

BOARD OF DIRECTORS 2005/2006

AES WORKSHOP AT AQUACULTURE EUROPE 2005

Trondheim, Norway, August 9-10, 2005

#	Type of Director	Name	2005	2006
1	Officer Past President	Kelly Rusch	√	
2	President	John Colt	√	√
3	Secretary/Treasurer	Brian Vinci	√	√
4	First VP	Shulin Chen	√	√
5	Second VP	Greg Boardman	√	√
6	USA	Brian Brazil	√	
7	USA	Roger Viadero	√	
8	USA	Steve Hall	√	√
9	USA	Ed Aneshansley	√	√
10	USA	Vacant		
11	NON-USA: Canada	Richard Patterson	√	
12	NON-USA: Canada	Sean Wilton	√	
13	NON-USA: The Netherlands	Ep Eding	√	√
14	NON-USA: Chile	German Merino	√	√
15	NON-USA: Israel	Yoram Avnimelech	√	√
16	NON-USA: Canada	Chris Watts	√	√

Dear AES member,

The AES and the EAS (European Aquaculture Society) are organising a joined workshop on Recirculating Aquaculture Technology. The workshop will be presented by Dr. Tom Losordo, Professor in the Department of Biological & Agricultural Engineering at North Carolina State University, USA and Ing. E.H. Eding, lecturer in the Fish Culture and Fisheries Group, Department of Animal Sciences, at Wageningen University, the Netherlands.

Recirculating aquaculture technology is the latest sector in aquaculture to have attracted attention and considerable venture capital. The presenters will seek to provide non-biased, research-based information to those that are interested in, or those using recirculating aquaculture fish production systems.

The tentative workshop components include:

- Critical Considerations in Recirculating Systems
- Quantifying Solid and Soluble Waste in Recirculation Systems
- Tank Hydraulics and Settleable Solids Removal
- Suspended Solids Removal
- Factors Affecting Biofiltration
- Biofiltration Components and Options
- Fine and Dissolved Solids Removal and Oxygenation Components
- Management and Operations of Recirculation Systems
- Biosecurity and Disease Control
- Monitoring, Alarming & Emergency Systems
- Denitrification in Aquaculture
- Moving, Grading & Harvesting Fish
- Economic Considerations
- Heating and Space conditioning
- Recirculating Systems Layouts in Europe, the USA and Australia
- Building Recirculation Systems
- Introduction to Mass Balance Analysis
- Designing Recirculation Systems
- Water and Wastewater Treatment and Disposal.



Photo taken at Aquaculture America 2005 in New Orleans, and shows outgoing President Kelly Rusch, and new President John Colt.



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The information presented comes either from the first-hand research results and experiences of the presenters or those of collaborators or colleagues around the globe.

For further information, please visit the AES website at <http://www.aesweb.org>.

