of the Board of Directors and Secretary-Treasurer of the Association of Environmental Engineering Professors. Flichard Dick is a former president of AEEP.

# Council on Water Supply Research

The Board of Trustees of the AWWA Research Foundation has formed a public advisory committee - The Public Council on Water Supply Research (PCWSR). The functions of the Council are to advise the Board of Trustees on broad social issues affecting drinking water and to make recommendations regarding utility subscription rates for the Foundation's research effort. Some issues the Council is expected to address are the distribution of the Foundation's research funding among short-term, mid-term, and long-term projects and the division of funding between hard/technological research and soft/qualitative research.

The Council is a 10 member advisory committee representing diverse groups from the professional, environmental, and consumer segments of the water supply industry. One member on the Council represents AEEP. Jim Edzwald was recommended by AEEP and his appointment was approved by the Foundation's Board of Trustee's. Jim's appointment is a three year term beginning December 1986.

AEEP Representative on the Public The first meeting of the Council is December 16, 1986. After that meeting, Jim plans to form a small subcommittee of AEEP members to provide assistance and advice to him. Any AEEP member interested in serving on the subcommittee, please contact Jim. Also, all AEEP members are encouraged to write Jim regarding their views and Ideas regarding the Council and the Foundation.

> Dr. James K. Edzwald Department of Civil Engineering University of Massachusetts Amherst, MA 01003 Phone (413) 545-0685

#### **Emeritus Members**

It is requested that suggestions and nominations for Erneritus Member status be sent to AEEP President E. Robert Baumann. Recently, four new Emeritus Members have been named. They are Harold Wolf, Jack Nesbitt, Jack Borchardt and Dale Carlson.

# GENERAL NEWS

# Activated Sludge Program for PCs Available Free-of-Charge

Under a grant from Environment Canada, the Department of Environmental Systems Engineering at Clemson University has developed a user-friendly program for IBM-PC compatible microcomputers which allows simulation of activated sludge processes performing carbon oxidation, nitrification and denitrification, either alone or simultaneously in a singlesludge system. The program is based on the conceptual model developed by the IAWPRC Task Group on Mathematical Modeling for Design and Operation of Biological Wastewater Treatment. The user specifies the plant configuration, reactor sizes, all flow rates, the desired solids retention time, the kinetic parameters, and the time-dependent pattern of input flows and concentrations. Default values are provided for the kinetic parameters to allow simulation of treatment of "typical" domestic wastewaters. Output may be in either tabular or graphical format. The microcomputer must be equipped with either an IBM or a Hercules graphics card to use the graphics capability. The code requires a minimum of 128K RAM and operates on PC DOS 2.0 or higher. Support is provided for an 8087 math coprocessor to enhance computation speed. Anyone interested in the program may receive a copy and a user's manual free-of-charge by sending a double-sided, double-density, soft sector 5.25" floopy disc to: me natisolaumimos y same

Dr. C. P. Leslie Grady Jr. Environmental Systems Engineering 501 Rhodes Engineering Research Center Clemson University Clemson, SC 29634-0919

#### Sabbatical in London?

For those considering a leave in London, Prof. David Jenkins of the University of California, Berkeley has available a 2-Bedroom apartment for rent (at 675.00 pounds sterling per month). The minimum rental period is 3 months. The apartment is located in Kilburn, 5 minutes walk from the Kilburn Underground Station on the Jubilee Line - a 15 minute ride from Central London. It is in a beautiful wide tree-lined street, close to shops and public amenities and with easy access to the American school near Regents Park. If you are interested, call or write David at:

11 Yale Circle Kensington, CA 94708 Tel. (415) 642-5337 or (415) 527-0672.

#### **EPA Document**

Have you your copy?

**Environmental Protection Agency** Office of Research and Development Technical Assistance Directory

If not, write to:

Regional Services Staff (RD-674) Office of Research Program Management Environmental Protection Agency Washington, D.C. 20460

# MEETINGS

# **Engineering Foundation Conference**

An Engineering Foundation Conference will be held in Henniker, N.H., 28 June to 3 July 1987, on SLUDGE TECHNOLOGY: Theory and Practice of Dewatering. This conference, the second in a continuing series of conferences on sludge technology, will focus on the theoretical as well as practical aspects of solid/liquid separation, with emphasis on wastewater sludge dewatering. Individual sessions include modeling of processes, particle/liquid interactions, polymer conditioning, industrial sludges and slimes, and research opportunities.

