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Spring / Summer 2007

"American Institute of Hydrology, the Society for Certification of Hydrology Professionals"

Volume 25, Issue 1 and 2

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## AIH Unveils Hydrologic Technicians Program

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On July 1, 2007, The American Institute of Hydrology (AIH) will begin to receive applications for certification of Hydrologic Technicians throughout the United States and many international countries. This program is open to all categories of Hydrologic Technician and all levels of experience. This page discusses the formation of the certification program and the application process to become certified. A brief history of the development of this program will help understand the importance of the program.

### The Need for the Hydrologic Technician Program

For many years, the members of AIH have discussed the value of certifying hydrologic technicians. It has been duly noted that the success of any hydrology project always depends on the training and experience of technicians that collect the data or make the analyses. A properly certified Hydrologic Technician provides another level of reliability and assurance that hydrology was conducted in accordance with current standards. Certification of technicians is a natural extension to professional certification and to the support of hydrology as a meaningful science. Public agencies and industry are concerned about the way data are collected with respect to standards and usability. They desire some way to define the competence of those employees that collect data used in water-resource decision making.



### In This Issue

- AIH Unveils Hydrologic Technicians Program
- Member Profiles: John E. Edinger
- 2007 Annual Meeting & International Conference was Another Success Story
- AGI Announces Contest Themes for Earth Science Week 2007
- New Water Quality Trading Guide Available
- Look where you can do your banking now!
- Job Postings
- Reduce Your Dues Payment and Still Help AIH?
- On-Line Registry New Member Service
- Quickie Questions
- Speakers Bureau
- Do You Miss Your Bulletin?

### The Organizing Committee

Recently, AIH formed a committee combining professional hydrologists and senior level hydrologic technicians from the public and private sectors to develop a certification program for hydrologic technicians.

The Hydrologic Technician Certification Committee under direction of the Executive Committee of AIH developed implementation of a program to include hydrologic technicians in our Institute. The program is designed to certify the qualifications of those that are responsible for collecting, quality assuring, and compiling the data used in hydrology. The plan is to certify hydrologic technicians at three levels within each sub-discipline (water-quality, surface-water, and ground water). Each level will have specific continuing education, experience, and testing requirements. These requirements were developed from a set of outlines compiled by members of the committee and vetted through industry, academia, and government. A fee schedule was set with Executive Committee approval.

### These professionals comprised the Committee:

Chairperson: Emmitt Witt, PH  
USGS Mid-Continent Geographic Science Center

Jack Doyle  
USGS Idaho Water Science Center

Cassidy Luebbring  
MEC Water Resources, Inc

Dave Adams  
USGS Oklahoma Water Science Center

Bob Whitaker  
USGS Missouri Water Science Center

Brian Mailot  
USGS Ohio Water Science Center

Fred Morris  
USGS retired

Tony Laenen, PH  
AIH President

Jerry Seaburn, PH  
AIH Executive Director

*Continued on Page 6*

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### Advertisement Rates are as follows:

SPACE	RATE	SIZE
1 page	\$595	9½ x 7½"
1/2 page	\$349	9½ x 3½" (1 column)
1/2 page	\$349	4½ x 7½" (1 banner)
1/4 page	\$199	4½ x 3½" (1/2 column)
1/8 page	\$125	2¼ x 3½" (1/4 column)

**Advertisers agreeing to publish an ad in three consecutive issues will receive FREE publication in the fourth issue.**

### Emails for the Executive Committee

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# PRESIDENT'S MESSAGE

I have chosen to wait these few months into my presidency to make opening remarks to our membership. I am still not entirely certain of the course I would like to steer, but I am certain that it will require change and commitment. AIH has never been a large organization, never surpassing the millennium membership mark at our peak, and we are now even smaller with recent losses from our charter membership period. We are an organization of less than 500 professional members. Our membership must increase and our certification must have better recognition. The two are not mutually exclusive.

I believe that the certification of hydrology professionals and hydrologic technicians is a commendable goal, and that the ultimate recognition of hydrology by States in the licensing of professionals is necessary for all water-resources and ecological planning. I do not believe that the American Institute of Hydrology has exclusive rights to hydrology certification but that we should be among the leaders in determining what constitutes certification and registration in the field of hydrology.

