



Association Of  
Environmental  
Engineering  
Professors

# NEWSLETTER

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SEPTEMBER 1985

## PRESIDENT'S CORNER

With the changing of the annual calendar for the Association, the Annual Meeting of the membership in conjunction with the WPCF Conference in Kansas City takes on added significance. Following the election this summer, new Board members will be introduced to the membership, as well as newly-elected Board officers. Issues regarding Bylaw changes, recruitment of sustaining members (a newly proposed membership category), Association awards and committee activities will also be discussed at the Annual Meeting. In addition, the Education Committee has scheduled a tutorial workshop on water quality modeling by Professor Donald J. O'Connor of Manhattan College for the Sunday prior to the conference. The membership is encouraged to support this excellent initial program, in what is planned to be an annual Fall event for the Association, and to **attend** the Annual Meeting on Monday.

The Fifth Conference on Environmental Engineering Education, sponsored by AEEP and AAEE, is being planned for July 1986 at Michigan Tech in Houghton. The program format will be similar to that of previous conferences with emphasis placed on integration of air, land and water issues;

computer systems; and plant design and operation concerns into the educational and research aspects of Environmental Engineering programs. This conference comes at a critical period for many programs in Environmental Engineering and should provide an excellent forum for discussion of current changes in emphasis and advances in Environmental Engineering.

Finally, as summarized in the Directory, AEEP has numerous committees and subcommittees pursuing a variety of topics. Guidelines are being developed by the Board to provide maximum opportunity for participation by the membership in committees and to allow for an orderly succession of committee members and officers. **All members interested in serving on AEEP committees are encouraged to write and indicate their interests.** Board contact members for each committee are presented in the Directory and can be contacted to learn more about the activities of the various committees.

F. Michael Saunders  
President

## AEEP NEWS AND ANNOUNCEMENTS

### Distinguished Lecturer for 1986

Professor Donald J. O'Connor has accepted our invitation to be the Distinguished Lecturer for 1986. Professor O'Connor is one of the most respected environmental engineering educators and researchers in our discipline. He has been associated with the Environmental Engineering and Science program at Manhattan College for most of his professional career. His research interests address mathematical modeling of natural water systems, and he has worked on diverse problems including modeling the fate of chemicals in the environment. His work is directed towards engineering evaluation, and in this regard he has influenced major water quality decisions on several large systems.

Professor O'Connor will be available for the lecture tour during the period between February and March, 1986. He has provided titles of two lectures for presentation at

### AEEP Workshop at WPCF Conference: "Advances in Water Quality Modeling"

Dr. Donald O'Connor of Manhattan College has agreed to present the first of a new series of workshops sponsored by AEEP to be given in conjunction with the Water Pollution Control Federation Conference each year. The seminar this year will be held on the Sunday afternoon at the start of the WPCF conference (Oct. 6) on the campus of the University of Missouri at Kansas City.

The workshop, on "Advances in Water Quality Modeling", will be divided into two lecture/discussion sessions interspersed with a refreshment break. In the first session, "A Conceptual and Mathematical Framework for Water Quality Modeling", Dr. O'Connor will review recent developments in transport phenomena, reaction kinetics, transfer mechanisms, and inputs and how they can be applied to water quality modeling. The basis of discussion will be a

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## Distinguished Lecturer

host institutions, with only one lecture being presented at any one institution:

- a. Mathematical Model of Water Quality - Theory and Application

This lecture will focus on wasteload allocations. The lecture will be adapted to suit the specific wishes of the host institution. The lecture may be a general overview seminar, or it may be directed towards a specific problem such as TDS, DO, SS, eutrophication, or toxic substances. The lecture may also emphasize freshwaters and lakes, or tidal rivers and estuaries.

- b. Mass and Momentum Transfer at Environmental Interfaces

This lecture presents the theoretical development of transfer relations that describe the exchange of dissolved gases, particulate matter and toxic substances. Consideration will be given to air-water and water-bed transfers, with comparison of models to laboratory and field data, and with application to water quality analysis.

Institutions which are interested in hosting Professor O'Connor should send a letter request by November 15 to: Richard G. Luthy, Professor and Acting Head, Department of Civil Engineering, Carnegie-Mellon University, Pittsburgh, PA 15213. Professor O'Connor's schedule may accommodate visits to ten or eleven host institutions on a staggered itinerary.

