

# Newsletter

VOLUME 30, NO. 2

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September 1995

## PRESIDENT'S LETTER

Dear Friends and Colleagues:

One year ago, Aarne Vesilind advised me: "It's a very short year. Step lively!" I have attempted to follow his very excellent advice, but have missed a few steps here and there, one of which resulted in my breaking the top vertebra in my sacrum this summer (ouch!). Fortunately, due to the hard work of our Board members, our committees, and Joanne Fetzner, much has been and is being accomplished.

- Our new Business Office, including our new computerized database, is operating smoothly; and the database is being expanded to include genealogical information and a listing of other professional societies to which each member belongs.
- The planning of the next education conference, including a preconference education workshop, is well underway.
- The groundwork is being laid for the next AEEP Register, which may be expanded to include information regarding undergraduate programs (send your thoughts to Robin Collins or Jim Young).
- Our communications network has been greatly expanded; many e-mail addresses have been added to the Directory and, our Electronic Highway committee is working to put us fully "on line".
- We have added two new Sustaining Members (Ann Arbor Press and Black & Veatch). John Carollo Engineers has agreed to sponsor our reception at the WEF Conference; and Black & Veatch has agreed to sponsor the AEEP Lecture at the AWWA Conference. Efforts are underway to recruit additional Sustaining Members and sponsors for additional AEEP functions.

As a result of these and other efforts this past year, our infrastructure has been significantly improved. We are better organized and better able to communicate; we are growing in size and strength; and we are working on many fronts to ensure that these trends continue. Our new Business Office will help future officers and Board members to reduce the amount of time spent on internal administrative matters and to devote a greater percentage of their time to tackling major issues. I believe that we are well positioned to play a leading role in addressing the issues confronting us.

A broad array of important issues faces our Association and our profession. Some were identified in my last column and some are noted in the guest editorial on page 14 by Roger

Dolan of AAEE. Many important issues will be on the agenda at next year's education conference, which I encourage all of you to attend. Given their complexity and long-term implications, most of these issues will not be quickly or easily resolved. It is important that we maintain an open dialog, both within AEEP and with other interested parties, keeping in mind that the ultimate goal is to chart a course that will best serve the interests of society and the environment. Though our organization is relatively small, our contributions as educators can and should be very great in proportion to our numbers. With your continued help and support, AEEP can make a difference!

#### Conferences, Workshops, & Receptions

One of this year's important accomplishments was the completion of a report by the Ad-Hoc Committee on Workshops, Conferences, and Receptions, chaired by Bruce Rittmann (see page 3 for a summary). In May, the Board met with Bruce to review and discuss the report, which carefully examined how our members felt about these events. In response, the Board decided that AEEP should:

- Continue holding the education and research conferences, which should be supported primarily through registration fees, with efforts made to solicit external support to subsidize junior faculty members.
- Continue to hold a reception at the WEF Conference and initiate receptions (or other functions, when receptions can not be satisfactorily arranged) at other major environmental engineering conferences, supporting them through sources other than dues as much as possible. (Please contact me if you are interested in initiating a reception or another function at a particular conference.)
- Focus our workshops primarily on providing practical information on teaching, increase the rigor of the presentations, and attempt to hold them immediately before or after (rather than during) a major existing conference that many of our members are likely to attend.

Following through on the third item, the Board further decided to cancel the WEF Workshop this year and to add a one-day teaching workshop to the Education Conference next August. Aarne Vesilind agreed to head up the effort, with help from Les Grady. JoAnn Silverstein, Jim Young, and Amit Amirtharajah volunteered to organize a session on teaching a senior design course.

The Board also decided to try a lecture format at the AWWA Conference, since there are significant logistical problems involved in hosting either a workshop or a reception at this conference. Bob Hoehn was invited to deliver the lecture, which we arranged to have scheduled immediately following the opening session; and Black & Veatch agreed to sponsor the lecture. One week before the lecture, notices were mailed out to selected members using labels generated from the expertise directory in our new database. Once the expansion of the database is completed, we will be able to send a notice to each AEEP member who is also a member of AWWA! Similar mailings to other organizations will also be possible.

Bob's lecture was a smashing success, with an enthusiastic audience of about 150 people in attendance. We were very pleased with the success of the lecture and hope others will be encouraged to initiate similar events or receptions at other conferences.

#### Farewell

Thank you for your active and enthusiastic support of AEEP. Although I must now bid you farewell as President, I look forward to enjoying your thoughts and companionship for many years to come.

Following my retirement as President, I plan to do what most ex-presidents do, i.e, write a book. However, instead of writing my memoirs, which would only be a small pamphlet given the few megabytes of memory I still have remaining, I plan to complete the first draft of an AEEP Officers and Committee Handbook that will include such things as officers' duties, committee charges, AEEP policies and procedures, and other information. My hope is that this handbook will help AEEP to "step lively"!

Best regards, Steve Randtke

## **AEEP News and Announcements**

## AEEP Annual Luncheon and Meeting at 1995 WEFTEC Conference

When: Monday, October 23, 1995, Noon-2:00 p.m

Where: LaPlaya Ballroom, Holiday Inn Oceanside-

Convention Center, Miami, Florida

Program: Awards and Reports by AEEP Officers

Cost: \$25.00

This is the traditional annual luncheon and meeting of the AEEP membership. Because the luncheon is a sit-down affair, reservations are required. Please register and pay for the luncheon in advance, as it is time consuming to collect money at the door. Send your reservation and check (payable to AEEP) to Clifford Randall using the form provided on page 13.

# **AEEP Interested in Hearing About Student Groups!**

Early this year, the AEEP Board appointed a "Student Organizations Committee". This new committee was appointed in response to the Board's growing interest in establishing, promoting, or assisting student organizations interested in environmental engineering and science. The committee currently consists of James Mihelcic (Michigan Technological University); Allen Davis (University of Maryland); and, John Little (Virginia Polytechnic Institute and State University).

AEEP is aware there are many active "umbrella" student organizations. Most of these groups appear to be independent. That is, they are unaffiliated with a national student or professional organization (e.g., WEF, AWWA). These groups typically have goals such as promoting student membership in professional societies; networking with potential employers; organizing seminars and field trips on environmental engineering and science; participating in student competitions; and, addressing career development issues. The purpose of the Student Organizations Committee is to determine a way to provide some cohesion to such groups, ultimately benefitting members both academically and professionally.