Subcommittee Assignments – 2005

<i>Members</i>	<i>Objectives</i>	<i>Time Frame</i>	<i>Status</i>
Brian Vinci	Secretary/Treasurer	Brian has been serving in this position for several years.	Bylaw position
Shulin Chen (Second VP)	Membership and Publication Committee		Bylaw position
Greg Boardman (First VP)	Program Committee for annual meeting		Bylaw position
Fred Wheaton	Audit Committee	Needs to be filled	Bylaw position
Kelly Rusch (Past President)	Nominating Committee		Bylaw position
Steve Summerfelt	Award Committee	Appointed in 2005	
Roger Viadero	Meeting & Promotion Committee		
KC Hosler	Newsletter Editor	Appointed in 2004	
KC Hosler	Web Page Liaison Committee	Appointed in 2005	
Oliver Schneider	Web Support (under contract)	Started in 2003	
Barnaby Watten	AES – WAS Liaison (contracting approval)		
Ron Malone	JSA Aquatic Effluent Task Force Representative		
Raul Piedrahita	AES Listserv Manager		
Brian Vinci	Corporate Sponsor Liaison		
John Colt	Standard Committee – Biofilter Reporting	Started in 2004	
Roger Viadero	Standard Committee – Systems Reporting	Started in 2005	
Program Chairs	World Aquaculture 2005, Bali Recirculation Workshop, Trondheim, 2005 (still under discussion with EAS) Aquaculture America 2006, Las Vegas Recirculation 2006, Roanoke Issues Forum 2007, The Netherlands Aquaculture America 2007, San Antonio World Aquaculture 2008, Korea	Jaw-Kai Wang Ep Eding/Tom Losordo Greg Boardman Timmons Ep Eding ??	
Mike Timmons and Brian Vinci	Development of Fiscal and Investment Objectives for the AES Issues include: (a)Position paper or amendment of constitution? (b)How much money do we need to have? (c)How available should the money be?	Complete formal report in 6 months and present to BOD in Las Vegas meeting	On-going
Steve Summerfelt and Kelly Rusch	Increase Participation Of AES Members In Society Activities Issues include: (a)Why did you join? (b)What additional services would you like AES to provide? (c) What would you like to assist with? (d)What type of program do members want at annual conference? (e)What other type of services do members want? (f)Does our current constitution discourage member involvement? (g)What do members think about our current organization (power in the BOD vs direct elections)? (h)Other issues	Complete formal report in 6 months and present to BOD in Las Vegas meeting	On-going

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JOB POSTINGS

Marketing Associate, Aquaculture Systems Technologies, LLC

Aquaculture Systems Technologies, LLC, the leading international supplier of Bead Filter Technologies for aquaculture and display applications, has an immediate job opening in its New Orleans office for a marketing associate.

Applicants should have a fundamental knowledge of water quality principles, as well as hands-on experience in the operations and maintenance of recirculating aquaculture systems. Such experience may include work with production aquaculture systems, water gardens, and ornamental fish ponds and display systems. Good interpersonal skills are essential, as are organizational skills and computer literacy. A minimum of a B.S. in Aquaculture, Environmental Science, Biology, Engineering or a related area required.

Job responsibilities include marketing Bead Filters and providing technical product support for our network of dealers and distributors. Principal activities include telephone sales, telephone customers with filter application and sizing analyses, as well as exhibiting our Bead Filter Technologies at trade shows and conferences.

Starting salary: \$32,000 to \$35,000 per year depending on experience plus commission after six months. Benefits include paid holidays (8), paid vacation and sick leave after 6 months.

For more information on Aquaculture Systems Technologies, LLC please visit our website at www.BeadFilters.com.

Applicants are requested to send resumes of qualifications and experience to Douglas Drennan via e-mail at jobs@BeadFilters.com or fax to (504) 837 5585.

Director, Center for Aquaculture Development

Fort Valley State University, Fort Valley, GA

Job Number: 88

Salary: \$48,960 to \$78,942

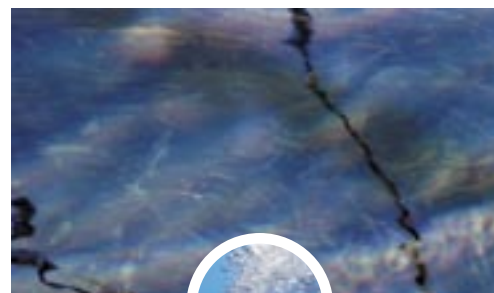
Location: Cooperative Extension Program

Responsibilities: Develop and implement a successful program in aquaculture research and education with a concentration on warm-season fish and crustacean aquaculture; develop and enhance catfish and tilapia production as a viable economic entities in Georgia; evaluate other fish and crustaceans (including marine shrimp and freshwater prawns) for adaptation to culture; provide support to producers who experience disease and other production problems; and establish cooperative projects and relationships with other aquaculture scientist and industry groups.

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The AES is looking for sponsors within the aquaculture industry to support the cost of producing the AES News. The sponsors listed below have donated generously to support the AES in 2004.