The letter request should contain the following information:

1. Name of institution and contact person.
2. Whether the program will be co-hosted with another institution.
3. Preferred lecture topic and whether a video tape of the lecture could be made.
4. Preference or restrictions on date for a visit during February-March; please try to be as flexible as possible.
5. A brief statement describing how a visit by Dr. O'Connor would fit into your institution's current academic activities.

Costs of the lecture tour are shared among the host institutions on a total lump sum, fixed cost basis. It is anticipated that each university would contribute approximately \$630 to cover cost of travel and living expenses, as well as to provide a modest honorarium. The Distinguished Lecturer Committee will review the requests and arrange an itinerary. It is anticipated that there will be more requests for visits than may be accommodated on one tour. In this case the Committee's decision will be guided by several criteria including: special consideration for those institutions which have not been visited by a Distinguished Lecturer within the last year or two, focus of research and teaching activities at the institutions, and the possibility of having two or more institutions co-host a visit.

## Emeritus Members

The AEEP Board requests the assistance of the membership in identifying those members who have retired and should be granted emeritus AEEP membership status. Kindly send these suggestions with supporting data (retirement date, current address) to President Saunders.

## AEEP Workshop

matrix of types of water bodies on one axis and various water quality concerns on the other. The second session will focus on one block of that matrix, **toxic chemicals in fresh water systems**, with emphasis on partitioning with the bed and transfer to the atmosphere, and chemical and bacterial decay mechanisms.

In line with the philosophy of AEEP workshops held in recent years, the workshop is designed to make recent advances more accessible to environmental engineering educators and students so that there is a shorter time lag and lesser knowledge gap between research in a certain area and its use in the classroom. To facilitate this transfer of knowledge, lecture notes (outlines and copies of figures, tables and relevant equations) will be given to all participants.

Dr. O'Connor has been on the faculty at Manhattan College since 1952, is presently a principal consultant to HydroQual, Inc., and a member of the National Academy of Engineering. He has directed over 100 water quality control projects involving mathematical modeling of rivers, lakes, estuaries, and coastal areas. He has also conducted and supervised research projects funded by the EPA, NSF, NOAA and the Corps of Engineers.

The seminar is an AEEP event and is not one of the WPCF-sponsored pre-conference seminars: hence, this notice and an announcement/registration form sent to all AEEP members are the only ways you will know of this workshop. Please share this information with students and colleagues who are not AEEP members. Costs will be \$25 for AEEP members, \$10 for students, and \$55 for others. For further information and registration forms, contact:

Dr. Desmond Lawler  
Department of Civil Engineering, ECJ 8.6  
University of Texas  
Austin, Texas 78712  
(512) 471-4595

## AEEP Computer Software Manual

The AEEP Computer Software Manual is under review by members of Dr. John Crittendon's committee. It is not too late to include a contribution, if it can be received in final form by September 15, 1985. Please call John at (906) 487-2798. An interim listing of the models in the manual is available from John.

John reports that: "... At the present time, we plan to put all the contributions which are mainly microcomputer programs on a tape which can be read by a mainframe computer. For an individual to obtain the software, he/she will request the tape and load it on his/her mainframe computer. At this point, the software can be down-loaded from the mainframe to an individual's microcomputer. This appears to be the simplest solution to distributing the software because there are so many microcomputer formats. The down-loading capability is available at most universities. (In most cases, all you need is a modem and call up your mainframe computer. Also, we have communicated between an IBM-PC and a MacIntosh using modems to transfer software from one machine to the other.) To check for errors during down-loading, the user can borrow a complete listing of all the programs for a short time or purchase a copy of the listing. (The transfer of software is error-free if you use a hard line instead of a phone line, which may be available at some universities.)"

## Environmental Engineering Education Conference

The Fifth Conference on Environmental Engineering Education will be held July 21-23, 1986 on the campus of Michigan Technological University in Houghton, Michigan. The Conference will deal with environmental engineering education at both the advanced undergraduate and graduate levels; however, the principal focus will be on the M.S. level as preparation for research and professional practice. The Conference will be the fifth in a series co-sponsored by the American Academy of Environmental Engineers (AAEE) and the Association of Environmental Engineering Professors. Previous conferences were held at Harvard in 1960, Northwestern in 1967, Drexel in 1973, and Toronto in 1980.