The Student Organization Committee is very interested in receiving your comments on this issue. Some questions we immediately need answered include:

- a) Does your university currently have an environmental engineering (or science) student group? If so, can you provide the name/address/email of the faculty advisor? Is the group composed of primarily undergraduate and/or graduate students? How large is the group? Is the group affiliated with any national organization (e.g., WEF, AWWA)?
- b) Do you feel a new formal national group is required? If so, should the group be a formal dues-paying organization or should the organization act as a loose federation serving as a communications link between the various independent groups?
- c) What role should established professional and technical societies (AAEE, AWMA, APHA, ASCE, AWWA, SWANA, WEF) serve in establishing this broad based environmental engineering and science group?
- d) Do you have any general comments on the role of AEEP and student groups?

Individuals interested in serving on the Student Organization Committee should contact the committee chair, James Mihelcic (phone: 906-487-2324, fax: 906-487-3292, email: JM41@MTU.EDU). Responses to the above questions or any other feedback you have should be sent to James Mihelcic, Allen

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Davis (AD36@UMAIL.UMD.EDU), or John Little (JCL@VT.EDU). The committee would appreciate your comments within the next two weeks.

#### Call for AEEP Volunteers...

The National Pollution Prevention Center for Higher Education (NPPC) is interested in developing university-level course materials for environmental engineering students and faculty. The U.S. EPA created the NPPC in 1991 to collect, develop, and disseminate educational materials on pollution prevention and represents a collaborative effort between business and industry, government, non-profit organizations, and academia. Already the Center has developed six *Pollution Prevention Compendia* in the areas of Accounting, Business Law, Chemical Engineering, Environmental Studies, Industral Ecology, and Industrial Engineering and Operations Research.

The Center is looking for AEEP members willing to help prepare a compendium in environmental engineering that would be presented at the 1996 Education and Practice Conference. If you are interested in actively participating, please contact Jonathan Bulkley, Center Director, NPPC, Dana Building, 430 E. University, Ann Arbor, MI 48109-1115. His telephone number is 313-764-1412, fax number is 313-936-2195, and e-mail is nppc@umich.edu. The Center also has a world-wide web home page at http://www.snre.umich.edu/nppc

## COMMITTEE RECOMMENDS IMPROVEMENTS TO AEEP EVENTS

An ad hoc committee advised the Board of Directors that AEEP should modify the format for its workshops. The Board, at its May meeting, adopted the committee's major recommendation that AEEP present a single one-day workshop oriented towards educational ideas and teaching methods. The committee also recommended that receptions gradually be expanded, while the conference format remain similar to what is done now.

In 1994, the Board appointed Bruce Rittmann as chair of an ad hoc committee to study workshops, receptions, and conferences. Rittmann assembled a broad-based committee of AEEP members: Kimberly Gray, Susan Larson, Bruce Logan, Richard Luthy, Sam McClintock, and Ken Williamson. The committee evaluated the value and approaches of each type of activity and used this information to develop a set of recommendations that were documented in a written report (Report and Recommendations on AEEP Workshops, Receptions, and Conferences) and presented to the Board at its May meeting in Chicago.

The committee conducted its work in three phases. First, it mailed a survey to 65 AEEP members selected to cover the organization's diversity. The survey, which has an outstanding 82% response rate, solicited opinions about the goals, value, and priority of workshops, receptions, and conferences. Second, the committee evaluated all statistical and verbal responses to the survey. Third, the committee combined the survey response

with its own insights to create its consensus report and recommendations.

Some of the most important results from the survey are: Many AEEP members have attended zero or only one of the events, but those who have attended the events value them higher than do those who have not attended. Workshops are highly valued for information transfer and networking, but members strongly desire that the workshops be more rigorous and oriented towards information on educational ideas and teaching methods. Receptions are viewed as cost-effective vehicles for networking, creating community within AEEP, and membership recruiting. Members like the stand-alone style and the 3-year interval for AEEP conferences, but they would like to see more emphasis on teaching ideas and methods.

The committee's recommendations are: AEEP should present a single one-day workshop each year. That workshop should be oriented primarily toward educational ideas and teaching methods and is best held the day before a major conference. The Education Committee's duties must be expanded and more clearly defined in order to achieve this goal. [The Board agreed to this recommendation and has scheduled the first teaching workshop to coincide with the 1996 AEEP/AAEE Conference in Orono, Maine.] AEEP receptions should be maintained at the WEF conference and gradually expanded to other major conferences. The Board may need to appoint a person or small committee to manage receptions consistently and to raise funds. The current conference format is appropriate, but the Board should consider how to offer a greater emphasis on teaching without sacrificing the unique planning nature of conferences. Efforts to minimize costs to members and, therefore maximize attendance, will become more important.

The full report can be obtained by contacting the AEEP Secretariat.

Ricardo Jacquez, AEEP Member, has been selected as the 1994 top college professor in the nation by Hispanic Engineering Magazine, and received his award in Houston at the Hispanic Engineer Achievement Awards Conference. Jacquez has served on the faculty at New Mexico State University since 1981, and is director of both the Waste-Management Education & Research Consortium and the New Mexico Alliance for Minority Participation. Jacquez is a previous recipient of the Charles A. Linbergh Fund grant and the Society of Hispanic Professional Engineers' Jaime Oaxaca Award.

Dr. Makram T. Suidan of the University of Cincinnati, has accepted the invitation to serve as the AEEP Distinguished Lecturer for 1996. Dr. Suidan has agreed to prepare three lectures entitled: a) Adsorption, Polymerization, and Fragmentation Reactions on Activated Carbon - Influence of Dissolved Oxygen; b) Development of Granular Bed Biofilter for the Treatment of Gas-Phase Pollutants, and; c) Development of the Anaerobic GAC Expanded-Bed Bioreactor for the Treatment of Refractory and Inhibitory Wastes. The lecture tour will be arranged during the spring semester of 1996 at a projected number of 10 to 12 locations.