Because we have tended to limit our membership to an exclusively-qualified applicant, we have restricted ourselves to slow growth, and in past years to negative growth. We are beginning to turn this around, but the gains are imperceptible. What I believe is needed is more interaction with other societies, agencies, and the public, so that they learn more about what it is we offer and where we are going.

So, what do we offer and where are we going?

The goals of AIH are simple - to define hydrology, certify hydrology professionals (and now technicians), and to provide education in hydrology. We have been strong in the definition process, but lag in both certification and education. Certification lags because membership lags. Education is almost non-existent and thus membership lags and certification is an unknown.

**Membership:** Membership has been restricted to hydrology professionals with rigid academic standards. Candidates find our application forms inconvenient. We have recently opened our associate membership up to those with just an interest in hydrology and some minimum education requirements. We are in the process of revising our applications to be more applicant-friendly, and we are working towards on-line applications, registrations, billing etc.

We have opened membership and certification up to hydrologic technicians because it is a natural extension to professional certification and to the support of hydrology as a meaningful science. Public agencies and industry are concerned about the way data is collected with respect to standards and usability. They desire some way to define the competence of those employees that collect the data used in water-resource decision making.

**Certification:** This is our most important product and we need to convey the importance of certification in hydrology to others. Most professionals working in water-related fields will dismiss the need for certification in hydrology. It is the opinion of many that hydrology certification is of no value in terms of their income, career, or education. The most important value that they ignore is the value implied to the resource itself. Certification can most importantly benefit water resources. It puts an onus on those practicing to have certain required hydrologic knowledge in order to provide study results for decision making in water resources. Certification can benefit income - professional hydrology certification is recognition of knowledge and level of knowledge by peers. A greater knowledge of water science is being demanded by authorities and the general public, and this demand generates income. Certification can benefit career - there is no better way to advance a career than by peer recognition. Certification requires education - to remain certified most programs require some minimum level of continuing education and these opportunities are provided within certification programs.

*Continued on Page 3*

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## President's Message - continued from Page 2

All of our membership needs to be actively involved in recruitment. The Executive Committee and Headquarters staff has material and presentations available for member recruitment. We have plans to make more presentations and become more visible at other organization, agency, and public meetings.

**Education:** It is important, yet we offer so little of it for our membership. We offer conferences and three publications. Our conferences are excellent in content educationally, yet very few of our members ever attend. It is true that we attract membership at our conferences, but they are becoming so poorly attended that the effort and results are not worth the substantial effort they require. We are looking into pooling our conferences with other organizations. Our publications do not reach out. We cannot compete with other journals, so we have made the decision to publish only proceedings. Our Bulletin is too old and stodgy. We wish to have an on-line current editorial/bulletin and are looking for a web editor. Most importantly we need to provide education for the fundamentals and practice of hydrology. To do this we need to focus our efforts in the development of study guides for our examinations.

We need to have our membership help us in all these tasks. I urge you to contact either myself or our Executive Director, Jerry Seaburn and volunteer in some way.

**A. Laenen**  
President AIH

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## Member Profiles

As a new feature for the AIH Bulletin, We will present Career Profiles of our members. These profiles may be presented in several different styles and formats. If you are interested in having us profile your career or if you know of someone that we could profile, please send the name and other contact information to us and we will do the rest.

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### John E. Edinger



Dr. John E. Edinger, is a Charter Member of the American Institute of Hydrology, with a Certification No. 253 issued in 1984. His career includes teaching at the University of Pennsylvania, Vanderbilt University and Bryn Mawr College, conducting research at TVA and Johns Hopkins University and running a successful consulting firm for 31 years.