<p>Aquatic Eco-Systems, Inc. 1767 Benbow Court Apopka, FL 32703 ph: (407) 886-3939 fax: (407) 886-6787 aes@aquaticeco.com www.aquaticeco.com</p>	<p>PRAqua Technologies Ltd. 1635 Harold Road Nanaimo, BC, CA V9X 1T4 ph: (250) 714-0141 fax: (250) 714-0171 info@praqua.com www.praqua.com</p>
<p>Aquaculture Systems Technologies, LLC. P.O. Box 15827 New Orleans, LA 70175 ph: (800) 939-3659 fax: (504) 837-5585 info@BeadFilters.com www.BeadFilters.com</p>	<p>Water Management Technologies, Inc. P.O. Box 66125 Baton Rouge, LA 70896 ph: (225) 755-0026 fax: (225) 755-0995 info@w-m-t.com www.w-m-t.com</p>
<p>Aquaneering, Inc. 8280 Clairemont Mesa Blvd., Suite 117 San Diego, CA 92111-1708 ph: (858) 541-2028 fax: (858) 541-2048 info@aquaneering.com www.aquaneering.com</p>	<p>Marine Biotech, Inc. 54 West Dane Street, Unit A Beverly, Massachusetts 01915 ph: (978) 927-8720 fax: (978) 921-0231 sales@marinebiotech.com www.marinebiotech.com</p>
<p>Holder Timmons Engineering Ltd. USA Office: 126 Sunset Drive, Ithaca, New York 14850 ph: (607) 255-1630, mibt3@cornell.edu CDN Office: 606 Evergreen Ave. Courtney, BC, CA, V9N7N5 ph: (250) 897-1334, jholder@island.net www.holdertimmons.com</p>	



AES Information

The AES News is printed quarterly by the Aquacultural Engineering Society. You can receive the AES News by joining the Aquacultural Engineering Society. If you would like to discuss the contents of the AES News, or, if you would like to contribute information to the AES News, please contact the editor:

KC Hosler P. Eng
PRAqua Technologies Ltd.
1635 Harold Road Nanaimo, BC,
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ph: 250-714-0141 | fax: 250-714-0171
info@praqua.com



Barnaby Watten Receiving the AES 'Award of Excellence'

BARNABY WATTEN RECEIVES AES 'AWARD OF EXCELLENCE'

During the AES Annual Membership Meeting in New Orleans on January 19, 2005, the AES Board of Directors presented Dr. Barnaby Watten (USGS, Leetown, WV) with the AES's 'Award of Excellence.' Dr. Watten is only the second to receive our society's highest award; Dr. John Colt was the first to receive the AES 'Award of Excellence' in November of 2003.

Dr. Watten's contributions to the field of aquacultural engineering are profound. Through his outstanding research in the field of aquacultural engineering and his efforts on behalf of the Aquacultural Engineering Society, Dr. Watten has had a significant impact on our field worthy of the Award of Excellence. Dr. Watten was the first to develop the 'Low Head Oxygenator', the 'Cross-Flow Culture Tank', the 'Mixed-Cell Culture Tank', the 'O₂/CO₂ Co-Transfer Column', the 'Non-Contacting Head-Space O₂/CO₂ Monitor', and the 'Pulsed Fluidized Limestone Acid Mine Drainage Treatment Process'. All of these technologies have already benefited the aquaculture industry or are still in proto-type testing, but perhaps no technology has been adopted more than the Low Head Oxygenator, where thousands of these gas transfer units are used in both flow-through and recirculating systems throughout North America. Dr. Watten has been awarded 7 patents and has authored about 50 publications.

Dr. Watten has served as President of the AES and as President of the Bioengineering Section of the American Fisheries Society. He has served as a Member of the Editorial Board and as a Guest Editor for the journal *Aquacultural Engineering*. He co-organized the 2001 and 2003 AES Issues Forums.

