



Association Of
Environmental
Engineering
Professors

NEWSLETTER

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PRESIDENT'S CORNER

AEEP is active and effective in serving the needs of its members. To emphasize this fact, I summarize highlights of recent accomplishment and new initiatives reported at our October Board of Directors meeting.

Who comprises AEEP? Our past Secretary, Bill Knocke, comprehensively up-dated our membership records. He reports that AEEP has 494 members, of which 397 are regular members that represent 133 institutions. We think that we have at least one member for almost every environmental engineering program in the United States.

One of AEEP's goals is to expand membership to virtually all professors practicing environmental-engineering education. To advance that goal, the Board revised and reprinted the AEEP "Trifold," which is a short brochure that tells about AEEP, its benefits to members and the profession, and how to become a member (see enclosed photocopy of the trifold). The new Trifolds are attractive and informative. Please request copies from the Publications Chairman, Desmond Lawler (U. Texas, Austin), and use them to encourage your colleagues to join us in AEEP. Membership will enhance their effectiveness as educators and will enhance the organization's effectiveness in all of its activities.

Who are the clients of AEEP members? Bill Ray's annual survey of graduate enrollments in environmental engineering described one of our key clients, the graduate students. In 1989, the 99 reporting institutions enrolled 1780 MS students and 825 PhD students. During that same time, they reported 706 MS graduates and 184 PhD graduates. Since we think that our survey enumerated about 95% of all graduate students in environmental engineering, we see that the total graduate-student output of our membership is approximately 900 per year.

Another key client of AEEP members is the community of those who hire our graduates. All of us hear constantly that consultants, industries, and government agencies cannot find nearly enough well educated graduates in environmental engineering. The

enrollments and graduation rates tabulated by Bill Ray quantitatively demonstrate the problem: We do not have enough students in our graduate programs! The AEEP Board of Directors is initiating two activities that should help to remedy the problem over the long term.

The first activity is production of a revised and greatly improved version of "So, You Want to Be an Environmental Engineer." Planned as a four-page, glossy brochure, this AEEP publication will be directed towards recruitment of students into undergraduate curricula leading toward environmental engineering. The informative and well written text, supplemented by attractive photos, will tell high-school students and lower-level undergraduates about the field of environmental engineering, what environmental engineers do, and how to enter the field. This publication should be completed in early 1991. Information on its contents and how to obtain copies will be published then.

The second activity involves an Environmental Education and Research Coalition (EERC), which will work towards convincing Congress that traineeship and fellowship programs need to be instituted. Only through the infusion of these kinds of Federal monies can the current limitations in the education of environmental engineers be overcome. I am extremely pleased to announce that our Past President, Tom Keinath, is taking the leadership role in establishing the coalition, which will involve AEEP and numerous industry and government groups. Although the road can be arduous when dealing with Congress, we have been successful in the past. Over the past two years, AEEP was instrumental in convincing Congress to increase the EPA's budget for exploratory research. Although the federal government's budget is still uncertain, it seems assured that the exploratory grants program will have a major increase. The EERC is a bigger legislative effort that AEEP has undertaken in the past, but with Tom's leadership and participation from the employers of our graduates, we can look forward to federal support for overcoming the personnel shortages in our field.

Soon, you will receive notice to renew your membership for 1991. You also will be asked to complete a more comprehensive form giving information about yourself. This is part of the Board's effort to improve the usefulness of the Directory. In addition to the traditional information, the 1991 Directory will provide information on electronic mail, fax numbers, and areas of technical expertise. This new information will make it easier for you to be contacted and for us and others to find the right person when expertise is required for reviews, consulting, and AEEP activities. Please make a special effort to complete the form and return it promptly to the Secretary.

During the summer, I surveyed the membership concerning possible inputs to a second edition of the *AEEP Computer Software Manual*. I received a good response. Most importantly, Joe DePinto (soon of SUNY Buffalo) stepped forward to be the leader of the effort and chairman of our Computer Software Committee. Joe will be in charge of selecting programs, assuring high quality in all aspects, obtaining financial resources, and producing the new manual. The second edition will be a major upgrade from the first edition. The Board is very excited about the manual and Joe's directions. We look forward to hearing from Joe over the next months.

Ken Williamson, John Ferguson, Bob Baillod, and Dick Luthy are the organizers of the 1991 AEEP Environmental Engineering Education Conference, which will be held in Corvallis, OR on August 18-20. The conference will focus on three themes critical to education and curricula in our field: namely, the role of undergraduate programs, the evolution of graduate education, and the incorporation of hazardous-waste management. Although more information will be coming from the organizers, please reserve the August 18-20 dates on your calendar; the education conference will be top quality and of interest to everyone in AEEP.

At the WPCF Conference in Washington, D.C., our annual membership luncheon attracted about 90 people. Tom Keinath and I were able to announce many exciting accomplishments and initiatives, including those reviewed above and others. We presented awards for achievements and service. The best dissertation awards are reported elsewhere in the *Newsletter*. Other awards went to Walter Weber for being the 1990 Distinguished Lecturer, Tom Keinath for his outstanding service as President over the past year, and Bill Knocke for his exceptional service as Secretary over the past two years.

At the end of the same day as the luncheon, we hosted the second annual AEEP Meet and Greet Reception. Perhaps 100 or more people attended the reception, which allowed informal discussions, new and renewed acquaintances, and attitude adjustment. The reception was a big success that we hope to continue in future years.

I think that these highlights from the 1990 Board of Directors meeting give you the flavor of the vitality and achievements of AEEP. Since AEEP is a volunteer organization, it performs only to the degree that its members step forward with ideas, energy, and effort. Fortunately, AEEP has plenty of members who are stepping forward. Although the Board members are exemplary in their dedication and service, they cannot and do not put forth the bulk of the effort. AEEP has numerous committee chairs and committee members who work diligently on AEEP activities throughout the year. As President, I look forward to seeing even greater participation by AEEP members. In fact, I and the Board will be calling on many of you to help in specific ways. Together, we will make AEEP and the profession it represents better and stronger.