Dr. Edinger received his Ph.D. in Environmental Engineering and Water Resources from The Johns Hopkins University (1965) with emphases in hydrodynamics and water quality. While at Johns Hopkins he studied physical, chemical and biological limnology, water resources, and estuarine oceanography. He taught physical

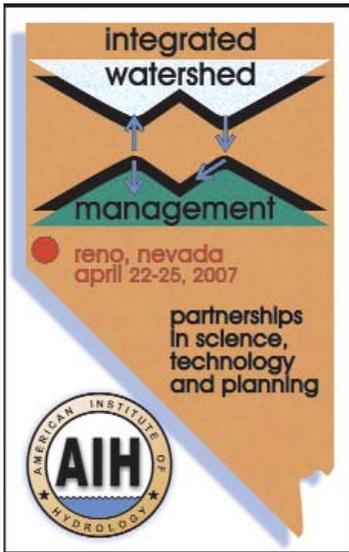
and chemical limnology while at Johns Hopkins as a Principal Research Scientist. He taught hydraulics, groundwater hydrology, fluid dynamics, water resources, and environmental engineering at Vanderbilt University. At the University of Pennsylvania he taught water body dynamics and water resources. In 1974 he started a consulting firm specializing in environmental hydrology, water body dynamics, and the coupling of hydrodynamic and water quality models. He is one of the primary developers of the longitudinal-vertical hydrodynamic and water quality modeling that became the basis of CE-QUAL-W2 which is distributed by the Corps of Engineers. He collaborated with other employees to develop an efficient three-dimensional hydrodynamic and water quality model for use on PC's that has since been expanded on to become a complete water body modeling system (GEMSS).

Dr. Edinger has extensive experience consulting to government agencies, utilities and manufacturing industries on water quality problems. His work has emphasized the coupling of modeling efforts with the analysis of field data. He has worked on numerous teamed projects involving specialists in other fields including other water quality scientists, biologists, and design engineers. Dr. Edinger has served on EPA's Science Advisory Board Committee on Environmental Transport and Fate, the Science Advisory Board to the Great Lakes Commission, the Executive Committee of the ASCE Energy Division and on the Environmental Effects Committee of the Energy Division. He served for a brief time as editor of the ASCE Energy Engineering Division Journal and is presently on its editorial board. Dr. Edinger is a certified hydrologist (American Institute of Hydrology).

Dr. Edinger has published and co-authored over 70 journal and conference proceedings papers, and has prepared over 30 reviews of papers and articles for different divisions and Institutes within ASCE. He presently serves on the faculty at Bryn Mawr College as a research associate in its Department of Geology where he has been studying the effects of pro-glacial lake outflows on the hydrodynamics and transport of sediment through Hudson Strait, effects of BMC storm water pond on water quality, and changes in uses of a watershed on its receiving stream and estuary water quality.

Dr. Edinger has recently been awarded the ASCE Stephen D. Bechtel, Jr. Energy Award, *"For career contributions to the energy industry, spanning academia, engineering practice and professional service, and in particular, for contributions in the area of water body Dynamics."* 2007. He also received the ASCE EWRI EMMC Award for Achievement in Private Practice of Environmental Engineering, 2005. Other honors he has received are: Honors Examiner Swarthmore College, 1974; Summer Fellow, Woods Hole Oceanographic Institution, 1961; Whitehead Scholarship, The Johns Hopkins University, 1960-1962; Western Electric Scholarship, Union College, 1958-1960; and Member of Sigma Xi and Tau Beta Pi

# 2007 Annual Meeting and International Conference Was Another Success Story



## TECHNICAL PROGRAM

The American Institute of Hydrology held its Annual Meeting and International Conference at the John Ascuaga's Nugget in Reno, Nevada, April 22-25, 2007. President Antonius Laenen opened the conference and presided over the Plenary Session. The conference theme was "Integrated Watershed Management - Partnerships in Science, Technology and Planning," and attracted 87 papers. The Plenary Session on Monday morning set the tone for the rest of the meeting. **Dr. P. Patrick Leahy** with the U.S Geological Survey (former AIH President and future Executive Director of AGI), discussed "**Emerging Challenges in Hydrology in the 21st Century.**" **John Erwin**, Director of Resource Planning and Development for the Truckee Meadows Water Authority, described the future issues in managing water resources in the Truckee Meadow. This presentation, entitled "**Negotiating a Future Water Resource Solution for the Truckee Meadows,**" set the theme to real time conditions, especially in the surface water. Our final speaker in the Plenary Session was **Dr. Peter Black** with SUNY. He presented his comments on management of resources for the benefit of our descendants, entitled, "**The Wonder of Water; a Canary in the Coal mine; or a Road to Sustainability?**"