Papers on various topics related to solid/liquid separation are solicited. Please send these to the conference cochairman:

P. Aarne Vesilind
Professor and Chairman
Department of Civil and Environmental Engineering
Duke University
Durham, N.C. 27706

### 42nd Annual Purdue Industrial Waste Conference

West Lafayette, Indiana May 12 - 14, 1987

#### SUGGESTED TOPICS:

Industrial Waste Treatment, Hazardous Waste Treatment, Residuals Management, Case Histories, Related Research/Design/Operations

#### LENGTH:

150 words or less

#### DEADLINE:

December 1, 1986

#### SUBMISSION:

Dr. John D. Wolszon, Associate Professor Conference Co-Chairman

#### ADDRESS:

Purdue Industrial Waste Conference School of Civil Engineering Purdue University, West Lafayette, IN 47907

#### FOR INFORMATION CONTACT:

Cynthia S. Dalton, Conference Secretary (317) 494-2194

In early December, the Review Committee will begin selecting papers from among the abstracts submitted. Every year far more papers are submitted than can be included. Papers having wide audience appeal and significant new technical information generally receive top priority. Please keep this in mind when selecting a subject and title for submission.

We urge you to mark your calendar, for attendance at the conference whether you submit a paper for presentation or not. Approximately 100 technical papers will be presented in six concurrent sessions. We look forward to seeing you at the most prestigeous conference of its kind - the Purdue Industrial Waste Conference, May 12, 13, and 14, 1987.

# ASCE 1987 National Conference on Environmental Engineering

July 7-9, 1987 Americana Dutch Resort Hotel Lake Buena Vista, FL (Orlando)

For further information contact:

John D. Dietz, Conference Chairman University of Central Florida Civil Engineering & Environmental Sciences Dept. P.O. Box 25000 Orlando, FL 32816-0993 (305) 275-2841

# University of Toronto

Institute for Environmental Studies
Department of Civil Engineering
2nd Annual Series of Workshops on Waste Management

Following successful workshops held in the spring of 1986 it is proposed to mount three further workshops on the subject of waste management in the spring of 1987.

These workshops will feature three separate topics related to the whole question of waste management.

Jan. 19-22, 1987 - Design and Operation of Landfills

Feb. 16-19, 1987 - Design and Operation of Waste Incineration Facilities

Mar. 16-18, 1987 - Risk Analysis for Waste Management

Location will be in Toronto, venues to be decided

Registration Fee - January workshop - \$550 February workshop - \$550 March workshop - \$450

Registrations will be limited to 40 persons. To receive further information please contact:

Dr. P.H. Jones Institute for Environmental Studies University of Toronto Toronto, Ontario M5S 1A4 (416) 978-7078

# The 6th World Congress on Water Resources

#### Water for World Development

The International Water Resources Association was established in 1972 as an international forum to promote interdisciplinary communication and cooperation among industries, business and social groups and professionals of diverse backgrounds. The basic missions of the organization focus on the following:

- Policies and strategies for water resources development, conservation, control and protection;
- Planning of multi-structure, multi-purpose and multisource water resources systems; and
- Management of water resources systems through the efficient operation and adjustment to evolving Water demands.

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#### Water Resources

The sixth world congress carries on these missions with papers from around the world and a large exhibition of equipment. A well-rounded program of technical and tourist site visits as well as many social functions will be available.

The conference will deal with Water for World Development. The three major themes will be

- · Policies and Strategies
- Planning
- Operation

Within these three themes, the following topics will be considered: Water Resources Training; Climatic Impact; Energy and Water Development; Irrigation, Drainage and Agriculture; UN Water/Sanitation Decade; Water Management; Environment Quality; Water Law.

#### Presentations

Authors are invited to submit papers on any of the above topics but are not restricted to those topics.

