



Newsletter

Published Quarterly by the Association of Environmental Engineering Professors

VOLUME 15, NO. 4

OCTOBER, 1980

PRESIDENT'S CORNER

At the last AEEP general membership meeting, concern was expressed about the decreased attendance at these meetings. Two factors were discussed in relation to the decrease. The more direct and less complex of these was the timing of the meeting. Traditionally, the meetings have been held at 8:00 p.m. on Tuesday during the WPCF and Purdue Industrial Waste Conferences. While there has been alternate speculation that decreased attendance by academics at the Purdue Conferences is as much responsible as anything, there is widespread agreement that the time is inconvenient relative to dinner at Morris Bryants, etc.

At the Federation Meeting, serious intrusion upon the hospitality room circuit is suspect. Toward testing this hypothesis, the general membership meeting has been shifted to a luncheon format (sandwich buffet) on Monday, September 29 at the Las Vegas Meeting. (Obviously, there are other lures than just the hospitality rooms in Las Vegas). This setting will also place a strict time limit on the meeting.

At the Purdue meeting next May the current intent is to hold the AEEP membership meeting immediately after the technical sessions in the afternoon, again with a strict time limitation. Although if the luncheon format is successful and facilities are available, a similar approach might be considered for Purdue.

The other issue associated with decreased attendance was lack of interest in the organization. Among the suspected causative factors were lack of purpose and direction for AEEP due to loss of participation by senior members of the profession. There is some truth in the observation that some individuals are no longer as active in the organization as they were at one time. Some, in fact, are no longer members. The reasons are complex. Changes in career activities and goals sought within larger and more recognized organizations play a substantial role. There isn't time for everything. Some people have left academia. Others have diverted into administration within their institutions which changes the nature of organizations important to them.

Another thought is that these people really were not so senior when they were the guiding forces in AEEP and the profession. Furthermore, it should be recognized that many of the "senior people" did actively participate in the Education Conference in Toronto. Still, there may be a real

need to maintain or revitalize the participation in AEEP by the "grey beards." Toward this end, an invitation or perhaps better, a challenge is issued to the senior members of the profession and AEEP to revitalize their participation. The Board of Directors and the AEEP general membership should express their thoughts on this issue, the latter group in writing to the Board.

I believe there is also a need for the general membership to communicate their feelings on things the organization should be doing. This should be done on a routine basis with a charge to the Board of Directors to formally review and consider such communications. A tear out sheet in each issue of the Newsletter could serve this purpose. To start with, communicate with the Board if you like this idea.

A final observation in closing out my last communication: the Toronto Education Conference overall was a positive and valuable meeting. There were numerous developments worthy of comment and I expect these to be contained in the Conference Report currently in assembly. However, one problem evolved and it most likely needs continued attention. Considerable concern was expressed about issuance of degrees containing the word engineering to individuals with science backgrounds who have not obtained or gone back and obtained an undergraduate engineering degree.

Equivalency via program prerequisites is a frequently used avenue but this is ill defined and became the subject of some very active discussion in Toronto. The engineers versus scientists conflicts that evolved were unexpected and surprising to a number of people, myself included, and point to the need to further explore this matter within the organization.

Research is science and engineering is the application of science. At the graduate education level there is a wide range over which the applied nature of the discipline can vary, especially at the master degree level, from a strong practice and design orientation to policy and regulation orientation to primarily research orientation. In contrast, the Ph.D. degree is a research degree, a distinction that became clouded in some discussions in Toronto. There is a need to be concerned about scientists doing bad engineering. But, there is an equal need to show concern about engineers doing bad science. Over emphasis on the former and neglect of the latter must be guarded against.

Roger A. Minear

AEEP MEETINGS AT LAS VEGAS

BOARD OF DIRECTORS: Sunday, September 28, 1980
9:00 a.m.
Meeting Room No. 5
Las Vegas Convention Center

GENERAL MEMBERSHIP: Monday, September 29, 1980
12:15 - 1:45 p.m.
Meeting Room No. 1
Las Vegas Convention Center

Persons wishing to bring matters to the attention of the Board should communicate with President Minear as soon as possible. The appropriate address is:

Dr. Roger A. Minear
Senior Scientist
Radian Corporation
8500 Shoal Creek Blvd.
P.O. Box 9948
Austin, Texas 78766
(512) 454-4797

The General Membership Meeting will include a luncheon sandwich buffet (includes non-alcoholic beverages) which is available for \$7.00. Persons planning to attend should notify Cliff Randall (703-961-6131) of their intentions as soon as possible. However, all members are urged to attend and share in the buffet even if it is not possible to notify Cliff ahead of time.