Dr. Watten is presently Chief of the Restoration Technology Branch of the U.S. Geological Survey, Leetown Science Center, in Leetown, WV. Dr. Watten has a B.S. in Aquatic Biology from Bemidji State University (Bemidji, MN), a M.S. in Agricultural Engineering from Oregon State University (Corvallis, OR), and a Ph.D. in Fisheries and Allied Aquaculture from Auburn University (Auburn, AL) under major professor Dr. Claude Boyd.

Nominations Solicited for AES Awards

Nominations are solicited from the AES membership for the AES Award of Excellence and the AES Meritorious Service Award. These two awards are described below in order of their importance and prestige and are considered on an annual basis by the AES Board of Directors. No more than one award in each category can be made in any one year. These awards are conferred on a need-only basis – they are not mandatory. The Awards Committee Chair ensures nomination packages are complete and then distributes nomination packages to the AES Board of Directors. The AES Board selects award recipient(s), if any, by majority vote. Awards are presented by the President of AES during the subsequent AES general membership meeting.

1. Award of Excellence

This award recognizes outstanding science or technical contributions to the field of aquacultural engineering. The award can reflect very substantial single contributions or an extended record of smaller contributions. The recipient must be a member of AES. Dr. John Colt and Dr. Barnaby Watten are the first two recipients of the Award of Excellence.

2. Meritorious Service Award

This award recognizes an AES member's unswerving loyalty, dedication, and meritorious service to the society over a long period of time; and for exceptional commitment to the programs, ideals, objectives and long-term goals of AES.

Award nominations and supporting data should be sent to the AES Awards Committee Chair (s.summerfelt@freshwaterinstitute.org) prior to November 1, 2005.



AQUACULTURE EUROPE 2005 - "OPTIMISING THE FUTURE" & AQUANOR TRADE SHOW

Norwegian University of Science and Technology (NTNU), Trondheim, Norway

August 5-12, 2005

The European Aquaculture Society (EAS) has the pleasure of inviting you to attend what promises to be a wonderful week of events linked to the further development of SUSTAINABLE AQUACULTURE.

Aquaculture Europe AE2005. "Lessons from the Past to Optimise the Future". August 5-8

The annual conference of EAS, organised in cooperation with the Nor Fishing Foundation will bring participants from more than 40 countries. The conference will address the economic, environmental and social (ethical) factors underlying sustainable development of the sector, based on past experience, current knowledge and future needs. This is a great opportunity to network and to get the latest information. The conference includes two special forums: one on Innovation in Aquaculture; the second on the 6th and 7th Framework Programmes of the European Union. Detailed information, the latest programme and registration forms are at <http://www.easonline.org/agenda/en/AquaEuro2005/default.asp>

Workshop "Wild and Farmed Salmon - Working Together". August 9.

This unique event, which aims to bring together those involved in the management of wild and reared salmon stocks, will have three theme sessions:

- Area management initiatives (local cooperation between wild and farmed salmon interests);
- Pros and cons of using sterile salmon in farming and the possible opportunities for cooperative trials;
- Restoration programmes (cooperative ventures in restoring wild Atlantic salmon).

This one day workshop is organised by the NASCO/ salmon farming industry Liaison Group in conjunction with EAS. Pre-registration is required.

Recirculation Aquaculture Technology Workshop. August 9-10

Recirculating aquaculture technology is the latest sector in aquaculture to have attracted attention and considerable venture capital. The presenters will seek to provide non-biased, research-based information to those that are interested in, or those using recirculating aquaculture fish production systems.

This workshop, which is designed for a broad audience, is being organised by the Aquaculture Engineering Society and EAS. Pre-registration is required.

Aqua Nor 2005, August 9-12.

The world's biggest aquaculture exhibition attracting 25,000 visitors. Get an update on the latest products and services from 500 manufacturers and suppliers to the aquaculture industry. An event not to be missed! Admission to Aqua Nor is free for registered delegates of AE2005 conference and workshops. See www.nor-fishing.no

A Special Aquaculture Innovation Network Event. August 9

On the first day of the Aqua Nor exhibition (August 9), EAS, through its participation in the CNS-INTRANS EU funded network (www.aquainnovation.net), is organising a special event on innovation in aquaculture. The workshop will assess how innovation in aquaculture is developing, and how innovation supports and guides technology transfer.