Bruce E. Rittmann
President

AEEP NEWS AND ANNOUNCEMENTS

Results of AEEP Officer Elections

At its October meeting, the AEEP Board of Directors elected the following individuals to office for the coming year:

President — Bruce Rittmann
Vice-President — Bob Baillod
Secretary — Gene Parkin
Treasurer — Brian Dempsey

Tom Keinath will continue to serve with the Board next year as the Past President of the Association. George Tchobanoglous officially "retired" from his year as Past President at the October meeting, although George will continue to serve in many capacities within the Association. Both Tom and

George deserve our sincere appreciation for the service they have given to AEEP. Congratulations new officers!

Engineering Science and CH2M-Hill Awards

Doctoral Thesis Awards

Entries are sought for the 1991 Outstanding Doctoral Thesis Awards, one sponsored by Engineering Science, Inc., and the other sponsored by CH2M-Hill. Two separate but equivalent awards will be given, each consisting of a plaque and a cash prize of \$1000 for the student and a plaque and a cash prize of \$500 for the faculty advisor.

Faculty advisors wishing to compete should send **three** copies of the thesis to Mitch Small (Civil Engrg. Dept., 119 Porter Hall, Frew Street, Carnegie Mellon University, Pittsburgh, PA, 15212). They should be accompanied by a simple letter of transmittal stating the student's current address and indicating when the thesis was completed. The copies will not be returned, so xerographic copies inexpensively bound are recommended.

The deadline for submission is **March 15, 1991** for dissertations completed during the **1990 calendar year**. (NB: the deadline and competition year have been changed from previous years!) Faculty advisors are urged to limit themselves to a single entry (which will be considered for each of the two awards); self nominations by students will not be accepted.

A selection committee of three AEEP members will read and judge each thesis on the basis of 100 points allocated as follows: Scientific and Technical Merit of the Research - 30; Originality of Research - 30; Contribution to Advancement of Environmental Engineering - 30; Clarity of Presentation - 10.

The selections will be made by September 1 so that the recipients can be invited to the AEEP luncheon at the WPCF meeting. The recipients of the 1990 awards were:

- Gordon D. Cobb, "Modeling and Experimental Simulations of Organic Contaminant Biotransformations in Subsurface Environments," under the supervision of Edward J. Bouwer, The Johns Hopkins University (recipient of the Engineering Science Award).
- Craig S. Criddle, "Reductive Dehalogenation in Microbial and Electrolytic Model Systems," under the supervision of Perry L. McCarty, Stanford University (recipient of the CH2M-Hill Award).

Our thanks to Engineering Science and CH2M-Hill for their generosity in sponsoring these awards and to the members of the 1990 selection committee: Charlie O'Melia (Chairman), Mitch Small, and Sandra Woods.

Stephen J. Randtke

AEEP Outstanding Paper Award

Nominations are sought for the 1990 AEEP Outstanding Paper Award for a paper that has "withstood the test of time". Nominators should send a copy of the paper and a letter (2 pages maximum) to Steve Rantke (Civil Engrg. Dept., U. of Kansas, Lawrence, KS 66045). The letter should give the full citation, the reasons why the paper is considered a "landmark", and a description of the influence the paper has had on environmental engineering practice. A nomination cannot be made by an author or co-author of the paper. Nominations are due **July 15**.

According to the current rules of the competition, any author of a winning paper is ineligible in the

competition for a period of three years. The previous winners were:

1983 - Stumm, W., and Morgan, J.J., "Chemical Aspects of Coagulation", *Jour. Amer. Water Works Assn.*, August, 1962.

1984 - Stumm, W., and O'Melia, C.R., "Stoichiometry of Coagulation", *Jour. Amer. Water Works Assn.*, May, 1968.

1985 - McCarty, P.L., and Lawrence, A.W., "Unified Basis for Biological Treatment Design and Operation", *J. San. Engrg. Div., ASCE*, June, 1970.

1986 - Dick, R.I., "Role of Activated Sludge Final Settling Tanks", *J. San. Engrg. Div., ASCE*, April, 1970.

1987 - Dick, R.I., and Ewing, B.B., "Evaluation of Activated Sludge Thickening Theories", *J. San. Engrg. Div., ASCE*, August, 1967.

1988 - McCarty, P.L., "Anaerobic Waste Treatment Fundamentals", *Public Works*, September-December, 1964.

1989 - Weber, W.J., Jr., and J. Carrell Morris, "Kinetics of Adsorption on Carbon from Solution" and "Equilibria and Capacities for Adsorption on Carbon", *J. San. Engrg. Div., ASCE*, April 1963 and June 1964.

1990 - O'Connor, Donald J., "Oxygen Balance of an Estuary," *Jour. San. Engrg. Div., ASCE*, 86, SA3, May, 1960.

Each year the papers ranked 2 through 5 are automatically considered in the next year's voting. A paper is dropped from consideration if: (a) it finishes fifth or lower in any year, or (b) it has been in competition for three years without being selected. The carryover nominations for this year's competition are:

- Cleasby, J.L., and E.R. Baumann, "Selection of Sand Filtration Rates," *Jour. Amer. Water Works Assn.*, 54, 579 (1962); and Cleasby, J.L., M.M. Williamson, and E.R. Baumann, "Effect of Filtration Rate Changes on Quality," *Jour. Amer. Water Works Assn.*, 55, 869-880 (1963). (Nominated 1989)
- Sezgin, M., D. Jenkins, and D.S. Parker, "A Unified Theory of Filamentous Activated Sludge Bulking," *Jour. Water Poll. Cont. Fed.*, 50, 2, 362-382 (Feb., 1978).
- Yao, K.M., M.T. Habibian, and C.R. O'Melia, "Water and Waste Water Filtration: Concepts and Applications," *Environ. Sci. and Tech.*, 5, 1105-1112 (1971). (Nominated 1989)

Please take a few moments to reflect on the papers that you think have had the greatest impact on environmental engineering and consider nominating one of them for this award. Note that papers in all areas of environmental engineering, including air pollution, water quality, solid waste, hazardous waste, etc. are eligible.

Stephen J. Randtke

AEEP Founders' Award

The AEEP Executive Committee has established the AEEP Founders' Award to recognize a maximum of one member each year for "**sustained and outstanding contributions to environmental engineering education**". Award criteria and a selection procedure have now been adopted, and nominations are being sought for the inaugural award to be given at the annual luncheon next October.

Nominations may be made by communicating (orally or in writing) the name of the nominee to the chairman of the awards committee (Steve Randtke, Civil Engrg. Dept., U. of Kansas, Lawrence, KS, 66045). The deadline for nominations to be assured of receiving full consideration is **March 15, 1991**.