## **AAEE/AEEP ENVIRONMENTAL ENGINEERING EDUCATION AND PRACTICE CONFERENCE** ORONO, MAINE August 3-6, 1996

#### Call for Papers and Posters

Educators and practitioners are encouraged to submit an abstract for either paper or poster presentation at the 1996 Education and Practice Conference. The abstract should clearly summarize the topic to be presented, identify presentation mode (paper or poster), author(s) and contact person, and any special equipment needs. The submission must be relevant to the Conference theme, "Relevance between Environmental Engineering Education and Practice".

Papers are solicited for sessions on Skills and Attributes of Environmental Engineers, Educational Approaches and Curricula, Role of Practitioners in Education, Involvement of Educators in Practice, and Outcome Assessment.

The poster session will provide an opportunity for presenters and attendees to exchange ideas and material on education and practice experiences. Posters are sought on a variety of topics, including computer applications for instruction and laboratory simulation, multi-media presentations, laboratory experiments, coop programs, continuing education, innovative teaching concepts, course modules, capstone design projects, case studies, etc.

Abstracts should be submitted by December 31, 1995 for full consideration and peer review. Both papers and poster material (as appropriate) will be published in the proceedings. For further information, please contact Chet Rock at the University of Maine. Abstracts can be faxed, e-mailed, or sent regular mail to the following address:

Chet A. Rock 5711 Boardman Hall University of Maine Orono, ME 04469-5711 TEL: 207-581-2170

FAX: 207-581-3888

E-mail: Chetrock@Maine.Maine.edu



Maine is often called "Vacationland" and for those of you who like to plan ahead - a great resource guide for planning your trip to Maine is published by the Maine Publicity Bureau. It is entitled "Maine Invites You" and this, and other helpful publications, is available by calling 207/623-0363.

"RELEVANCE BETWEEN ENVIRONMENTAL Engineering Education and Practice"

#### Tentative Schedule

SATURDAY, AUGUST 3, 1996 Teaching Workshop

#### SUNDAY, AUGUST 4, 1996

1:00 pm	welcome and Opening Remarks
1:15 pm	Environmental Engineering Work Force and
	Markets: Today and Tomorrow
4:30 pm	Social Hour with Book Publishers displays

1.50 pm	Docial Float with Dook I dollollers dis
5:30 pm	Lobster Boil/Steak BBQ
7:00 pm	Tim Sample Maine Humorist

7:00 pm	Tim Sample, Maine Humonst
8:00 pm	Faculty and Practitioner Interaction
8:00 pm	Movie for families

#### MONDAY AUGUST 5 1996

MONDA	1, 1100	JULJ	, 1770					
9:00 am	Skills	and	Attrib	utes	Re	quired	of	the
	Enviro	nmen	ital E	ngine	er:	Practi	tion	ers'
	Percent	tions						

10:15 am	Break
10:45 am	Educational Approaches and Curricula for
	Development of Requisite Skills: Educators'

	Development of Kequisite Skills: Laucators
	Perceptions
12 noon	Luncheon
1:30 pm	Role of Practitioners in Education

3:00 pm	Break
3:30 pm	Involvement of Educators in Practice
5:00 pm	Social Hour with posters on display
6:00 pm	Banquet

7:30 pm	Poster Session (posters also displayed Tuesday)
7:30 pm	Movie for families

#### TUESDAY, AUGUST 6

9:00 am	Outcome Assessment
10:15 am	Break
10:30 am	Outcome Assessment
11:30 am	Summary Session

12:30 pm Adjourn

## CONFERENCES/CALL FOR PAPERS

## Electronic Extension of the 2nd International Conference on Ecological Engineering for Wastewater Treatment September 1 - October 13, 1995 Waedenswil, Switzerland

The 2nd International Conference on Ecological Engineering for Wastewater Treatment: Recycling the Resource (Waedenswil, Switzerland; 18-20 Sept 1995) will focus on approaches and solutions for wastewater problems that include a recycling loop for water, nutrients, heat and other resources one might find in wastewater.

The organizers of this International Conference, in cooperation with International Ecological Engineering Society (IEES), Ecotechnology Network and UNU/ZERI (Zero Emissions Research Initiative at the United Nations University) are happy to announce its electronic extension. Selected parts of this Conference will be placed on the Internet, in a forum called an electronic extension, for those who cannot attend in person but wish to participate.

Electronic versions of selected plenary talks will be available in the beginning of September, for discussion up to and during the conference. Other plenary talks will be posted in the end of September, and discussion of those will continue into October.

Also, the workshop "Aquaculture for wastewater treatment" will be on the Internet. Abstracts of the papers will be posted in the beginning of September, and discussion may go until the conference. Comments and questions from the Internet participants will become a part of the discussion in Waedenswil. Summaries of all the workshop papers presented in the workshop will be sent out each day. Discussion on the Internet will also be incorporated into the chairperson's final report and will continue after the conference.

To receive more information on the electronic extension, including titles of papers and abstracts, please send email to LISTSERV@SEARN.SUNET.SE and write the message: REV ET-ATLAS SHORT

IMPORTANT: All participants should join the mailing list ET-ATLAS where instructions and announcements will be posted by the organizers. All subscriber names in any of the mailing lists used during this electronic extension will also be added to ET-ATLAS automatically and without prior notice to the subscribers.

To join ET-ATLAS, please send an e-mail to listserv@searn.sunet.se and write the message: SUBSCRIBE ET-ATLAS yourfirstname yourlastname organization e.g. subscribe et-atlas Carl Etnier, Stensund Ecological Ctr. Please send any additional questions related to your participation to: Mr. Eng-Leong Foo, foo@hq.unu.edu

## Annual Meeting of the Association of Engineering Geologists and Groundwater Resources Association of California

Diversity in Groundwater & Engineering Geology October 1 - October 7, 1995 Sacramento, California USA

The following technical sessions are planned: Engineering Geology; Surface and Groundwater Resources; Engineering Geophysics; Environmental Hydrogeology; Seismic Hazards and Risk Evaluation; Nuclear Waste Disposal; Status of Engineering Geology Programs in State Geological Surveys Teaching; and, Training in Engineering Geology

For more information: AEG/GRA '95, Jim Parsons at 916/421-5276 or Vicki Kretsinger at 916/661-0101 or PO Box 220968, Sacramento, CA 95822-0968

## International Symposium on Wastewater Treatment and Seventh Workshop on Drinking Water

November 14 - 16, 1995 Hotel Le Meridien Montreal, Quebec

For additional information contact: AQTE - Symposium '95, 911, Jean-Talon Street East, Suite 220, Montreal, Quebec H2R 1V5, Canada, Fax: 514/270-7154

Hydrology and Hydrogeology of Urban and Urbanizing Areas
1996 Annual Meeting of the American Institute of Hydrology

April 21-26, 1996 The 57 Park Plaza Hotel Boston, Massachusetts

The purpose of this conference is to describe issues, management strategies, and technologies related to hydrology and hydrogeology in urban and urbanizing areas. The conference will feature sessions on subjects of current concern

in hydrology. There also will be general sessions, poster sessions, short courses and field trips. The proceedings will be available at the meeting.