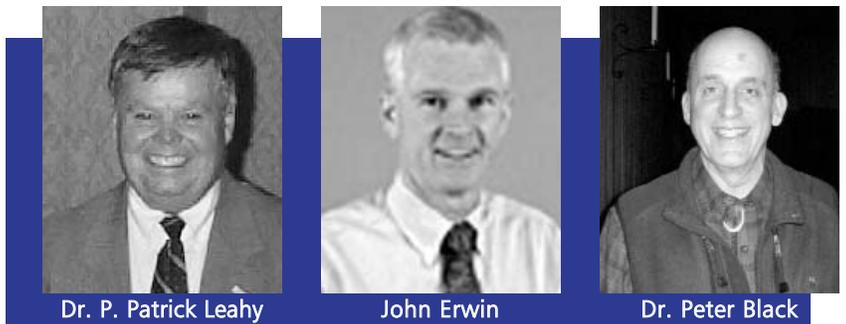


Following lunch on Monday, the conference was organized into two to three concurrent sessions of three to five papers each. Each session was organized to focus in detail on subjects relating to the theme of the conference.

## ACTIVITIES

The Organizing Committee put together a large number of associated activities:

- Conducted a review class for the Fundamentals Examination with seven in attendance
- Held the AIH Business Meeting on Monday at lunch with improved attendance
- Provided direct contact with our exhibitors/ Vendors by holding all breaks and receptions in the Exhibit Hall
- A well-planned field trip, to **Lake Tahoe and Carson City Waterfall Burn Area** to inspect the data collection programs that have been funded to manage watershed and water resources to meet some very high management standards. **Tim Rowe**, with the U.S. Geological Survey Nevada Water Science Center in Reno, Nevada, was responsible for putting together this excellent field trip.



Dr. P. Patrick Leahy

John Erwin

Dr. Peter Black



*Continued on Page 5*



"Lake Tahoe and Carson City Waterfall Burn Area; Integrated Studies of Sedimentation, Flooding, and Management of the Carson City "Waterfall" Fire Burn Area Watershed and Within the Lake Tahoe Basin"

## AWARDS

One of the highlights of any AIH Conference is the presentation of Awards. This year's ceremony was especially important because of the new Robert Wetzel Award in Water Quality Hydrology. In addition, AIH had a student paper competition.

The student technical paper awards were presented after all student presentations were made. Each presentation that registered for the competition was evaluated and scored by a panel of judges.

### The 2007 Student Technical Papers Awards are:

#### **\$350 First Place**

Oral Presentation

"Hydrodynamic Analyses of Delta Smelt Salvage and Entrainment in the Sacramento-San Joaquin Delta, California"

Joseph Simi  
USGS Intern

#### **\$250 Second Place**

Oral Presentation

"Risk-based Analysis of Pollutant Concentration Removal in Stormwater Detention Basins with Different Compartment Configurations"

Ali Abrishamchi  
University of California at Davis

#### **\$250 First Place**

Poster Presentation

"Influences of Irrigation Runoff on Water Quality and Aquatic Ecosystems in Small Lakes in Khorezm, Uzbekistan"

Margaret Shanafield  
University of Nevada, Reno

#### **\$150 Second Place**

Poster Presentation

"Regional Water Budget Accounting and Uncertainty Analysis Using a Deuterium-Calibrated Discrete State Compartment Model: White Pine County, Nevada, and Adjacent Areas in Nevada and Utah"

Kevin Lundmark  
University of Nevada, Reno

### The 2007 AIH Award winners are:

#### **R.K. Linsley Award**

Jacques W. Delleur  
Purdue University  
Citation by:  
Lindell Ormsbee  
University of Kentucky

#### **C.V. Theis Award**

Philip B. Bedient  
Rice University  
Citation by:  
E.C. Witt  
U.S. Geological Survey

#### **R.G. Wetzel Award**

Robert H. Meade\*  
U.S. Geological Survey, Colorado  
Citation by  
Glenn Patterson  
U.S. Geological Survey

\*Dr. Meade is the first recipient of the R. G. Wetzel Award.