In addition to formal paper presentations poster sessions will also be held. A poster session is an informal standup talk presented to a passing audience. The speaker uses photographs or illustrations to attract an audience as well as to highlight the presentation.

#### Submission of Abstracts

Paper and poster presentation selection will be based on the submission of a 1,000 word abstract not including references. The abstract is to be written in one of the three official languages (English, French or Spanish) of the conference and typed single spaced on regular sized paper. Figures and tables may be included in addition to the 1,000 word text. The particular theme for which the abstract is to be considered may be indicated or left up to the decision of the abstract review committee.

Papers and posters may deal with theoretical, field or case studies.

For formal paper presentations at least one of the authors must be present at the conference for the final paper to be presented and published. Only selected abstracts from the poster sessions will be published. At least one author from a poster presentation must be present at the conference for the abstract to be published.

The abstracts must be received by May 30th, 1987.

Address abstract to:

Abstracts Review Committee
Sixth IWRA World Congress on Water Resources
University of Ottawa, 631 King Edward Avenue
Ottawa, Ontario K1N 6N5, Canada

#### Selection of Abstracts

All abstracts will be reviewed by a highly qualified team of engineers, physical and social scientists and other professionals in the respective areas of the topics.

Successful abstract authors will be notified in September, 1987.

#### Paper Submission

Special layout forms will be sent to successful authors for preparation of the final paper. A complete set of guidelines and rules for setting the paper will be sent along with the layout forms. The length of the final paper will not exceed ten pages.

Special layout forms and a guideline for the abstract for poster presentations will be sent to successful authors. Guidelines for the poster presentation, including the space and hardware to be made available will be sent to successful abstract authors.

The final paper or poster abstract must be received by January 31, 1988.

Registration fees of at least one author of a full paper or poster presentation must accompany the final paper or poster presentation abstract or have been received by the above date for the paper or poster abstract to be published. Authors are expected to make their own arrangements for travel and conference fees.

The final paper and poster abstracts will be printed and bound for availability at the conference.

# **FACULTY POSITIONS AVAILABLE**

# Environmental Systems Engineering Clemson University

Environmental Engineering: The Department of Environmental Systems Engineering at Clemson University invites applications for a tenure-track professorial position (any level, but assistant or associate positions are preferred) in the area of mathematical modeling of environmental systems and pollution control processes. An earned PhD degree is required as is evidence of strong mathematical and modeling skills. Particular expertise is desired in pollutant transport modeling. Responsibilities include teaching graduate and some undergraduate environmental engineering courses, development of a strong, funded graduate research program and other professional activities. Position to be filled by mid-August 1987. Interested individuals should submit an application letter, vitae and the names, addresses and telephone numbers of three references to Dr. T. M. Keinath, Professor and Head, Environmental Systems Engineering, Clemson University, Clemson, SC 29634-0919. Applications accepted until 1 February 1987 or until a suitable candidate is named to the position. Clemson University is an affirmative action, equal opportunity employer.

# Assistant to Associate Professor of Environmental Engineering

Immediate opening and a tenure track position. Duties are undergraduate teaching plus freedom to conduct research. A Ph.D. is required with demonstrated specialization in environmental engineering. The Environmental Engineering program at New Mexico Tech is within the combined Mining, Environmental and Geological Engineering Department. Persons with solid waste disposal experience/research are particularly suitable for this position. The faculty members are expected to interface with others within the department along with Tech's strong departments in Hydrology, Chemistry, Atmospheric Physics and Biology.

Person to Contact:

Dr. George B. Griswold, Chairman
Department of Mining, Environmental and
Geological Engineering
New Mexico Tech
Socorro, NM 87801
Phone: (505) 835-5345

# University of Massachusetts

The Environmental Engineering Program of the Department of Civil Engineering at the University of Massachusetts/ Amherst invites applications for a tenure track position in Environmental Engineering commencing September 1987. Research interests should be in chemical or biological processes in water, wastewater, or hazardous waste treatment systems. Applicants must have an earned doctorate and be eligible for Professional Engineering Registration. The position is at the Assistant Professor level. Responsibilities include graduate and undergraduate teaching and contributions to an active graduate research program. The ability to teach design related courses is desirable. The Environmental Engineering Program is ABET accredited at the advanced level and has seven permanent faculty. There are approximately 35 full-time M.S. and Ph.D. students in Environmental Engineering, and 1985-86 research expenditures in the Program exceeded \$350,000. Interested candidates should send a resume and names of at least three references to:

Dr. William H. Highter, Professor and Head Department of Civil Engineering University of Massachusetts Amherst, Massachusetts 01003

The closing date for applications is 15 February 1987. The University is an Affirmative Action Equal Opportunity employer.