For additional information:General Chairman, Dr. Guillermo J. Vicens, Camp Dresser & McKee Inc., 10 Cambridge Center, Cambridge, MA 02142, Tel. 617/252-8301, Fax 617/621-2565, or vicensgj@cdm.com

## International Conference on Municipal and Rural Water Supply and Water Quality

May 28-30, 1996

#### Poznan, Poland

Chaired by Professor and NSERC Chairholder in Water Treatment Dr. Peter M. Huck, Professor of Engineering (University of Waterloo) the conference is sponsored, among others, by the Canadian Society for Civil Engineering, two universities in Poznan, the Polish Society of Sanitary Engineers and Technicians, and the Polish Chamber of Commerce. It will be the 14th conference in this series. and it aims at bringing together international scietists and engineers to present state-of-the-art technical and managerial (e.g. financing, pricing, marketing, etc.) solutions to problems of water supply (groundwater and surface) and to the emerging economies of the Central and Eastern Europe. The topics are not limited to water treatment and distribution problems and may include aspects of water pollution control and remediation.

If you are interested in participating in putting this conference together or in participating with or without a paper please contact the organizers Prof. Marek Sozanski Polish Association of Sanitary Engineers ul. Wieniawskiego 5/9 Poznan 61-712, Poland tel (011)-48-61-674 423 or 61-689 924 or Jan Oleszkiewicz Dept Civil Engineering University of Manitoba, 15 Gillson St., Winnipeg, MB R3T 5V6, Canada 204/474-8722 FAX -204/261-9534.

## 3rd Semiannual Meeting International Society for Environmental Biotechnology

July 15-20, 1996

Boston, Massachusetts

For information contact: Donald L. Wise, 342 Snell Engineering, Northeastern University, Boston, MA 02115 or fax 617/373-2784.

# 7th International Symposium The Interactions Between Sediments and Water

September 22-25, 1996

Baveno (Stresa), Italy

For information please contact the Conference Secretariat at: Seventh International Symposium, The Interactions Between Sediments and Water, Redaelli - Circia & C., Via Brioschi, 33-20136, Milan, Italy, phone (0039) 2-89403730 or fax (0039) 2-89401225.

## 7th International Gothenburg Symposium on Chemical Treatment

September 23-25, 1996

Edinburgh, Scotland

The biennial Gothenburg Symposia are recognized as unique meeting places for administrators, engineers, and scientist active in the treatment of dirnking water, municipal and industrial wastewater, and sludges. The 7th Symposium (Edinburgh 1996) again invites scientist, process engineers, administrators and operators from the fields of water and wastewater treatment to submit papers and attend presentations conference with all aspects of chemical treatment.

For additional information on conference/abstract submissions, please contact: 7th International Gothenburg Symposium on Chemical Treatment, c/o Kemira Kemi AB, Mrs. Agneta Lindquist, P.O. Box 902, S-251 09, Helsingborg, Sweden.

# Water Environment Federation 69th Annual

Conference & Exposition

October 5-9, 1996
Dallas Convention Center
Dallas, Texas

The WEFTEC '96 is the largest water quality conference and exposition in the Western Hemisphere. The deadline for adstract submissions is December 18, 1995 and nitification of acceptance or refection will be made by April 5, 1996. If selected a full manuscript will be due by July 1, 1996 and final acceptance for the program is contingent on receipt of a completed manuscript. All abstract submissions should be extended abstracts consisting of a minimum of four and a maximum of six double-spaced pages, which are to include the narrative, bibliographic material, graphs, sketches, and tables. Abstract submissions exceeding six pages will be returned, and any attachments to an abstract will be discarded. Abstracts must clearly, but briefly, define the objectives of the investigation or study, the status of the investigation, what was done, what was found, what conclusions were drawn, and what the findings mean to mthe environemntal engineering and operations community. Abstracts not meeting these requirements have little probablity of being selected for either platform or poster presentation.

Submit abstracts to the Water Environment Federation, Attn: Conference Program, 601 Wythe Street, Alexandria, VA 22314-1994.

## **EMPLOYMENT OPPORTUNITIES**

## **American University in Cairo**

The American University in Cairo invites applications for one faculty opening for an Assistant, Associate, or Full Professor to teach, in English, undergraduate and graduate courses in these areas: industrial pollution prevention, environmental impact assessment and risk analysis, environmental management, cleaner technologies, air pollution, solid and hazardous waste.

The Ph.D. and evidence of excellence in teaching and research are required. Industrial experience is desirable. Teaching load is three courses per semester. Appointment is for two years (renewable) beginning September 1996. Rank, salary according to qualifications and experience. For expatriates, housing and round-trip air travel to Egypt, plus schooling for up to two children, are included. Write with curriculum vitae to: Dr. Andrew Kerek, Provost, The American University in Cairo, 866 United Nations Plaza, Suite AE517, New York, NY 10017, preferably before November 30, 1995. AUC is an equal opportunity employer.

### The University of Alberta

Applications are invited for three tenure-stream faculty positions at the Assistant/Associate Professor level in the area of Environmental Engineering and Science, one commencing 1 January 1996 or earlier, the other two commencing 1 July 1996. The salary range for the Assistant/Associate Professor level is \$39,230 to \$69,664. For the first position there is specific interest in candidates with strong research interests in environmental engineering processes related to water and wastewater treatment. A strong background in environmental chemistry would be an asset. The second position is directed at the specialty of environmental modeling. The third position is directed at treatment processes in the wastewater area. Outstanding candidates with abilities in other aspects of Environmental Engineering and Science would be seriously considered. Applicants should hold a doctoral degree or equivalent and have a demonstrated commitment to teaching and research in the university environment. The successful candidate will be expected to conduct research and supervise graduate students in his or her fields of interests, teach postgraduate and undergraduate courses in Environmental Engineering, and assist in the teaching of other engineering courses at the undergraduate level.