The Conference Planning Committee consisting of Bob Baillo (chair), Bob Baumann, Paul Busch, Jon Liebman, Jim Patterson, and Fred Pohland have identified three contemporary issues on which the conference will focus. Task Committees have prepared and reviewed initial drafts of position papers on each focal issue. The issues and Task Committee Leaders are:

1. Integrated Air, Water, Land Approaches in Environmental Engineering.  
Max Berthouex (Wisconsin)  
Bill Thacker (Nat. Council for Air & Stream Impr.)
2. Role of Computers in Environmental Engineering Education and Research.  
John Crittenden (Michigan Tech)  
J. B. Neethling (UCLA)
3. Role of Design and Operation in Environmental Engineering Education.  
Davis Ford (Engineering Science)  
Cal Patterson (Engineering Science)

The next Planning and Task Committee meeting is scheduled for Tuesday afternoon, October 8 at the WPCF

Conference in Kansas City (see the conference program for time and place). At that time, second drafts of the position papers will be available for distribution and review. Academicians and practitioners interested in joining the Task Committees are encouraged to attend.

### AEEP Members Honored

AEEP is pleased to congratulate Dr. Walter J. Weber, Jr. on his election to the National Academy of Engineering. Dr. Weber was cited for his contributions to the field of environmental science and engineering, in particular the development of new and advanced technologies for treatment of waters and waste waters.

AEEP also congratulates Drs. G. Lee Christensen, James M. Symons, and T. Viraraghavan who were named Diplomates of the American Academy of Environmental Engineering last year.

### Annual Membership Meeting

The annual membership meeting/luncheon will be held at Noon, Monday, October 7, in Kansas City, Missouri in conjunction with the WPCF Conference. An announcement will be mailed giving the location and cost.

### Deadline for the December 1985 AEEP Newsletter

Anyone interested in submitting articles for the December 1985 issue of the AEEP Newsletter should do so no later than October 1, 1985. Articles should be mailed directly to the editor.

## GENERAL NEWS

### NSF Reorganization

The following description of the reorganized Environmental Engineering Program at NSF was forwarded to the Newsletter by Edward H. Bryan, Program Director. Program descriptions for the entire Engineering Directorate may be obtained from him. The funding level for fiscal year 1985 was approximately \$4.2 million.

**ENVIRONMENTAL ENGINEERING**  
Edward H. Bryan, Program Director,  
(202) 357-7737

Environmental engineering deals with the impact of human activities that adversely affect the usefulness of water, air, and land. The practice of environmental engineering involves consideration of all factors that influence the location, concentration, and impact of solid, liquid, and gaseous pollutants on environmental quality, for example:

- Hydrodynamics of mixing, diffusion, dispersion, and sedimentation
- Chemical reactions in water, on land, and in air
- Biological activity of plants and animals on land and in water

Environmental engineers design systems to provide water of acceptable quality, treat wastewater prior to reuse or discharge to the environment, and manage the residues produced by human activities that would otherwise adversely interfere with those activities.

This program supports research directed toward a better understanding than now exists of factors relating to and influencing the practice of environmental engineering. Research supported by this program includes:

### Environmental Quality

Quality aspects of water supply; design of innovative water and wastewater treatment processes; and relating knowledge of the diffusion, dispersion, and interactions of pollutants as affected by physical, chemical, and biological environmental factors to environmental engineering design practice. Fundamental principles are sought that underlie the largely empirical procedures used to insure adequate supplies of water for industrial and domestic uses, design of storm and sanitary drainage systems and to relate our understanding of pollutant dispersion in air, water and on land to design of engineered systems to maintain acceptable standards of environmental quality.