Stephen J. Randtke

1990-91 Committee Assignments

COMMITTEE	CHAIR
AAEE Liaison	Paul L. Bishop
AWWARF Liaison	Jack Cleasby
Archives	David W. Hendricks
Arrangements	Bob Baillod
Audit	David Long
Awards	Steve Randtke
Bylaws	
Computer Software	Joe DePinto
Distinguished Lecturer	Fred Pohland
Education	Mike Stenstrom
1990's Education Conf. Planning	Ken Williamson
Enrollment Survey	Bill T. Ray
Latin American Initiatives	Ricardo Jacquez
Legislative Analysis	Tom Keinath
Membership	Gene Parkin
Newsletter	Chet Rock (1/91)
Nominating	Tom Keinath
Publications	Desmond F. Lawler
Relations with	

USANC	David Jenkins
Specialty Conference	H. David Stensel
Sustaining Member Liaison	George Tchobanoglous
WPCF Liaison	Walter J. Weber
Water Quality 2000	Walter J. Weber

Sponsorship of 1991 AEEP Distinguished Lecturer

Dr. Willi Gujer of the Swiss Institute for Water Pollution Control (EAWAG) in Dubendorf, Switzerland has accepted the invitation to serve as the AEEP Distinguished Lecturer for 1991. Dr. Gujer has been requested and has agreed to prepare a lecture entitled "Model Development for Dynamic Simulation of Complex Activated Sludge Systems". The lecture tour will be arranged sometime during the period of February 15 to April 30, 1991. at a projected number of 10 to 12 locations.

Institutions interested in hosting Dr. Gujer should send a letter request with appropriate documentation by December 1, 1990 to:

Dr. Frederick G. Pohland
 Department of Civil Engineering
 1140 Benedum Hall
 University of Pittsburgh
 Pittsburgh, PA 15261
 ☎(412) 624-1880
 Fax. (412) 624-0135

This request should include the following information:

1. Name and address of host institution and contact person.
2. Identity of possible co-sponsors.
3. Arrangements for publicity, accommodations and possible video taping of the lecture.
4. Preference or restrictions on dates for a visit during the February to April period with pertinent justification.
5. A brief statement describing how a visit by Dr. Gujer would benefit and complement current academic activities.

Expenses associated with the lecture tour are shared by the host institution on a total lump sum, fixed cost basis. It is estimated that each institution would contribute \$800 to cover travel and living expenses, as well as to provide a modest honorarium. Responsibility for final choice of the lecture tour will rest with the AEEP Distinguished Lecturer Committee who will make that selection on the basis of the information received. Special consideration will be given to institutions that have not been visited by a Distinguished Lecturer within the last year or two, the research and teaching focus of the candidate institutions, and the possibility of having more than one institution co-host the event.

The members of the AEEP Distinguished Lecturer Committee are pleased with the prospect of another successful tour and look forward to a timely receipt of invitations to participate as hosts.

Frederick G. Pohland

AEEP-25 Years

The book AEEP-25 Years was printed in mid-June with 305 copies. Copies remaining are 153. Copies may be obtained from Bill Knocke for a cost of \$20 at the address following:

Professor William R. Knocke
Dept. of Civil Engineering
VPI&SU
Blacksburg, VA 24061

The following form may be used in ordering.

Please send ___ copies of AEEP-25 Years to:

I have enclosed a check for \$20 per copy made payable to AEEP.

Deadline for April 1991 Newsletter

Please submit articles for the April issue of the AEEP Newsletter to the new editor, Chef A. Rock (Dept. of Civil Engineering, University of Maine, 457 Aubert Hall, Orono, ME 04469) by March 1, 1991.

GENERAL NEWS

The 1991 LARS Scholarships

The Larson Aquatic Research Support (LARS) scholarships are intended to honor the memory of Dr. Larson by providing support and encouragement to outstanding graduate students preparing for a career in one of the fields of science or engineering to which Dr. Larson made significant contributions.

You are eligible to apply if you are pursuing an advanced (MS or PhD) degree at an institution of higher education located in Canada, Guam, Puerto Rico, Mexico, or the United States. In addition, you must complete the requirements for your master's degree sometime after May 1, 1991; PhD candidates, sometime after December 31, 1991.

Completed applications for the MS scholarship must be received no later than December 15, 1990; for the PhD, no later than February 15, 1991. The scholarship recipients will be publicly recognized at the annual conference of the American Water Works Association in June.

Two scholarships will be provided: a \$3,000 scholarship for an MS student and a \$5,000 scholarship for a PhD student.

Application forms and additional information are available from:

The LARS Scholarship Program
American Water Works Association
6666 West Quincy Avenue
Denver, Colorado 80235
☎(303) 794-7711

Call for Papers

Annual American Institute of Chemical Engineers (AIChE) Environmental Division Student Award

AIChE - Environmental Division
1st Place - \$300
2nd Place - \$200
3rd Place - \$100

Certificates and awards will be presented at the Summer National AIChE Meeting to be held in Pittsburg, PA, in August of 1991. The AIChE will also provide the 1st place winner with attendance at the awards presentation. In addition, the paper is intended for publication in *Environmental Progress*.

Contest Entry Rules:

1. The work must be a first paper (i.e., report on original unpublished work).
2. The paper must report on research or investigation related to an environmental program (i.e., lab experiment, theoretical development, a numerical analysis or modeling).
3. The author must be a member of the student chapter of AIChE.
4. The work must be performed during the author's undergraduate enrollment and the paper must be submitted prior to or within six months of graduation.

Submit manuscript with cover letter by May 14, 1991 to the Second Vice Chairman of the Environmental Division as shown below:

Peter B. Lederman, Ph.D., P.E.
Roy F. Weston, Inc.
One Weston Way
West Chester, PA 19380
(212) 430-7422
FAX (212) 430-3158

New Research Awards

The Society of Environmental Toxicology and Chemistry is pleased to announce the availability of the Air Force Office of Scientific Research Toxicology Grants: Post-Doctoral Research Award, a two-year grant, \$40,375 per year, a new grant annually; New Investigator Research Award, a one-year grant (non-renewable), \$61,750.