The University of Alberta, founded in 1908, is one of the largest universities in Canada with 25,000 undergraduate and 3,000 graduate students. The Environmental Engineering and Science program has more than 50 graduate students and four full-time-faculty members supported by two full-time technical staff and several research associates. The University is situated in the heart of Edmonton on the banks of North Saskatchewan River. Edmonton has a population of 600,000 people, and offers a diverse array of cultural and sporting activities year round. The city has one of the lowest costs of living in Canada. The Rocky Mountain National Parks of Jasper and Banff are readily accessible from Edmonton by

modern express highways, providing access to some of the finest skiing, kayaking, cycling, camping, backpacking and fishing in the world.

In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. Applicants should send a curriculum vitae including employment history, a statement concerning research and teaching interests, and names of at least three referees to: Dr. N.R. Morgenstern, Chair, Department of Civil Engineering, University of Alberta, Edmonton, Alberta T6G 2G7 CANADA, 403/492-7620 or fax 403/492-0249. Application deadlines: 30 October 1995 for 1 January 1996 appointment or 30 December 1995 for 1 July 1996 appointments.

The University of Alberta is committed to the principle of equity in employment. As an employer we welcome diversity in the Workplace and encourage applications from all qualified women and men, including Aboriginal peoples, persons with disabilities and members of visible minorities.

## University of California

The Department of Civil and Environmental Engineering at the University of California, Los Angeles (UCLA) invites applications for a faculty position in environmental microbiology available as early as January 1, 1996. The position is open to all levels, but preference will be given to mid career candidates. Applicants should have a Ph.D. in environmental engineering, environmental science, environmental microbiology, or related fields. We are looking for individuals with research interests and demonstrated expertise in one or more of the following areas: mircrobiology, in-situ bioremediation, bio-kinetics of hazardous wastes, biofilms, and biofouling. The successful candidate will be expected to teach undergraduate and graduate courses in environmental engineering, advise graduate students, and develop a strong externally-funded research program.

Candidates should send a detailed reume including list of publications, record of academic and professional experience, description of research and teaching areas, and names of at least three references to: Chair, Environmental Engineering Search Committee, Microbiology, Department of Civil & Environmental Engineering, 4173 Engineering I, University of California, Los Angeles, CA 90095-1593. Applications are requested by September 1, 1995, but will be accepted until the position is filled.

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

## **University of California**

The Department of Civil and Environmental Engineering at the University of California, Los Angeles (UCLA) invites applications for a faculty position in aquatic chemistry available as early as January 1, 1996. The position is open at all levels, but preference will be given to mid career candidates. Applicants should have a Ph.D in environmental

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science, environmental engineering, or related fields. We are looking for individuals with research interests and demonstrated expertise in the applications of aquatic chemistry to environmental science and engineering problems. The successful candidate will be expected to teach undergraduate and graduate courses in environmental engineering and chemistry, advise graduate students, and develope a strong externally-funded research program.

Candidates should send a detailed resume including list of publications, record of academic and professional experience, description of research record and teaching areas, and names and addresses of at least three references to: Chair, Environmental Engineering Search Committee, Aquatic Chemistry, Department of Civil & Environmental Engineering, 4173 Engineering I, University of California, Los Angeles, CA 90095-1593.

Applications are requested by September 1, 1995, but will be accepted until the position is filled.

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## University of Missouri-Rolla

The Department of Civil Engineering at the University of Missouri-Rolla is undertaking a major revitalization of the environmental engineering program to meet the needs of Missouri and the nation with regard to education of engineers to provide innovative solutions to environmental problems. To this end, applications are invited for the position of assistant professor of civil engineering with specialization in environmental engineering. Salary will be commensurate with qualifications and experience. Although all applicants with a bachelor of science degree in engineering from an ABET accredited program wil be considered, the preference will be given to those with a bachelor of science in civil engineering. All applicants must have an earned doctorate with a program of study and research that focuses on environmental engineering. Preference will be given to those applicants who possess professional registration or the EIT. Candidates with non-academic professional experience as environmental engineers, and who meet the other requirements are encouraged to apply.

Because the position will require the teaching of environmental engineering courses at both the undergraduate and graduate level, teaching experience is highly desirable. The successful candidate will be expected to develop a strong, externally funded research program and to direct masters' and doctoral level research. Research interests in biological treatment systems, applied microbiology or biological remediation are especially desired, but other areas of environmental engineering will also be considered. The applicant will be expected to participate in intra- and interdisciplinary research, so experience in collaborative research activity will be viewed favorably.

The University of Missouri-Rolla is the technological campus of the University of Missouri System. Established in 1870 as the Missouri School of Mines and Metallurgy, the campus is located in the heart of the Missouri Ozarks, 100 miles southwest of St. Louis. More than 70 percent of the students

are majoring in science and engineering. The campus supports the Center of Environmental Trace Substance Center, the Environmental Research Center, and the Institute of River Studies. The Department of Civil Engineering has 18 faculty, 461 undergraduates and 50 resident graduate students. The undergraduate program is broad-based and includes two required courses in environmental engineering and three required courses in hydraulics and hydrology. In addition to the BSCE, the department offers the MSCE, MS in Environmental Engineering, and Ph.D. degrees. Areas of emphasis for the MSCE and Ph.D. include environmental engineering, geotechnical engineering, hydraulics and hydrology, structural engineering, and civil engineering materials. The successful applicant can look forward to collaborating in a well-rounded program of civil engineering teaching and research on a campus where science and engineering predominate.

The search for this position has been extended due to the recent hiring of the Maths Professor of Civil Engineering in environmental engineering. Review of applications will begin on September 15, 1995 and will continue until the poeition is filled. Applications should be submitted with a statement of teaching and research interests, a complete curriculum vitae, and names of three references to: Dr. Jerome A. Westphal, Department of Civil Engineering, University of Missuori-Rolla, Rolla, MO 65401.

The University of Missuori-Rolla is an affirmative action/equal opportunity employer.