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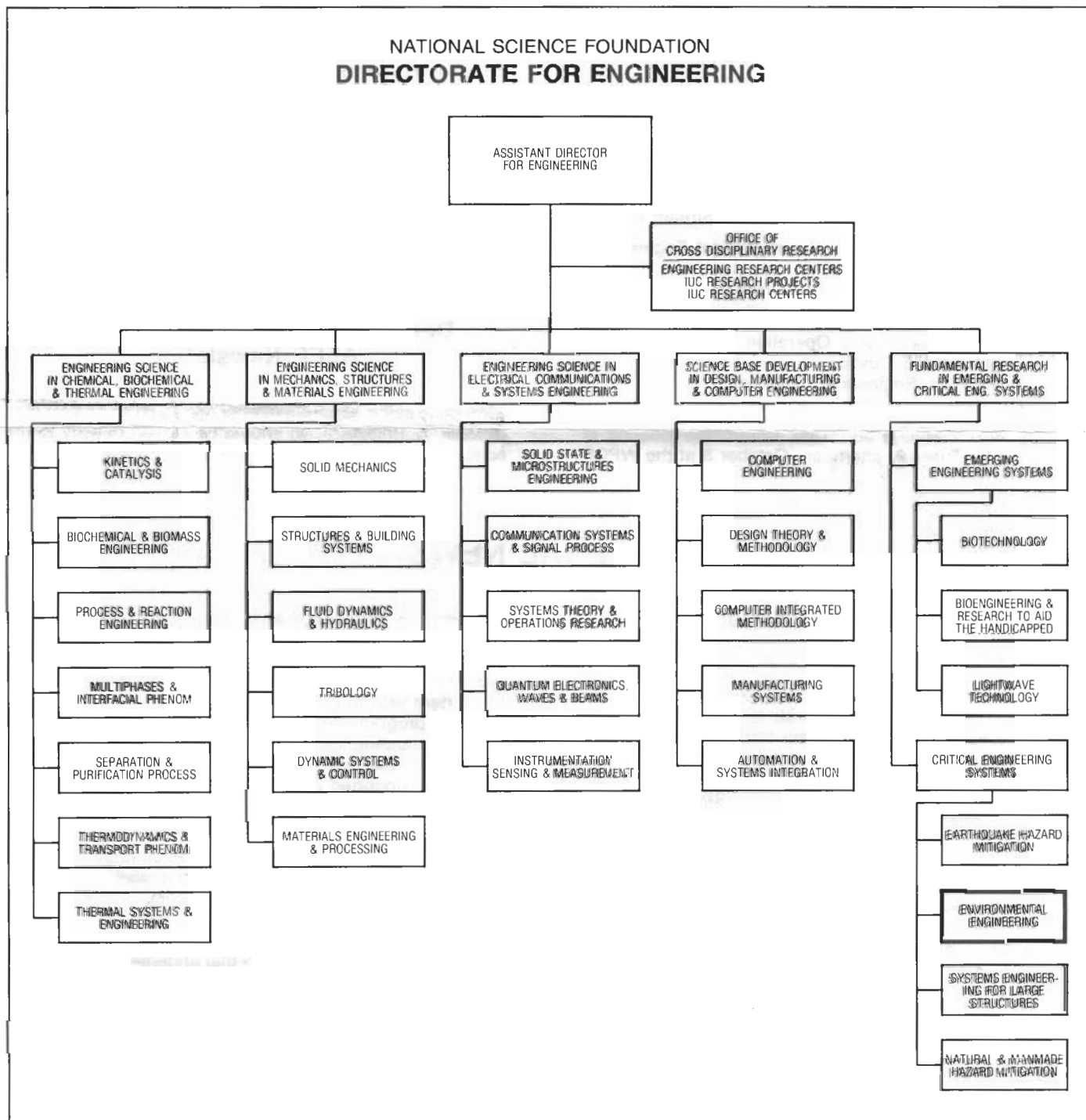
**Water Borne Pollutants**

Innovative approaches are needed in dealing with pollutants such as halogenated hydrocarbon contaminants in water and on the search for a better basic understanding of water and wastewater treatment processes as steps toward improving their design. Emerging issues include addressing the problem of groundwater contamination by hazardous wastes, which involves obtaining a better understanding than now exists of pollutant transport in subsurface flow, and applicability of advances and innovation in biotechnology to environmental engineering practice.

**Canadian Association on Water Pollution Research and Control (CAWPRC)**

The CAWPRC was formed in 1984 from the merger of the Canadian Symposium (on water pollution research) and the Canadian National Committee of the IAWPRC. Membership in the CAWPRC provides a subscription to the Water Pollution Journal of Canada. AEEP members interested in joining the CAWPRC should contact:

Dr. Bruce Jank  
 P.O. Box 5050  
 Burlington  
 Ontario L7R 4A6  
 Canada



# MEETINGS

## Call for Papers

The 1986 annual conference of the Canadian Society for Civil Engineering will be held in Toronto, May 14-16, 1986. Papers are invited relating to construction, environmental, hydro-technical, management, municipal, structural and transportation topics. Abstracts not exceeding 500 words should be submitted by Oct. 11, 1985. Submissions and inquiries should be addressed to Imants Hausmanis, P.Eng., technical program coordinator, c/o CSCE Ontario Region Office, 191 College Street, Toronto, Ontario M5T 1P9; tel. 416-252-5451.