Submit written requests for details and application to:

Air Force Grant
The Society of Environmental
Toxicology and Chemistry
1101 Fourteenth Street, N.W.
Suite 1100
Washington, D.C. 20005

The closing date for grant submission is January 15, 1991. The grant work begins Summer 1991.

Excellence in Environmental Engineering Awards

The American Academy of Environmental Engineers invites entrants for its 1991 Excellence in Environmental Engineering Awards. Awards will be given in 6 categories: Research, Planning, Design, Operations/Management, Small Projects and University Research. The competition is open to any person or organization and to any type of environmental control or management project or program.

Entries are due February 1, 1991. All entries will be displayed during National Engineer's Week. The winners will be publicly-announced and awards presented at the Academy's Awards Banquet April 15, 1991.

Persons interested in entering are encouraged to contact the American Academy of Environmental Engineers at 130 Holiday Court, Suite 100, Annapolis, MD 21401, (301) 266-3311 for details on how to enter.

Michigan Tech Students Form Society for Environmental Engineering

This year a group of Michigan Technological University students formed the Society for Environmental

Engineering (SEEn). Michigan Tech currently has over 140 students enrolled in their ABET-accredited BS in Environmental Engineering program and over 20 students in their graduate environmental engineering program. The purposes of SEEn are to:

1. promote environmental engineering as a unique and viable curriculum and profession,
2. promote exchange of ideas between various curriculums, emphasizing that environmental engineers often work with other disciplines,
3. discuss current and new technologies in environmental engineering, and
4. keep the university community current on the needs of the environmental engineering students.

SEEn is interested in whether other similar organizations are active at other universities. If so, please contact them by writing in care of Dr. James R. Mihelcic, Department of Civil and Environmental Engineering, Michigan Technological University, Houghton, MI 49931.

Publish and Perish?

Is the saying "Publish or Perish?" or is it "Publish AND Perish?" "At some universities writing a text lessens a professor's chances for promotion or attaining tenure," said Mike Keedy, Executive Director of the Textbook Authors Association (TAA). The organization has formed a committee to look into the problem. The committee, chaired by L. Kathy Heilenman of the University of Iowa, is charged with constructing guidelines for use by promotion committees at universities.

The work of Heilenman's committee, called the committee on *Text Authoring and Academic Values*, is in a draft stage. Their concern is not confined to authors of books, but includes concern for authors of instructional software or works in any other medium. Comments and suggestions are invited. They should be addressed to:

Professor L. Kathy Heilenman
Box 535
Orange Springs, FL 32182

Article for TAA Report Sought

Textbook Authors Association is seeking articles for its quarterly publication *TAA Report*. Articles should be of interest to authors or prospective authors of text materials (not necessarily books *per se*) and preferably be of interest to the educational community at large. Articles should be 3000 - 5000 words and a biography of the author should accompany the manuscript. The best article of the year will receive an award. Textbook Authors Association, Box 535, Orange Springs, FL 32182; (904) 546-1000.

PERSONAL ACCOMPLISHMENTS

State Society of Engineers Honors Clemson Dean

J. Charles Jennett, Dean of Clemson University's College of Engineering, has been named "Engineer of the Year" by the South Carolina Society of Professional Engineers.

The 900-member group presents the award to the engineer who presents the best image of the profession and is of benefit to the community and fellow engineers.

As Dean for the past nine years, endowments to the College of Engineering have increased 20-fold, research has increased and the College has developed a nationally ranked graduate research program, according to the group.

Jones Wins Engineering Medal and Accepts Chair at Griffith University

Recently retired from the University of Toronto, Dr. Philip H. Jones has accepted the Foundation Chair of Environmental Engineering at Griffith University in Brisbane, Queensland, Australia. As the Professor of this new program, he will be responsible for staffing and planning the new building and facilities in the Division of Australian Environmental Studies. Dr. Jones will be moving to Australia with his wife some time in February 1991. He has a commitment from the University to permit him to travel to North America and/or Europe at least twice and perhaps three

times a year. You may therefore not have seen the last of him, particularly since he has four children and three grandchildren living in Canada.

For his contributions to the engineering profession, Dr. Jones received the 1990 Association of Professional Engineers of Ontario (APEO) Engineering Medal for Engineering Excellence at APEO's annual awards dinner Nov. 3 in Toronto. Dr. Jones is an APEO member.

NETAC President Edgar Berkey Appointed to EPA Subcommittee on Bioremediation

Dr. Edgar Berkey, President of the National Environmental Technology Applications Corporation (NETAC) at the University of Pittsburgh, has been appointed as a member of the US Environmental Protection Agency's (EPA) newly established Bioremediation Action Committee (BAC), and named chair of the Committee's Treatability Protocol Subcommittee.

The Bioremediation Action Committee was established and is chaired by Dr. John Skinner, Deputy Administrator of US EPA's Office of Research and Development (ORD), to determine the current "State of Bioremediation" in the environmental industry and to recommend the direction and role that bioremediation should play in pollution control or prevention in the future. Recommendations of the BAC will be reported to the Administrator of the US EPA.

CONFERENCES AND EDUCATIONAL PROGRAMS

Summer Programs at Michigan State University

The Center for Microbial Ecology, an NSF Center for Science and Technology at Michigan State University, will sponsor the following programs in 1991: (1) a symposium on Microbial Community Structure: Concepts and Principles, June 7-10, at the MSU Kellogg Biological Station; (2) a Laboratory Workshop on Environmental Applications of Gene Probe Methodologies, June 10-28; and (3) ten week Undergraduate Internships, June-August, specific dates to be arranged individually.

Scheduling of the Symposium and the Gene Probe Workshop is arranged so that interested individuals may attend one or both of these programs. The fo-

cus of the Symposium will be on structure and diversity within ecological communities. Although emphasis will be on microbial communities, speakers will also present concepts developed from higher plant and animal communities. The approach will be to synthesize common or divergent views on community structure taken from these various fields of study. Accompanying poster sessions will focus on modern techniques used to examine community structure in microbial communities.

The Environmental Gene Probe Workshop is designed to introduce the use of nucleic acid hybridization methodologies for environmental research. A basic background in manipulative techniques related to DNA cloning will be included in the course, and experience in molecular biology is not

required. Graduate students, post-docs, faculty and other professional scientists are eligible.