## **University of Minnesota**

The St. Anthony Falls Laboratory, Department of Civil Engineering invites applications for a nine-month Research Associate appointment in the general area of environmental and water resources engineering. We are especially interested in individuals qualified to perform research at the interface between environmental fluid mechanics and contaminant chemistry or aquatic biology, but will consider other qualified candidates. The position will involve the development of sponsored research opportunities and teaching of undergraduate and graduate courses. The successful candidate will be expected to collaborate in the wriring of proposals for funded research, and therefore must have demonstrated writing skills. Benefits include health, dental, life, and disability insurance. A doctoral degree in Engineering or Sciences by the time of the appointment is required. Please send a curriculum vitae, a description of research interests, graduate transcripts, and the name, address, telephone number, and email address of at least three references to John Gulliver, Search Committee Chair, St. Anthony Falls Laboratory, University of Minnesota, Mississippi River Avenue S.E., Minneapolis, MN 55414. Applications must be submitted before November 15, 1995.

The University of Minnesota is an equal opportunity educator and employer.

## **University of Nevada**

The Civil Engineering Department at the University of Nevada, Reno invites applications for a tenure track faculty position at the Assistant Professor level in Environmental Engineering starting January 1996. Salary will be consistent with the applicant's qualifications. The Civil Engineering Department is committed to excellence in both its undergraduate and graduate programs. A strong environmental engineering program is being developed. The Ph.D. program in the department is established, and the new faculty is expected to help enhance the program. The Environmental Engineering Graduate Research Laboratory is equipped with basic laboratory equipment for the analysis of water quality and sophisticated analytical equipment including gas chromatographs, liquid chromatograph, GC/MS, ICP and IC.

A B.S. and a Ph.D. degree (or equivalent) in Civil/Environmental Engineering with a major emphasis in biological wastewater treatment, hazardous waste treatment, or water treatment and evidence of scholarly research or promise are required. Some background in geoenvironmental engineering is desirable. The candidate will be expected to teach courses including, but not limited, to undergraduate courses in hydraulics and hydrology of water supply and wastewater disposal and graduate level courses in Environmental Engineering. The candidate will be expected to conduct research and to support the teaching, research, and service/outreach goals of the department.

Letters of application, resumes and the names, addresses, and telephone numbers of five references should be sent to Dr. E. Maragakis, Chairman, Department of Civil Engineering, University of Nevada, Reno, Nevada 89557-0152. The closing date for these applications will be November 15, 1995.

Members of minority groups are especially encouraged to apply.

AA/EOE. The University employs only U.S. citizens and other individuals lawfully authorized to work in the U.S.

#### **EMPLOYMENT OPPORTUNITIES**

To place your free "EMPLOMENT OPPORTUNITIES" ad in the AEEP Newsletter, please contact (by mail, fax or email):

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## Organizations of Interest

## American Society of Civil Engineers Environmental Engineering Division Announces:

The Sixth National Environmental Engineering Student Essay Competition

The StandingCommittee for Student Essay Competition of the ASCE-EED is proud to announce a nationwide call for essays for its sixth Student Chapter and essays can be entered in either the graduate or undergraduate student categories.

The essays may be written on any subject matter related in technical aspect to Environmental Engineering, including Water Pollution Management, Water Supply Management, Solid and Hazardous Waste Management, and Air and Radiation Management. Each year, winning essays are awarded prizes at the ASCE National Conference on Environmental Engineering (to be held in Anaheim, CA in 1996). Entries for this year's competition must be received by December 8, 1995.

For more information, see your ASCE Student Chapter/Faculty Advisor or contact Purush K. TerKonda, University of Missouri-Rolla, 222 Engineering Research Laboratory, Rolla MI 65401-2049; 314/341-4484.

## **Northwestern University**

The Department of Civil Engineering at Northwestern University is pleased to announce that two new faculty will join its environemntal engineering program in September 1995.

Dr. Kimberly A. Gray Associate Professor Dr. Jean-Francois Gaillard Assistant Professor

## AEEP NEWS FLASH FROM AEEP SECRETARY JOANN SILVERSTEIN

The results of the recently completed AEEP election are as follows: Jim Alleman, Bruce Logan and Chet Rock were elected to the Board of Directors for three-year terms which begin in October at the Board meeting in Miami, Florida. Amendments to the AEEP ByLaws were also approved by an overwhelming majority of the voters - over 90% approved changes to each of the sections (3,4,5,6,7,8,9).

#### THREE WAYS

#### TO PARTICIPATE IN WATERTALK!

WaterTalk is the communications system of the Universities Water Information Network (UWIN). WaterTalk is designed to facilitate linkages among those with water resources related interests. WaterTalk provides a convenient forum to establish avenues of communication between researchers, teachers, managers, consultants, and administrators in the academic, private, and governmental sectors. These participants are increasingly drawn from around the world.

WaterTalk is set up as a series of discussion forums. Each forum is devoted to a particular water related topic. Current discussion forums include: Hydrology, GIS, Global Water Issues, Groundwater Quality, Water Policy Issues, and Education. Any user can suggest other topics for forums they would like to see added. The discussions on all of these forums are archived at UWIN's gopher and World Wide Web sites which are located at gopher.siu.edu and http:\\www.uwin.siu.edu respectively. Users can read or search these archives for relevant information.

We have set the WaterTalk communications system up so that you can choose how you wish to participate in these discussions based upon your preferences. The three possible ways to participate are:

OPTION 1: Logging onto the WaterTalk Bulletin Board System.

OPTION 2: Subscribing to WaterTalk discussion forum(s) in a mailing list format and receiving the messages at your email address.

OPTION 3: Having your organization receive the forums as Usenet-style newsgroups.

Each of these three methods allows you to participate in the WaterTalk discussion forums. All methods monitor the SAME discussions, only the format of your participation is different. We have interfaced these three methods to maximize user participation and the ease of use for our participants. Thus, you can choose which method is right for your participation.