DEADLINE FOR JANUARY NEWSLETTER

Items to be included in the next issue of the NEWSLETTER should be received by the editors no later than Tuesday, January 6, 1981. Items of general interest to the profession should be submitted to:

J. F. Judkins, Jr. and J. M. Morgan
Co-Editors, AEEP NEWSLETTER
Department of Civil Engineering
Auburn University, Alabama 36849

AUDIT COMMITTEE REPORT

The Audit Committee (William R. Knocke and Robert C. Hoehn) have examined books of the organization and found them to be in order. The final end of the year (calendar 1979) assets of AEEP are:

General Fund	\$ 2,439.56
Workshop Fund	0.00
NSF Fund	0.00
Publications Account	6,275.87
Savings Account	12,175.52
Total	\$20,890.95

AEEP/ENGINEERING-SCIENCE RESEARCH AWARD

The AEEP/Engineering Science award for the best doctoral thesis contributing to the advancement of environmental engineering and science for 1979-80 goes to:

Dr. Thomas Keith Jewell (Dissertation Author)
Union College
New York

and,

Dr. Donald Dean Adrian (Major Professor)
Department of Civil Engineering
University of Massachusetts
Amherst, Massachusetts 01002

Dr. Jewell's dissertation is entitled, "Urban Stormwater Pollutant Loadings." The AEEP/Engineering Science Award consists of \$2000 to be divided equally between the dissertation author and major professor.

AEEP/NALCO RESEARCH AWARD

The winners of this year's AEEP/NALCO award for significant chemical research in Industrial Waste Treatment are:

Dr. Mirat D. Gurol (Dissertation Author)
Department of Civil Engineering
Drexel University
Philadelphia, Pennsylvania 19104

and,

Dr. Philip C. Singer (Major Professor)
Department of Environmental Sciences and
Engineering
University of North Carolina
Chapel Hill, North Carolina 27514

Dr. Gurol's dissertation is entitled: "Kinetic Behavior of Ozone in Aqueous Solution: Decomposition and Reaction with Phenol." The award consists of \$2500 to be divided equally between the dissertation author and major professor.

AAEE

Suggestions for nomination for certification as diplomats of AAEE are currently being sought by the AEEP Board of Directors. Persons nominated by the AEEP Board must meet the basic requirements (registration and 15 years experience), but need only take an oral examination.

The annual meeting of the AAEE Board of Directors is scheduled for October 23, 1980. One of the issues to be considered will be the future role and activities of AAEE. If you have comments, views, opinions, etc. that you wish brought to the attention of the Board, contact Walt Purdom (AEEP contact on the AAEE Board) at the address shown below.

Dr. P. W. Purdom, P.E.
Director, Environmental Studies Institute
Drexel University
Philadelphia, Pennsylvania 19104
(215) 895-2265

CALL FOR PAPERS

Papers addressing the topic of "Disinfection and Chemical Oxidation" are being sought for presentation at the 1981 AIChE National Meeting which is to be held in New Orleans during November 1981. Persons wishing to submit papers for possible inclusion on the program should send two copies of a one page abstract to either of the individuals mentioned below on or before **January 1, 1981**.

Dr. Charles N. Haas
Dept. of Chemical and Environmental Engineering
Rensselaer Polytechnic Institute
Troy, New York 12181

Dr. Paul V. Roberts
Dept. of Civil Engineering
Stanford University
Stanford, California 94305

WETLANDS ROLE IN MANAGEMENT OF WASTEWATER

A new 16mm film in sound and color has been completed describing research supported by the National Science Foundation on the use of wetlands as an alternative to conventional methods for advanced or tertiary treatment of wastewater. The film documents research completed and underway on this innovative concept and suggests directions for further studies to seek a better understanding of the potentially larger role that wetlands can play in management of the nutrient and water content of wastewaters.

Entitled "Wetlands — Our Natural Partners in Wastewater Management," the 38-minute film portrays research being conducted by personnel from:

- University of Michigan's Department of Chemical Engineering.

- Williams & Works, a consulting engineering firm in Grand Rapids, Michigan.
- The Houghton Lake (Michigan) Sewer Authority.
- University of Florida's Center for Wetlands.
- Boyle Engineering Corporation's Orlando, Florida office.
- The State of Florida's Epidemiology Research Center in Tampa.

The film describes background basic and applied research that led to the current, full-scale, proof-of-concept experiment in which the Houghton Lake community's oxidation pond effluent is being placed into a natural wetland. The effluent's content of nitrogen and phosphorus is utilized by wetland vegetation, thus increasing the wetland's productivity. At another Michigan location near Vermontville, a wastewater management site that was designed for land-application but which became a wetland is being studied to determine conditions under which the wetland concept for treatment of secondary wastewater treatment plant effluents may be used where natural wetlands do not now exist.