Submit inquiries to: The Center for Microbial Ecology, 540 Plant and Soil Science Building, Michigan State University, East Lansing, MI, 48824-1325, (517) 353-9021, FAX - (517) 353-2917.

Sixth Conference on Environmental Education

Oregon State University
August 18-20, 1991

The Sixth Conference on Environmental Education will be held at Oregon State University on August 18-20, 1991 in Corvallis, OR. Place the dates on your calendar and plan to attend. In addition to an exciting professional program, an extensive social and recreation program to involve both yourselves and your families is planned.

Corvallis is located within the beautiful Willamette Valley and is within one-hour drive of either the gorgeous Pacific coast or the scenic Cascade mountain. Trips to both will be planned including hiking, rafting, canoeing, and sightseeing.

The professional program of the Conference will be dominated by three themes:

- development of independent undergraduate environmental programs,
- inclusion of hazardous wastes into tradition environmental engineering curriculum, and
- integration of innovative technology in environmental engineering education.

For more information contact:

Dr. Kenneth J. Williamson
Department of Civil Engineering
Oregon State University
Corvallis, OR 97330

Third International Symposium on Off-Flavors in the Aquatic Environment

Los Angeles, CA
March 3-8, 1991

The Third International Symposium of Off-Flavors in the Aquatic Environment will be held on March 3-8 at the Los Angeles Airport Hilton Hotel, Los Angeles and offers a unique opportunity for the formal and informal exchange of information, and ideas among engineers, scientists and managers working on off-flavors in drinking water and fish. Presentations will be delivered by leading scientists from the United States, Japan, France, Finland, Australia, Canada, Sweden, Germany, Norway and the Netherlands. In addition, it is expected that representatives of several other countries will be in attendance. Sessions are

scheduled on: 1) the sensory characteristics of off-flavors; 2) the chemistry of off-flavors; 3) the biochemistry of off-flavors; 4) the chemical and biological ecology of off-flavor problems; and, 5) technology of off-flavor abatement.

Off-flavors in drinking water and fish and seafood have been recognized problems with significant economic, sociological and political repercussions throughout the world. Cooperation between researchers in the fields of limnology, fisheries and water research have already led to significant advances in the understanding and control of off-flavors in the aquatic environment. The Third International Symposium on Off-flavors in the Aquatic Environment will undoubtedly facilitate the advancement of the state-of-the-art on this important topic.

The Symposium should be attended by researchers or managers with an interest in: 1) the latest sensory evaluation techniques for the detection of off-flavors in drinking water and fish; 2) the latest chemical detection and quantification techniques for compounds responsible for off-flavors in the aquatic environment; 3) the biochemical basis and regulation of off-flavor compounds; 4) the ecological and environmental factors which may control the abundance and distribution of microorganisms leading to or causing off-flavors; and, 5) the latest technology for the prevention, removal or abatement of off-flavors in the aquatic environment. Those interested in more information should contact Dr. Michael J. McGuire, Chairman, 1991 Organizing Committee, c/o Metropolitan Water District of Southern California, P.O. Box 54153, Los Angeles, California 90054. (213) 250-6647; FAX (213) 250-6951.

ETEX '91 - The Environmental Technology Exposition and Conference

Sands Expo and Convention Center
Las Vegas, Nevada
March 13-15, 1991

The ETEX '91 Conference sessions are organized within eight tracks, or subject groupings:

- Pollution Prevention
- Progressive Waste Management and Recycling
- Treatment
- Remediation in the '90s
- Technology Development and Commercialization
- Corporate Environmental Management
- Environmental Regulatory Standards for the '90s
- Environmental Education, Training, and Career Development

Presentations will be made by people from corporations, government agencies, academic institutions, legal and consulting firms, and environmental organizations in the US and abroad. For more information, call (617) 449-6600.

Seventh Conference on Computing in Civil Engineering and Symposium on Data Bases

Washington, D.C.
May 6-9, 1991

The Symposium will be held at the Ramada Renaissance Techworld in Washington, DC. Initiated in 1978, this series provides a continuing forum for the advancement of intelligent computer use in the civil engineering profession.

National leaders in academia and the business community will host 35 sessions covering a range of topics including: data base applications in materials and environmental engineering; expert systems in construction and structural engineering; innovations in transportation; and a panel discussion on educational issues. For more information, contact:

Conference Department
American Society of Civil Engineers
345 East 47th Street
New York, NY 10017
☎(212) 705-7350
FAX (212) 980-4681

PUBLICATIONS AVAILABLE

International Journal of Environment and Pollution

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New Books Released by WPCF

Air Pollutants at Municipal Wastewater Treatment Facilities

Produced by the Water Pollution Control Federation with Financial support from the US Environmental Protection Agency, Office of Municipal Pollution Control. This publication summarizes results from a

national workshop to examine what is known about air toxic emissions from Publicly Owned Treatment Works (POTWs). Sixty-five speakers and attendees represented water and air regulatory agencies, wastewater agencies, and consultants.

The Executive Summary is \$15 for members of the Water Pollution Control Federation and \$25 for non-members. The full proceedings of the conference session on air pollutants including a complete workshop report, costs \$75 for members and \$125 for non-members. To order call toll-free (800) 666-0206.

Wastewater Biology: The Microlife

Prepared by the WPCF Task Force on Wastewater Biology under the direction of the Operations and Maintenance Subcommittee of the Technical Practice Committee.

This easy-to-use guide presents the biological aspects of wastewater treatment with a minimum of technical jargon. *The Microlife* is one of a three-part series that addresses the microscopic life forms found in wastewater treatment processes. Publications now in development will address the life processes and habitats of these life forms. The text is \$30 for members of the Water Pollution Control Federation and \$40 for non-members. To order call toll-free (800) 666-0206.

Hazardous Waste Treatment Processes Including Environmental Audits and Waste Reduction

Prepared by the WPCF Hazardous Waste Treatment Task Force under the direction of the Hazardous Waste Subcommittee of the Technical Practice Committee, *Hazardous Waste Treatment Processes Including Environmental Audits and Waste Reduction* is a reference for planning, executing, and maintaining a hazardous waste treatment program. This Manual of Practice describes the technical and regulatory approaches to hazardous waste treatment. It also offers solutions to hazardous waste control problems.

The manual is \$45 for members of the Water Pollution Control Federation and \$60 for non-members. To order, call toll-free (800) 666-0206.