We invite you to REGISTER NOW for these events, as registration costs will increase after May 15.

We also invite you to book your accommodation in Trondheim as early as possible.

We very much look forward to welcoming you in Trondheim in August.

Alistair Lane

EAS Executive Director

For Conference Information

visit www.easonline.org, or contact:

European Aquaculture Society - Aquaculture Europe 2005

Slijkensesteenweg 4
B-8400 Oostende, Belgium

Tel.: +32 59 32 38 59

Fax: +32 59 32 10 05

E-mail: ae2005@aquaculture.cc

For Aquanor Trade Show Information, Contact:

The Nor-Fishing Foundation - Aqua Nor 2005 Exhibition

Trondheim Spektrum
NI-7030 Trondheim, Norway

Tel.: +47 73 56 86 40

Fax: +47 73 56 86 41

E-mail: mailbox@nor-fishing.no

Web site: <http://www.nor-fishing.no>

Job Postings continued from page 4

Qualifications: Ph.D. in Fisheries and Applied Aquaculture or an appropriately related discipline, with emphasis on freshwater aquaculture. Notable experience in areas outlined under major responsibilities desired. Evidence of professional publications and funding raising. Ability to communicate effectively with producers, scientists, Extension specialist and the general public. Evidence of cooperatively working with others engaged in interdisciplinary Research and Extension Programs to support the aquaculture industry. Evidence of management and supervisory experience and skills.

All positions open until filled and contingent upon availability of funds. For additional information regarding this position, log on to our web page WWW.FVSU.edu or call Fort Valley State University Office of Human Resources at 478-825-6301.

A letter of application and resume, official transcripts, and three professional letters of reference required for all positions. Send to: Mr. Dwayne Crew, Director Office of Human Resources Fort Valley State University, Fort Valley, GA 31030-4313.



Message from the President continued from page 1

I would encourage all members to log on to our web site (<http://www.aesweb.org>). This site is key to providing members and non-members with up-to-date information on society activities and services.

I look forward to working with all the committees, officers, and members during 2005.

Best Regards,

John Colt, President

Aquacultural Engineering Society

john.colt@noaa.gov

(206) 860-3243

www.aesweb.org

If you've looked at the AES website lately you will find a lot of information. If you haven't, then you should. Stay current! There are publications and presentations, access to newsletters – past and present – available for downloading, news items, lots of upcoming conferences and forums to attend. There are also databases available with hundreds of useful links to help you find whatever aquaculture related information you are searching for. The public access portion of this website also includes a page for submitting aquaculture-related job positions that will be responded to by industry related employees only.

If you are fortunate enough to be a member of AES (you can become a member online, of course) there are quite a few privileges associated with membership in the members-only section of the website. There are job postings that you can browse, plus a wide variety of useful

calculating tools including oxygen and ammonia calculators. There is a large collection of articles, presentations and newsletters and a discussion forum for members to exchange information and to post aquaculture questions and answers.



Your Input is Needed

We need your help to make the website as useful and informative as possible to the AES membership. If you have any suggestions for website improvement or features/information that you would like to see posted, please forward your comments to KC Hosler at kc@praqua.com.

Technical Assistance

If you are having trouble accessing website features or links, or if you have general comments about the site itself, please contact the webmaster, Oliver Schneider at office@oliverschneider.com.



Residuals & Biosolids Management Conference 2006 Water Environment Federation

March 12-15, 2006
Marriott River Center & Northern Kentucky Convention Center
Greater Cincinnati, Ohio USA

Residuals and biosolids management are an ongoing concern for aquacultural and agricultural facilities, as well as for mainstream municipal waste treatment facilities. The theme of the Residuals and Biosolids Management Conference 2006 is "Bridging to the Future", with a strong focus on the management of biosolids and residuals.