#### **OPTION 1: Log onto WaterTalk bbs**

You can log onto the WaterTalk bbs at your convenience and read the boards of interest to you and post any messages in response; the system keeps track of what you have already read and you can forward messages back to your own e-mail address if you have one. The WaterTalk Bulletin Board System is accessed from the UWIN main menu. Thus, you must first access UWIN. This can be done in several ways including telnet, modem, gopher, and via the World Wide Web:

- MODEM: Set your communications parameters to (8N1) or (7O1) and for best results, set your software to emulate a vt100, ANSI, or compatible terminal. Phone #618-453-3324 or 618-453-3090
- TELNET: You can telnet to UWIN and look around but we do not recommend this as your regular access method

- as it limits your usage of UWIN's menu items. Use the command, telnet gopher.uwin.siu.edu. At the login prompt, log in as guest and use uwin as the password.
- 3) GOPHER: Point you gopher client at gopher.uwin.siu.edu.
- 4) WWW: Point you WWW browser at http://www.uwin.siu.edu.

Once you have accessed UWIN, you can easily get to WaterTalk by selecting the WaterTalk option from the main menu, and then selecting the "Access WaterTalk" option.

#### **OPTION 2: WTlists**

You can subscribe to any of the WaterTalk discussion forums and have all of the messages sent to your e-mail address. Once you subscribe to any board, general information will be sent to you. To subscribe, send the following command in the body of an e-mail message to WTlists@uwin.siu.edu: subscribe forumname, where "forumname" specifies the forum you are interested in (WThydrology, WTgis, WTeduc, WTgwq, WTpolicy, WTglobal). You must repeat this procedure for each discussion that you are interested in subscribing to.

#### **OPTION 3: WaterTalk Newsgroups**

If your organization (university, firm, government agency, etc.) has a Usenet-style news-server and readers, you can ask that the WaterTalk discussion forums be received in this format. This requires that your local administrator contact admin@uwin.siu.edu to inquire about establishing a newsfeed. We hope that you will participate in the WaterTalk discussion forums no matter what method you choose (and you are always free to change). The UWIN staff would be glad to answer any questions that you may have. And please make suggestions on possible topics for new boards. To learn more about WaterTalk, you can read the WaterTalk FAQ on UWIN.

All WaterTalk questions can be sent to Admin@uwin.siu.edu.

## Middle East Water Information Network

The Middle East Water Information Network (MEWIN) has been formed to improve regional planning and management of water resources in the Middle East and to promote the peaceful and cooperative use of this vital resource.

To accomplish these purposes, MEWIN will (1) promote and facilitate communication amoung its members, (2) identify and provide direction to sources of information and data on Middle East water, (3) work to improve access to existing sources of information on water in the region (such as databases containing historical and current data and bibliographic references), (4) facilitate accurate collection and analysis of available data through such activities as the development of uniform standards for the measurement, reporting, and analysis of water data, (5) serve as a clearinghouse for information on activities, projects, technological developments, and information resources related to water in the Middle East,

and (6) operate as a distributed information system comprised of databases and other information resources.

MEWIN will not serve as a repository or transmitter for large sets of raw data, rather the organization will provide a pointer system to identify the locations, nature, and owners of data. This will include data on environmental impacts of development, wastewater treatment and use, desalination, and other topics related to, but not solely based on, water use in the Middle East. MEWIN membership consists primarily of scientists, researchers, analysts, and resource planners from within the region as well as Middle East water specialists and resource planners from outside the region and from international organizations, such as the World Bank and agencies within the United Nations. As of March 27, 1995, MEWIN's membership consists of over 150 leading water specialists from Egypt, Jordan, Israel, Palestine, Syria, Turkey, Kuwait, Lebanon, Saudi Arabia, Canada, Germany, the United Kingdom, the United States, UNEP, UNDP, and the World Bank. \*Expanded participation is being actively sought.\*

For more information about MEWIN contact Dr. Thomas Naff (tnaff@sas.upenn.edu) or visit MEWIN's homepage at http://WWW.SSC.UPENN.EDU/~MEWIN/INDEX.HTML

#### AEEP'S ELECTRONIC HIGHWAY

For your information, AEEP's 'Electronic Highway' Committee has started to build an experimental WEB home page. We anticipate having several useful 'hot-links' on this page:

- a) links to individual university WEB sites
- b) postings for current environ engrg faculty vacancies
- c) member email address listings
- d) upcoming conference, workshop, etc. information
- e) an electronic version of our newsletter
- f) publication announcements, book reviews, etc.

Therefore, at this time, I'd like to solicit your help. Email to me your school's WEB page location ('URL'), and email to me job announcements you'd like to have posted.

Thanks! Jim Alleman/alleman@cloaca.ecn.purdue.edu



#### REMINDER

Deadline for the January 1996 AEEP Newsletter is Friday, December 1st.

## **BOOKS/PUBLICATIONS**

#### BOOK REVIEW

#### <u>Statistics for Environmental Engineers</u> Paul Mac Berthouex and Linfield C. Brown, Lewis Publishers, Boca Raton, 1994

When a truly new and interesting book appears in a field, there is a tendency to consider it as irrelevant. After all (so the thinking goes), the essential elements of the field must already have been covered in existing books, and any material that hasn't been published can't really be central to the discipline.

It is with this negative attitude that I opened up <u>Statistics for</u> <u>Engineers</u> by our colleagues Mac Berthouex and Lin Brown.

What I found was instead a wealth of new and interesting material for all environmental engineers and scientists. Although the statistics covered by the authors includes some of the same old stuff we all slogged through in graduate school, much of the material is specific to our field and is not readily found in other books. Consider some of the chapter titles:

- · Seeing the shape of distributions
- · Using transformations
- Estimating percentiles
- · The limits of detection
- Simple methods for analyzing data that are below the limit of detection
- Estimating the mean of censored samples
- · Assessing conformance with a standard
- Estimating parameters using the method of least squares
- Empirical model building by linear regression
- The coefficient of determination, R<sup>2</sup>
- Why linearization can bias parameter estimates
- · Adjustment of survey data

How measurements errors are transmitted into calculated values.

This is all essential information for any environmental engineer who is conducting research, is involved in regulatory matters, or has to be able to analyze environmental data. For environmental engineering professors, this book represents a wealth of reference information for both laboratory data analysis as well as classroom instruction.

On the negative side, the book could have been better presented. The graphics are not of a high quality, and leave the impression that the publishers were not willing to place sufficient resources into the production. Perhaps as the book enters its subsequent editions the graphics can be improved.