Papers are also invited for a Speciality Conference on Computer Applications being held concurrently with the annual conference of the Canadian Society for Civil Engineering. Abstracts not exceeding 500 words should be submitted by Oct. 11, 1985 to: Denis Hall, P.Eng., c/o Centre for Advanced Technology Education, Ryerson Polytechnical Institute, 350 Victoria Street, Toronto, Ontario M5B 2K3; tel. 416-979-500, ext. 7200.

## IWPC Meeting Programme

The Institute of Water Pollution Control (Great Britain) has announced the following conferences and symposia for 1986:

- 14-15 May 1986: European Symposium:  
"Sewerage: Value for Money"  
Heathrow Penta Hotel, London.
- 8-11 September 1986: Annual Conference and Exhibition,  
Birmingham Metropole Hotel, N.E.C.,  
Birmingham.

# WELCOME TO NEW AEEP MEMBERS

Dr. Robert C. Bales  
Hydrology & Water Resources  
University of Arizona  
Tucson, AZ 85721  
(602) 621-7113

Dr. William W. Clarkson  
Civil & Environmental Engineering  
Clarkson University  
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(315) 268-6542

Dr. M. Yavuz Corapcioglu  
Civil Engineering  
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Dr. Mark Kennedy  
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Dr. Boris Khudenko  
School of Civil Engineering  
Georgia Institute of Technology  
Atlanta, Georgia 30332  
(404) 894-2265

Dr. James W. Morris  
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Dr. Miryoussef Norouzian  
Instituto de Ingenieria  
Apdo. Postal 70-472  
Ciudad Universitaria  
04510 Mexico 20, D.F.; MEXICO  
(905) 550-52-15 ext. 3603

Dr. Bill T. Ray  
Civil Engineering & Mechanics  
Southern Illinois University  
Carbondale, IL 62901

Dr. Makram T. Suidan  
Civil Engineering Department  
University of Illinois at U-C  
Rm. 3230 NCEL  
208 N. Romine St.  
Urbana, IL 61801  
(217) 333-9017

Dr. David A. Vaccari  
Civil & Ocean Engineering  
Stevens Institute of Technology  
Hoboken, NJ 07030  
(201) 420-5570

# FACULTY POSITIONS AVAILABLE

## University of Arizona

As a result of a new State-funded initiative in water resources quality and quantity management, two new tenure-track positions at the Associate or Assistant Professor level are available beginning in August 1986, or sooner. Applicants must hold a Ph.D. in environmental engineering or a related field and have a strong commitment to teaching at both the graduate and undergraduate levels and to an on-going program of quality research. Desirable areas of emphasis include water reuse process analysis and design, physicochemical processes for tertiary or industrial waste treatment, optimization of treatment process systems, applications of conventional and new technology to treatment of hazardous wastes, and fluid mechanics aspects of wastewater treatment and disposal. Interested candidates should forward resumes and three letters of recommendation to the Chairman of the Search Committee, Dr. R. A. Sierka, Department of Civil Engineering and Engineering Mechanics, University of Arizona, Tucson, Arizona, 85712. Review of applications will begin on October 15, 1985, and will continue until both positions have been filled. The University of Arizona is an affirmative action/equal opportunity employer.

## Postdoctoral Position in Metals/Organic Chemistry

Duties involve studies of segregation of toxic metals and organic compounds in coagulating particle/dissolved substance systems in fresh to seawater using AA, electrochemistry, GC and HPLC. Send resume, salary needs, availability and names of three references with phone numbers to: R. J. Gibbs, Center for Colloidal Science, College of Marine Studies, University of Delaware, Newark, DE 19716.

## APPLICATION FOR MEMBERSHIP in the

### Association of Environmental Engineering Professors

Name \_\_\_\_\_

Official Title \_\_\_\_\_ Dept. \_\_\_\_\_

Business Address \_\_\_\_\_ Tel. \_\_\_\_\_

Home Address \_\_\_\_\_ Tel. \_\_\_\_\_

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

#### PLEASE ATTACH RESUME

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. 31 Mar.	1 Apr. 30 June	1 July 30 Sept.	1 Oct. 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:

Benjamin C. Dysart III  
Environmental Systems Engineering  
Clemson University  
Clemson, SC 29631

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

Signature \_\_\_\_\_

Date \_\_\_\_\_

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