*Hazardous Waste Site
Remediation Management*

Prepared by the Water Pollution Control Federation's Task Force on Hazardous Waste Remediation, it encompasses environmental conditions, real and potential risks, regulatory cleanup requirements, remediation options, costs, and other site-specific factors.

The text is available from the Water Pollution Control Federation at a cost of \$20 for members and \$30 for non-members plus postage and handling. To order, call toll-free (800) 666-0206.

WPCF 1991 Products & Services Catalog

The 1991 Products & Services Catalog, published by the Water Pollution Control Federation, introduces a number of new publications targeted to the water quality industry.

Over 80 publications covering areas such as collection systems, design, hazardous and industrial waste, laboratory methods, plant management, and operations and maintenance are presented with summaries. Educational training materials, periodicals and safety and health videos are also introduced.

Copies of the 1991 Products & Services Catalog can be obtained by calling WPCF Member Services Center at (800) 666-0206.

EMPLOYMENT OPPORTUNITIES

University of Cincinnati

University of Cincinnati, Department of Civil & Environmental Engineering anticipates the opening of two new tenure-track positions in the Division of Environmental Engineering and Science, beginning Autumn 1991.

(1) The first position is at the associate professor level and involves teaching undergraduate and graduate courses in water chemistry, solid wastes and environmental instrumentation laboratory operations. The candidate must have extensive experience in instrumentation measurements, computer data management systems, and quality assurance. The applicant must have an established record of research funding and publications.

(2) The second position is at the rank of assistant professor in groundwater hydrology. Research interests in the following areas are preferred: groundwater modeling, regional aquifer analysis and modeling; design of aquifer testing programs; contaminant transport and remedial measures. Preferential consideration will be given to applicants with teaching experience, demonstrated practical and theoretical abilities, and management and communication skills. The successful candidate is expected to establish a strong groundwater hydrology research program and to teach at both the undergraduate and graduate levels.

Applications received before December 1, 1990, will be given priority, but the searches will continue until the positions are filled. Applications should send a resume, statement of teaching and research interests and names and telephone numbers of three references to:

Faculty Search Committee
Department of Civil and
Environmental Engineering
University of Cincinnati
Cincinnati, OH 45221-0071

UC is an affirmative action/equal opportunity employer and encourages applications from all qualified individuals.

The University of Cincinnati, Department of Civil & Environmental Engineering invites applications for a tenure-track faculty appointment at the rank of Assistant Professor in Fluid Mechanics or Environmental Hydraulics starting Fall 1991. Applicant must have earned doctorate at the time of appointment. Preferential consideration will be given to applicants with strong backgrounds and interests in water resources engineering, water quality modeling, geostatistical methods and/or design of sampling networks. The successful candidate is expected to develop a vigorous research program and to teach at both the undergraduate and graduate levels. A PE or the ability to obtain registration is desirable. Applications will be accepted until February 1, 1991 or until the position is filled. Send curriculum vitae, statement of teaching and research interests and names of three references to:

Dr. Steven G. Buchberger
Department of Civil
and Environmental Engineering
University of Cincinnati
Cincinnati, Ohio 45221-0071

University of Cincinnati is an affirmative action/equal opportunity employer and encourages applications from all qualified individuals.

Clarkson University

The Department of Civil and Environmental Engineering at Clarkson University invites applications for a tenure-track position in Environmental Engineering to begin July 1991. Duties of the position include teaching at the graduate and undergraduate level and continued active participation in research and cognate scholarly activities. The rank of the position is open, and outstanding recent PhD recipients will be considered. Preference, however, will be given to applicants with a proven record of accomplishment in their research area, which should relate directly to environmental engineering: environmental chemistry, water or wastewater treatment processes, bioengineering, hazardous waste management, air quality engineering, and mathematical modeling of aquatic systems in surface and subsurface environments. Review of applications will begin January 1, 1991 and will continue until the position is filled. Send a current resume plus the names of at least three references to:

Dr. Norbert L. Ackermann
Department of Civil
and Environmental Engineering
Clarkson University
Potsdam, NY 13699

Clarkson University is an affirmative action/equal opportunity employer.

University of Connecticut

The University of Connecticut, Department of Civil Engineering invites applications for a tenure-track position in the area of biochemical processes in environmental engineering at the assistant professor level. Duties include teaching and advising undergraduate and graduate civil engineering students, developing a nationally-recognized sponsored research program, and directing graduate research. Opportunities exist for close cooperation with the Environmental Research Institute at UConn. ERI is a research center administered through the School of Engineering encompassing 14 full-time research and support staff, over 30 affiliate faculty from 9 academic departments, and fully-equipped and staffed analytical laboratories. An engineering degree, Civil Engineering preferred, and a PhD in an appropriate field are required. It is anticipated that this position will become available as of January, 1991. Forward curriculum vitae and the names of three references to:

Professor Domenic Grasso,
Chairman, Search Committee
Department of Civil Engineering
The University of Connecticut
Storrs, CT 06269-3037.

Qualified candidates from under-represented groups including women are encouraged to apply.

The University of Connecticut is an affirmative action, equal opportunity employer.

Florida International University

Applications for a tenure-track position are sought in the Department of Chemistry at the Assistant or Associate Professor level for a person with research interests in Environmental Chemistry. The position is a joint, twelve-month appointment between the Department of Chemistry and the Drinking Water Research Center, and is available August 1991. A PhD is required and postdoctoral experience desirable with an active research program expected. Teaching responsibilities are at both graduate and undergraduate levels in the candidate's area of expertise. The closing date is December 6, 1990. Send vitae, transcripts, research plans, and three letters of reference to:

Dr. Leonard Keller, Chairperson
Department of Chemistry
Florida International University
Miami, FL 33199
(305) 348-2606

FIU is rapidly growing with more than 20,000 students. A new Chemistry/Physics building will open in late 1990. The Drinking Water Research Center is a state-of-the-art analytical facility (major equipment inventory of more than \$1.5 million) which specializes in trace organics analysis, nutrient cycling and related areas of environmental chemistry and biology. FIU is an affirmative action/equal opportunity employer.