Complementing the wetland research in Michigan, cypress wetlands in Florida near Gainesville and Jasper are being studied to determine the effects of wastewater application on these wetland ecosystems. This research will lead to a better understanding of both the short and long range effects and provide the scientific and engineering background needed for **decisions on potentially more intensive use of wetlands for conserving water and beneficially using the plant nutrients contained in domestic wastewater.**

Over the eight-year period since the initial awards were made by the National Science Foundation, 24 funding actions totalling \$2,404,965 have sustained this research. Initiated as part of the Waste Management Strategies element of the Regional Environmental Systems program, support continued through the Residuals Management element of the Regional Environmental Management and the Community Water Management programs.

Current NSF support of research on the wetlands concept for wastewater management is through the program in Appropriate Technology. The wetlands concept is adaptable to both small and intermediate scales; is amenable to being managed by its users; is conserving of capital, energy and natural resources; and is in harmony with the environment. The savings in capital investment at Houghton Lake over land application, the next least-cost alternative, was estimated to be \$1,200,000.

The film was produced by Forum, Ltd. of Falls Church, Virginia under NSF Contract No. PFR 79-19067. Film Director was Ronald G. Capalaces. Technical assistance in production of the film was provided by Susan Bartlett, Audio-Visual Production Officer and by Dr. Edward H. Bryan, Program Manager for Appropriate Technology, The National Science Foundation, Washington, D.C. For information regarding availability of the film, contact:

Dr. Edward H. Bryan, Program Manager
Directorate for Engineering and Applied Science
National Science Foundation
Washington, D.C. 20550

ACADEMIC MARKET
PLACE

SCHOOL: University of Central Florida

POSITION: Assistant Professor

QUALIFICATIONS: Doctorate in Engineering

RESPONSIBILITIES: Undergraduate and graduate teaching and research

APPLICATION DEADLINE: As soon as possible.

CONTACT: Dr. M. P. Wanielista
University of Central Florida
P.O. Box 25000
Orlando, Florida 32816
(305) 275-2155

SCHOOL: Florida Institute of Technology

POSITION: Assistant Professor of Environmental Engineering

QUALIFICATIONS: B.S. in Engineering, Ph.D. in Chemical Engineering or Environmental Engineering

RESPONSIBILITIES: Undergraduate and graduate teaching and research in water and wastewater treatment and air pollution control

APPLICATION DEADLINE: January 1, 1981

CONTACT: Dr. Donald R. Mason, Head
Dept. of Environmental Engineering
Florida Institute of Technology
Melbourne, FL 32901

SCHOOL: Louisiana State University

POSITION: Assistant Professor or higher (several positions)

QUALIFICATIONS: Ph.D. degree, interest in geotechnical, water resources, environmental, highway materials and structural

RESPONSIBILITIES: Undergraduate and graduate teaching and research

APPLICATION DEADLINE:

CONTACT: Dr. Roger K. Seals, Chairman
Department of Civil Engineering
Louisiana State University
Baton Rouge, LA 70803

SCHOOL: Illinois Institute of Technology

POSITION: Assistant Professor of Environmental Engineering (tenure track)

QUALIFICATIONS: Ph.D. Degree, strong background or undergraduate degree in Chemical Eng., teaching and research interests in industrial pollution control. Some experience desirable, but not necessary.

RESPONSIBILITIES: Undergraduate and graduate teaching, direction of graduate research, sponsored research involvement

APPLICATION DEADLINE: Open. Position available for mid-year appointment.

CONTACT: Dr. James W. Patterson, Chairman
Pritzker Department of Environmental Engineering
Illinois Institute of Technology
Chicago, IL 60616
312/567-3535

SCHOOL: Clemson University

POSITION: Associate Professor

QUALIFICATIONS: Ph.D. in Engineering and established record of research productivity in the biological wastewater treatment process.

RESPONSIBILITIES: Graduate research and teaching.

APPLICATION DEADLINE: November 1, 1980

CONTACT: Dr. Tom Keinath, Head
Department of Environmental Systems Engineering
Clemson University
Clemson, SC 29631

SCHOOL: Mississippi State University

POSITION: Assistant Professor

QUALIFICATIONS: B.S. in Civil and Ph.D. in Environmental with interest in water and wastewater treatment

RESPONSIBILITIES: Undergraduate and graduate teaching and developing research

APPLICATION DEADLINE: Position starting January, 1981

CONTACT: Dr. R. M. Scholtes, Head
Department of Civil Engineering
Drawer CE
Mississippi State University
Mississippi State, MS 39762

SCHOOL: Cornell University

POSITION: Assistant Professor - Environmental Engineering (tenure track)

QUALIFICATIONS: Ph.D., research experience on the fate of trace constituents in the aquatic environment or in treatment processes

RESPONSIBILITIES: Teaching and research in environmental engineering.