Abstract Topics

The Conference Program will include oral presentations, workshops, and panel discussions to be presented at the conference. Specific conference topics will include, but not be limited to, the following:

- A. Research and Development Activities
- B. Land Application, Land Reclamation and Managing Nutrients
- C. Marketing of Biosolids Products
- D. Biosolids Success Stories
- E. Program Overviews and Case Studies
- F. Environmental Management Systems
- G. Building Public Support
- H. Advances in Stabilization Technologies
- I. Conditioning and Dewatering Technologies
- J. Bioenergy Technologies
- K. Odor Control
- L. Regulatory/Legal Issues
- M. Biosolids/Residuals Management Economics and Competitiveness
- N. Regional (Tri-State) Issues
- O. Future Issues

Abstract Submittal Deadline is July 8, 2005.
Water Environment Federation
Conference Programs – Biosolids 2006
601 Wythe Street, Alexandria, Virginia, USA
22314-1994
Phone: 703-684-2400, ext. 7010,
Fax: 703-684-2413.
Questions? Contact the WEF Technical Programs Department at 703-684-2400, ext. 7010.

Held by the Water Environment Federation and cosponsored by the Ohio Water Environment Association.



Subcommittee Assignments continued from page 3

Members	Objectives	Time Frame	Status
Mike Timmons	Can Our Constitution Be Changed To Allow Non-Engineers To Serve As Officers And BOD Members?	Complete formal report in 6 months and present to BOD in Las Vegas meeting	On-going
Barnaby Watten, Tim Pfeiffer, and Steve Summerfelt	Steering committee (and editors) for preparation of Biofilter Book from the 2004 AES/OI workshop in Hawaii	Complete in next 12-15 months	On-going
Roger Viadero, Chair	Development of reporting standards for production systems		On-going

AES Sponsor Companies

Aquaculture Systems Technologies, LLC



Buffalo Zoo Sea Lion Exhibit

The photo at left shows six of Aquaculture Systems Technologies' Model PBF-50 Special Propeller Washed Bead Filters installed in the filtration vault at the Buffalo Zoo on their new Sea Lion Exhibit. The filters have a flow rate of 600 gpm each and will be providing complete biological and mechanical filtration for the exhibit. The exhibit was designed by and the installation done by Biscayne Aquaculture of Miami, FL.

Harbor Branch Oceanographic Institute Pompano Larval Rearing System

The photo at right shows an installation of AST's Model BBF-XS1000 bubble-washed bead filters (one cubic foot) at Harbor Branch Oceanographic Institute. These units are installed for a Pompano larval rearing system in Dr. Chuck Weirich's laboratory. In addition to having a Bubble Washed Bead Filter, each individual system also features an AST-40 watt UV vertically mounted to the filter, and a circulation pump.



PRAqua Technologies Ltd.

For over twenty years, PRAqua has provided a wide spectrum of design, engineering and equipment integration services to the aquaculture and water treatment industries. As a market leader in design, engineering and equipment provision, we have earned an enviable reputation for our commitment to quality and service. PRAqua Technologies continues to be at the leading edge for energy-efficient, robust, and environmentally friendly systems, with a specific focus toward recirculation technology. We are experienced with both cold and warm water aquaculture and habitat enhancement projects. We have designed many successful world-class aquaculture hatcheries and grow-out facilities, built on proven recirculation technologies.

State of Utah: Logan Fisheries Experimentation Station June Sucker Interim Warm Water Hatchery

PRAqua participated as aquaculture specialists in a design team led by J-U-B Engineers, Inc. to develop a recirculating aquaculture facility for the State of Utah designed for preservation of the June Sucker, an endangered species of finfish. In the initial Programming and Planning phase of the project, PRAqua assembled the rearing requirements into a comprehensive growth model, from which a facility plan and treatment process were developed, incorporating the latest in recirculation technologies.

PRAqua is currently participating in the Detailed Design phase of the project, developing comprehensive tender documents that the State is using to construct a facility designed to achieve its production targets and cost objectives while ensuring survival of this endangered species.