Florida State University

Florida State University, Department of Urban and Regional Planning. Tenurable nine month position in environmental and natural resources planning at assistant professor level beginning August 1991. Requirements include PhD in planning or related discipline. Research and planning experience in environmental and natural resources planning preferred. Primary interests should include one or more of the following areas: air quality, water quality, solid and hazardous waste, hazards mitigation, open space, public lands, energy, or planning for other natural resources. Responsibilities include teaching in graduate planning program and development of research activities. The Department, located in the College of Social Sciences, has 13 faculty and 90 graduate students. The MSP and PhD degrees are offered, as well as an undergraduate minor. Graduate specializations include environment and natural resources, growth management and comprehensive planning, housing and community development, transportation, health and aging, and planning for developing areas. Send curriculum vitae, a letter describing relevant research and teaching interests and experience, and names of four referees to:

Dr. Charles E. Connerly, Chair
Academic Personnel Committee
Dept. of Urban & Regional Planning (R-117)
Florida State University
Tallahassee, FL 32306.

Applications will be accepted through December 15, 1990. Women and minorities are encouraged to apply. Florida State University is an affirmative action/equal opportunity employer.

Georgia Institute of Technology

The School of Civil Engineering is seeking an individual to fill a tenure-track position in Environmental Engineering. Preference will be given to individuals with expertise in areas of toxic and hazardous waste management; biological contaminants; biological treatment and remediation systems; and process-modelling and computer applications. A position at the entry level of Assistant Professor is anticipated although appointments at all levels can be considered.

Successful applicants will be expected to teach at the undergraduate and graduate levels; acquire sponsored research; produce scholarly publications; and advise BCE, MSEnE and PhD students. Applicants should possess a doctorate in Civil or Environmental Engineering, or an equivalent, by the time of appointment and, preferably, have baccalaureate training in engineering from an accredited university. The position will be available until filled.

Please send a detailed resume and names of at least three references to:

Prof. Paul H. Sanders
Acting Director
School of Civil Engineering
Georgia Institute of Technology
Atlanta, GA 30332-0355.

Information about the Environmental Engineering program can be obtained from Dr. F. Michael Saunders, Professor and Program Coordinator, Environmental Engineering, (404) 894-2265. Georgia Tech, a unit of the University System of Georgia, is an equal opportunity/affirmative action employer.

Indiana University

The Bloomington campus of the School of Public and Environmental Affairs is recruiting for two environmental science positions starting in the 1991-92 academic year. Positions are tenure-track. Teaching at graduate and undergraduate levels will be expected, along with the demonstrated ability to establish and maintain an active, applied research program. All faculty are expected to have the appropriate terminal degree and to have demonstrated their research abilities.

Environmental Scientist/Engineer (Rank Open) - Area of research specialization open but preference

given to candidates with hazardous waste, combustion engineering, or atmospheric sciences background. Post-doctoral research experience preferred. Interested candidates should send their application (including a vitae) to:

Dean John L. Mikesell
School of Public and Environmental Affairs
Indiana University
Bloomington, IN 47505

University of North Carolina at Charlotte

The Department of Civil Engineering, The University of North Carolina at Charlotte invites applications for a tenure-track position in an interdisciplinary biotechnology program. Candidates with a background in biotechnology with research and practical experience in industrial fermentation/bioprocess engineering are preferred. The successful candidate will work with an interdisciplinary team of faculty from the Chemistry Department, Biology Department, and College of Engineering. This tenure-track position at the Assistant or Associate Professor level requires a doctoral degree or near completion of same in Civil Engineering or a biotechnology related field. Duties include undergraduate and graduate teaching, student advising, pursuit and development of sponsored research, and participation in on-going research. Good communication skills in both spoken and written English are necessary and University teaching and/or research experience is desirable. The position will be available August 16, 1991. Applications must be received by February 1, 1991 to receive full consideration. Applicants should send a complete resume including publications, transcript copy or list of courses included in graduate program and the names, addresses and telephone numbers of four references to:

Dr. L. Ellis King, Chairman,
Department of Civil Engineering
The University of North Carolina
at Charlotte
Charlotte, NC 28223.

The University of North Carolina at Charlotte is an equal opportunity/affirmative action employer.

Oklahoma State University

Applications are invited for the following position in Environmental and Water Resources Engineering program in the School of Civil Engineering at Oklahoma State University. Tenure-track/Tenured faculty. Rank open, 9-month appointment, salary commensurate with rank and experience. PhD in environmental engineering or related field. Any primary research interest considered. However, preference may be given to individuals interested in developing research programs and coursework in one or more of the following: solid waste management; sludge management; industrial and hazard-

ous residuals; and environmental aquatic chemistry. Research funding opportunities are available at the institutional, state, and national levels. Available August 1991. Applications will be accepted until the position is filled. Submit a resume and the names, address, and telephone numbers of at least three references to:

Dr. Robert K. Hughes, Head
School of Civil Engineering
207 Engineering South
Oklahoma State University
Stillwater, OK 74078.

Oklahoma State University is an affirmative action/equal opportunity employer.

Tennessee Technological University

The Center for the Management, Utilization and Protection of Water Resources at Tennessee Technological University is an interdisciplinary research unit which is supported by substantive State resources. The Center addresses the following areas:

- Allocation and control of public waters.
- Satisfaction of quantitative and qualitative water needs.
- Preservation of water quality in resource development activities.

It involves the Colleges of Engineering, Arts and Sciences, Agriculture and the Tennessee Cooperative Fisheries Research Unit.

Assistant/Associate Professor of Civil (Water Resources) Engr. Position Requirements

- Provide water resources expertise to the Center's research, teaching, and public service roles.
- Develop long-term research programs in the area of water resources.
- Develop models to simulate water body dynamics of lakes, reservoirs, streams, cooling ponds, and other aquatic systems, using multi-dimensional mathematical and numerical models.
- Attract external funds for support of a research program in the water resources area.
- Teach courses at the undergraduate and graduate level in water resources with emphasis on modeling aquatic systems.

Qualifications

Applicants must hold a degree in engineering with an earned doctorate in water resources or related areas; have a record of research publications and external funding; be able to demonstrate an expertise in hazardous waste treatment, chemical and physical fate of conservative and non-conservative parameters of water quality; be able to relate to industry/government and have good interpersonal skills. Preference will be given to persons having or

having the ability to obtain a Tennessee professional engineers license within a reasonable period of time.