APPLICATION DEADLINE: The position will be filled in January 1981 or later

CONTACT: Richard I. Dick
School of Civil and Environmental Engineering
Cornell University
Ithaca, New York 14853

WELCOME TO NEW
AEEP MEMBERS

V. Dean Adams
Utah Water Research Lab
Utah State University
Logan, UT 84321
(801) 750-3185

Manuel Jose Teixeira Carrondo
Dept. of Environmental Sciences
Univ. Nova de Lisboa
Av. da Republica, 61, 1
1000 Lisboa, PORTUGAL

Joseph P. Gould
School of Civil Engineering
Georgia Institute of Technology
Atlanta, GA 30332
(404) 894-2265

Zahid Mahmud
Rainbow Irrigation Systems
P.O. Box 70
Fitzgerald, GA 31750

Chet A. Rock
Dept. of Civil Engineering
457 Aubert Hall
University of Maine
Orono, ME 04469
207-581-2119

Dr. R. Perry
Dept. of Civil Engineering
Imperial College
London SW7 2BU UK

Gedaliah Shelef
Dept. of Environmental Engineering
Technion, Israel Institute of Tech.
Haifa, ISRAEL

Louis A. Vorse
Dept. of Civil Engineering
University of Detroit
4001 W. McNichols
Detroit, MI 48221

PUBLICATION OF THESIS TITLES

Ordinarily the October NEWSLETTER contains a list of theses/dissertations published during the preceding school year (July 1 - June 30). However, this year only those thirteen schools listed below have submitted lists.

U. of Alberta
Auburn
Central Florida
Clarkson
Florida Tech
Hawaii (Manoa)
Kansas
Purdue
Rensselaer
Rutgers
Stanford
Stevens Tech
Washington State

In order to give other schools an opportunity to respond, the deadline for submitting thesis/dissertation titles has been extended to December 1, 1980. Please classify each thesis/dissertation title submitted and use the standard format shown below:

TIME INTERVAL: July 1, 1979 to June 30, 1980

CLASSIFICATION OF TITLES:

Air Pollution
Agricultural Waste Management
Instrumental Methods of Analysis
Industrial Waste Treatment
Land Treatment
Non Point Pollution
Rivers, Estuaries and Lakes
Solid Wastes
Water and Wastewater Treatment
Water Management

You may also use other classifications if there are a sufficient number of titles.

FORMAT:

"Title of Paper," Name of Author (Ph.D. or M.S.), X pp.,
Month, Year, Name of University (Name of Faculty Advisor).

COMMENTS:

Since the availability of documents varies, persons interested in a specific publication will be asked to contact the Faculty Advisor directly.

DEADLINE:

Submit by December 1, 1980 to:

J. F. Judkins, Jr. and J. M. Morgan
Co-Editors
AEEP Newsletter
Department of Civil Engineering
Auburn University, AL 36849

**Application for Membership
in the
ASSOCIATION OF ENVIRONMENTAL ENGINEERING PROFESSORS**

NAME _____

OFFICIAL TITLE _____ DEPARTMENT _____

BUSINESS ADDRESS _____ TEL. _____

HOME ADDRESS _____ TEL. _____

Applying for: Membership Status (indicate rank), Affiliate Status

P L E A S E A T T A C H R E S U M E

Dues are payable in 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 April	1 July	1 Oct.
	31 Mar.	30 June	30 Sept.	31 Dec.
Professors	\$50.00	\$37.50	\$25.00	\$12.50
Associate Professors	25.00	18.75	12.50	6.25
Assistant Professors	25.00	18.75	12.50	6.25
Affiliate Member	10.00	7.50	5.00	2.50

Please return this form, along with your dues to:

Dr. C. P. Leslie Grady, Jr.
School of Civil Engineering
Purdue University
W. LaFayette, IN 47907

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

Signature Date

OFFICERS

PRESIDENT

Roger A. Minear
Department of Civil Engineering
University of Tennessee
Knoxville, Tennessee 37916
(615) 974-3320

VICE PRESIDENT

Benjamin C. Dysart, III
Department of Environmental Systems
Engineering
Clemson University
Clemson, South Carolina 29631
(803) 656-3276

SECRETARY-TREASURER

Clifford W. Randall
Department of Civil Engineering
Virginia Polytechnic Institute
and State University
Blacksburg, Virginia 24061
(703) 961-6131

DIRECTORS

Francis A. DiGiano
University of Massachusetts

Benjamin C. Dysart, III
Clemson University

John F. Ferguson
University of Washington

Donald T. Lauria
University of North Carolina - Chapel Hill

Jon C. Liebman
University of Illinois - Urbana/Champaign

Roger A. Minear
University of Tennessee

James W. Patterson
Illinois Institute of Technology

Clifford W. Randall
Virginia Polytechnic Institute

P. Aarne Vesilind
Duke University