# University of Massachusetts

The Environmental Engineering Program of the Department of Civil Engineering at the University of Massachusetts/ Amherst invites applications for a tenure track position in Environmental Engineering commencing September 1987. Research interests should be in the area of groundwater with an emphasis on water quality. Applicants must have an earned doctorate and be eligible for Professional Engineering Registration. The position is at the Assistant or Associate Professor level, and salary is commensurate with qualifications and experience. Responsibilities include graduate and undergraduate teaching and contributions to an active graduate research program. The Environmental Engineering Program is ABET accredited at the advanced level and has seven permanent faculty. There are approximately 35 fulltime M.S. and Ph.D. students in Environmental Engineering, and 1985-86 research expenditures in the Program exceeded \$350,000. Interested candidates should send a resume and names of at least three references to:

Dr. James K. Edzwald, Chairman, Environmental Engineering Search Committee Department of Civil Engineering University of Massachusetts Amherst, Massachusetts 01003

The closing date for applications is 15 February 1987. The University is an Affirmative Action Equal Opportunity employer.

#### Environmental - Water Resources

The University of North Carolina at Charlotte, Department of Civil Engineering, invites applications for a tenure-track position in the environmental/water resources engineering area. The position is at the Assistant Professor level and begins in August 1987. Responsibilities include teaching at the undergraduate and graduate levels, participating in ongoing research, and attracting externally funded research. Individuals with a solid background in instrumentation methods, bio-process technology or groundwater management are encouraged to apply. The Civil Engineering program is accredited by EAC/ABET. The environmental area is actively involved in research related to stormwater management, industrial pollution control and prevention, and particularly. an emerging inter-departmental program in biotechnology. To receive full consideration, applications should be received by February 1, 1987. The position requires an earned doctorate in engineering or a closely allied area. Good communication in both spoken and written English is required. Applicants should send a detailed resume, including publications, list of courses included in graduate program, and names, addresses, and telephone numbers of four references to Dr. David M. Bayer, Acting Chairman, Department of Civil Engineering, The University of North Carolina at Charlotte, Charlotte, North Carolina 28223. The University of North Carolina at Charlotte is an equal opportunity/affirmative action employer.

# WELCOME TO NEW AEEP MEMBERS

Dr. Shanka K. Banerji Civil Engineering Department University of Missouri Columbia, Missouri 65211 (314) 882-3610

Dr. Hang Sik Shin
Environmental Engineering Division
Asian Institute of Technology
GPO Box 2754
Bangkok 10501
THAILAND
529-0100-13

# APPLICATION FOR MEMBERSHIP

# in the

# Association of Environmental Engineering Professors

Official Title		Dept.			
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Dues are pay	able in the Ass	ociation on a ca	lendar year bas	is.	
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Assistant Professor	25.00	18.75	12.50	6.25	
Affiliate Member	20.00	15.00	10.00	5.00	
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University of Texas Austin, TX 78712					-
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Enclosed are my AEEP dues in	the amount of:	S			

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#### **DIRECTORS**

James E. Alleman (1987-89) Purdue University

Gary L. Amy (1985-87) University of Arizona

John F. Andrews (1984-87) Rice University

E. Robert Baumann (1986-88) Iowa State University

Nicholas L. Clesceri (1985-87) Rensselaer Polytechnic Institute

J. Charles Jennett (1985-87) Clemson University

Desmond F. Lawler (1986-88) University of Texas

Richard G. Luthy (1986-88) Carnegie Mellon University

H. David Stensel (1987-89) University of Washington

George Tchobanogolous (1987-89) University of California at Davis