This position is to be filled at the Assistant or Associate Professor level and is a tenure-track position. The position is available January 15, 1990. Rank and salary will be commensurate with qualifications and experience. Applicants should submit a complete resume with names, addresses, and telephone numbers of three references no later than November 15, 1990, to the following:

Dr. V. Dean Adams, Director
Center for the Management,
Utilization and Protection of Water
Tennessee Technological University
P.O. Box 5033
Cookeville, TN 38505
☎(615) 372-3507

Assistant/Associate Professor of Civil (Environmental) Engineering Position requirements:

- Provide technical support of environmental engineering aspects of the Center's research, teaching and public service roles.
- Develop long-term research programs in the area of environmental engineering.
- Operate an environmental engineering research program in a highly independent, self-motivated manner.
- Attract external funds for support of a research program in the environmental areas.
- Teach courses at the graduate and undergraduate level.

Qualifications:

Applicants must hold a doctorate in civil or environmental engineering; have a record of research publications and external funding; be able to demonstrate an expertise in hazardous waste treatment, chemical and physical fate of conservative and non-conservative parameters of water quality; be able to relate to industry/government and have good interpersonal skills. Preference will be given to persons having or having the ability to obtain a Tennessee professional engineers license within a reasonable period of time.

This position is to be filled at the Assistant or Associate Professor level and is a tenure-track position. The position is available January 15, 1990. Rank and salary will be commensurate with qualifications and experience. Applicants should submit a complete resume with names, addresses, and telephone numbers of three references no later than November 15, 1990 to the following:

Dr. V. Dean Adams, Director
Center for Management,
Utilization and Protection of Water Resources
Tennessee Technological University
P.O. Box 5033
Cookeville, TN 38505
☎(615) 372-3507

TTU is an equal affirmative action/equal opportunity employer.

Texas A&M University

The Department of Civil Engineering at Texas A&M University has a position open in all areas of Environmental Engineering. Special consideration will be given to those candidates with additional expertise and/or practical experience in numerical analysis and computational mechanics; risk analysis (including applied probability and statistics); expert systems (including uncertainty analysis) and artificial intelligence; control theory, robotics, and automation; engineering design (including CADD and decision analysis); and systems engineering (including quality management and human factors).

Ideal candidates will have a proven track record of refereed publications, funded research, effective teaching, and a clear potential for leadership. This position is tenure-track. Rank and salary are commensurate with qualifications and experience. This position will be filled on a timely basis.

Interested persons should send summaries of personal data, education, publications, professional experience, and any other noteworthy accomplishments, together with names and addresses of three references to:

Faculty Search Committee (Env)
Department of Civil Engineering
Texas A&M University
College Station, TX 77845-3136

APPLICATION FOR MEMBERSHIP in the Association of Environmental Engineering Professors

Name _____

Official Title _____ Dept. _____

Business Address _____ Tel. _____

Home Address _____ Tel. _____

Applying for: Membership Status Rank: _____ Affiliate Status

PLEASE ATTACH RESUME

Dues are payable to the Association on a calendar year basis.
The AEEP annual dues payment, prorated according to the date of application, is shown below.

INITIAL DUES PAYMENT REQUIRED BASED ON RANK AND DATE OF APPLICATION

RANK	1 Jan.	1 Apr.	1 July	1 Oct.
	31 Mar.	30 June	30 Sept.	31 Dec.
Professor	\$50.00	\$37.50	\$25.00	\$12.50
Associate Professor	25.00	18.75	12.50	6.25
Assistant Professor	25.00	18.75	12.50	6.25
Affiliate Member	20.00	15.00	10.00	5.00

Please return this form along with your dues to:

Gene F. Parkin
Department of Civil and Environmental Engineering
University of Iowa
Iowa City, IA 52242

Enclosed are my AEEP dues in the amount of: \$ _____

Signature

Date

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Association Of Environmental Engineering Professors

NEWSLETTER

Gregory D. Boardman
Editor, AEEP Newsletter
Department of Civil Engineering
Virginia Polytechnic Institute and State University
Blacksburg, Virginia 24061

VA-
P.O. Box
61089

- access to all AEEP publications at low member prices.
- invitation to the annual Membership Meeting and Luncheon, held at the annual conference of the Water Pollution Control Federation.
- the opportunity to participate in many AEEP committees and activities.

Organization

The Association is administered by an elected Board of Directors that serves without stipend. The Board is comprised of nine members, three of whom are elected each year for a three-year term. The Board elects its own officers: President, Vice-President, Secretary, and Treasurer.

The work of the Association is carried out primarily by committees that report directly to the Board. Membership on committees is an excellent way to participate in AEEP activities and have a positive impact on the profession. Committee membership is open to all members and is especially encouraged among the Association's young members.

Becoming a Member

Membership in AEEP offers important benefits to individuals, their programs, their students, and their profession. All individuals eligible for membership are urged to join the Association and to participate in the full range of benefits and opportunities.

Regular membership in AEEP is open to all university staff members of professional rank (assistant, associate, full, and emeritus professor) engaged in educational programs in the sciences and technologies of environmental protection. The annual dues vary with rank:

Full Professors	\$50
Assistant and Associate Professors	\$25

AEEP members who become emeritus professors pay no dues.

Application for regular membership is made by sending the completed application form (see back of this brochure), a curriculum vita, and a check (made out to AEEP) to the Secretary.

Affiliate Membership is open to individuals associated with academic programs, but who are not eligible for regular membership. These include professors outside of North America, instructors, adjunct professors, research professors, and individuals affiliated with institutions other than universities, but

who also hold academic appointments in environmental programs.

Application for affiliate membership is the same as for regular membership. The annual dues for affiliate members is \$20.

Sustaining Membership is available to organizations employing environmental engineers and scientists and to individuals outside universities. Sustaining membership acknowledges the special relationship between AEEP and those who employ the graduates of AEEP programs. The financial support provided by sustaining members allows the organization to carry out many special programs that benefit the organization, the profession, and the employers. Sustaining members receive copies of all AEEP publications and are invited to all AEEP events. Annual dues for sustaining members are \$250. Organizations or individuals desiring more information on sustaining membership should write to the Secretary.

Membership Application

Last Name _____

First Name and Initial _____

Title _____

Address _____

Telephone No. _____

Facsimile No. _____

Please mail this application, along with your curriculum vita and a check made out to AEEP, to the Secretary:



Association Of Environmental Engineering Professors