In summary, Berthouex and Brown have written an outstanding book, and it will no doubt find wide use in environmental engineering laboratories and classrooms, as well as in regulatory agencies and environmental engineering offices.

P. Aarne Vesilind AEEP Book Editor

## Water Resources Update Published Four Times a Year

The Water Resources Update is published four times a year by the Universities Council on Water Resources (UCOWR) Headquarters. Each issue of Update focuses on a particular theme relating to water resources and is edited by a guest editor who is an expert on that theme.

continued...

UCOWR delegates receive the Update as part of their institutions' membership. Annual subscription rates are \$20.00 domestic and \$25.00 international. The following back issues are available at \$5.00 per copy for domestic addresses and \$7.50 for international:

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#91, Spring, 1993

Water Mgt.: Why the Resistance to Change?

#90, Winter, 1993

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Water Conservation
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#83, Autumn, 1990

Upcoming themes are:

Assesment of Flood Plain Mgmt. Report

#97, Fall, 1994

Issues in Limnology

#98, Winter, 1994

Water Resources and theInternet

#99, Spring, 1995

Reauthorization of the Farm Bill: Water Quality Issues #100, Summer, 1995

For furthur information or th place an order, contact UCOWR HQ, 4543 Farner Hall, Southern Illinois University, Carbondale, IL 62901-4526, Fax: (618) 435-2671, E-Mail: hedden.uwin.siu.edu.

## Proceedings of the 50th Purdue Industrial Waste Conference

edited by

RONALD F. WUKASCH, **AEEP Member**, Professor, School of Civil Engineering, Purdue University. CYNTHIA S. DALTON, School of Engineering, Purdue University

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#### AQUATIC CHEMISTRY: INTERFACIAL AND INTERSPECIES PROCESSES

C.P. Huang, **AEEP Member**, Distinguished Professor, Dept. of Civil Engg., University of Delaware.

CHARLES R. O'MELIA, **AEEP Member**, Professor and Chair, Dept. of Geography & Environmental Engineering, The Johns Hopkins University.

James J. Morgan, **AEEP Member**, Professor, Environmental Engr. Science, California Inst. of Tech.

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#### Anaerobic Biotechnology for Treatment of **Industrial Wastewaters**

RICHARD E. SPEECE, AEEP Member, Professor of Environmental and Water Resource Engineering, Vanderbilt University.

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ARUP K. SENGUPTA, AEEP Member, Professor, Department of Civil and Environmental Engineering, Lehigh University.

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## **AEEP Luncheon Registration Form**

Monday, October 23, 1995 at noon LaPlaya Ballroom **Holiday Inn Oceanside-Convention Center** Miami, Florida

Please reserve a place for me at the AEEP Luncheon. My check payable to AEEP in the amount of \$25.00 per person is enclosed.

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Please check here and notify your server at the lunch vegetarian, low-fat, or other (specify)	heon if your pre	fer a special dish f	or the main course:
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**Clifford Randall** 

Department of Civil Engineering Virginia Polytechnic Institute & State University Blacksburg, VA 24061

Fax 703/231-7916

## **Future Directions**

by Roger J. Dolan, P.E., DEE - AAEE President-Elect

In recent years, the Trustees and Officers of the Academy have become increasingly concerned with the Academy's need to respond to trends and changes in environmental management, including:

- Environmental Engineering is evolving into a distinct engineering discipline. A number of states are now issuing Environmental Engineering licenses, with more states adding this classification every year.
- Environmental scientists are increasingly more important members of the teams of professionals who work with engineers in solving environmental problems. They are not well integrated into the professional engineering society networks.
- The credentialing programs for environmental professions other than engineering are not as well developed or recognized.
- Many professors teaching graduate environmental courses, even if they were trained as engineers, are not licensed engineers and are therefore not eligible for membership in the Academy.
- Academy membership has not kept pace with the expansion of the field.

A facilitated planning meeting took place on May 21 and 22, 1995, in Dallas, attended by the Academy's Board and the AAEE Planning Committee. The process included consideration of external and internal factors in influencing the Academy and the profession. Goals were identified which, if accomplished, would benefit both the academy and the field of environmental engineering. In addition, actions were selected which could be taken in the short term that would aid in defining issues and gathering information to assist in the development of a vision of how the Academy should proceed.

The group felt that steps should be taken to strengthen the working relationship between the environmental engineering university faculty and the Academy. Given the importance of the role of the Academy in the ABET accreditation process and the importance of the universities in the profession, it was felt that this was a priority area. It was recognized that reconsideration of the PE requirement for Academy membership may be appropriate for tenured faculty.

A task force was asked to meet with the Association of Environmental Engineering Professors to explore ways to increase cooperation and participation between the two organizations.

The planning group expressed support for the concept of increasing the experience credit for a Masters Degree in environmental engineering from one to two years. This idea will be considered further at the annual Academy Board meeting in November, 1995.

The planning group was generally open to consider expanding the board certification activities of the Academy to encompass other qualified environmental professionals. However, it was felt that a great deal of information would be needed before deciding this issue, such as: interest on the part of existing environmental science organizations, input from AAEE membership, input from environmental science opinion leaders, and estimates of both the resource requirements and the likelihood of success of this endeavor.

With the help of staff, the planning group will gather information informally about the interest in consolidating existing certification programs for environmental scientists, or implementing new ones within an expanded Academy. Trustees will consider this information along with input from members when they meet in November, 1995.

The group discussed the concept of expanding members services to help create, or become, a professional society fro all environmental engineers, or possible to include other qualified environmental professionals. They felt that even though this would be a substantial undertaking, they were willing to consider the idea further.

The group's discussion of these diverse issues was open and exploratory. It was recognized that all of these topics required more information and thought before knowing what actions to take, or whether to take any actions at all. Even if there were widespread support for expansive changes, the process of change would take several years and would entail a number of key decision points. Member input is earnestly sought on these concepts. All letters will be distributed to the people engaged in the planning process. Excerpts from the letters will be published in the Environmental Engineer as space permits.

Please direct any ideas, comments, or questions to Roger J. Dolan, Chair, Planning Committee, c/o CCCSD, 5019 Imhoff Place, Martinez, CA 94553. Another planning session is scheduled for the November 1995 Board of Trustees meeting.

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## **APPLICATION FOR MEMBERSHIP**

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