## WHY ATTEND THE NEXT CONFERENCE?

The most frequent comment we hear from participants of our meetings is that the paper/presentations are excellent. They address the theme of the meeting. The presentations are timely, technically sound and presented well. The American Institute of Hydrology is proud to hear these comments, because AIH's mission is to strengthen hydrology, educate and communicate on matters related to the science and profession of hydrology and hydrogeology.

The Institute urges you to attend our next meeting that will be held in Houston, Texas. AIH needs your continued support in many ways. One important way is by attending our annual meetings.

## AGI Announces Contest Themes for Earth Science Week 2007

Alexandria, VA – The American Geological Institute (AGI) is sponsoring three national contests in conjunction with Earth Science Week 2007, October 14-20 - "The Pulse of Earth Science."

All U.S. residents are encouraged to enter "People Discovering Earth's Treasures" – this year's Earth Science Week photography contest. Submissions should depict an aspect of earth science as it appears in your community. Learn to look at your surroundings through a geoscientist's eyes and photograph what you discover.

Students in grades K – 5 are eligible to enter the visual arts contest, "Changing Earth." Submissions should illustrate how geologic processes are constantly changing Earth's landscape. Draw a picture, make a collage, or create another piece of two-dimensional artwork that highlights the continuous change on our planet.

The essay contest "Earth Science in My Community" is open to students in grades 6-9. Entries should be short essays of no more than 300 words explaining a unique geologic aspect of their community, discuss current earth science research in their geographic area, or indicate why it is important to study the geology of your town.

Earth Science week is organized annually by AGI with support from a number of other geosciences organizations, including the U.S. Geological Survey and the American Association of Petroleum Geologists Foundation. To learn more about how to celebrate our understanding of the planet and for more information on these contests including information on how to enter, please go to <http://www.earthsciweek.org/>.

The American Geological Institute is a nonprofit federation of 44 geoscientific and professional associations that represents more than 120,000 geologists, geophysicists and other earth scientists. Founded in 1948, AGI provides information services to geoscientists, serves as a voice of shared interests in the profession, plays a major role in strengthening geoscience education, and strives to increase public awareness of the vital role the geosciences play in society's use of earth resources, resiliency to natural hazards, and interaction with the environment.

## Hydrologic Technicians - continued from Page 1

By a vote of our membership, two sections of an Article were amended to our Constitution. Section 1 addresses the creation of a Technical Division to include hydrologic technician members, and Section 2 addresses the management of that Division. Division status is the most efficient way to include technicians in our organization and give them the autonomy they need to move forward and grow.

### ARTICLE XX. TECHNICAL DIVISION

Section 1. Creation. The Institute may create a Technical Division to operate under separate by-laws and under the Institute's oversight. The mission of the Division will be to qualify and certify Hydrologic Technicians. The process to create a Division must be voted by two-thirds or more affirmative vote of all votes received from voting Members, through a mail ballot. A vote by the Institute's Professional Membership on such a change will use a time schedule and procedure determined by the Executive Committee, upon receipt and acceptance by the Institute of by-laws for the intended Division.

Section 2. Management. The Technical Division will elect a Management Committee to be composed of a Chairperson and elected officers as defined in Division Bylaws. The duties of the Division Management Committee shall be to accomplish the business of the Division as described in the Division Bylaws. The Chairperson of the Division will serve as a member of the Institute's Executive Committee as a representative of the Technical Division.

## Why Certify as a Hydrologic Technician?

- To gain recognition as being important participant in hydrology work.
- Certification is intended to give credentials. It is an endorsement by peers and professionals in the field of hydrology.
- The public and professional can rely on the work of the Hydrologic Technician to provide credible and reliable data.
- To give potential employers assurance that a future employee will give qualified performance.
- To establish credentials for hydrologic technicians and thus allow an employer to demonstrate data-collection competence in their portfolio.
- To emphasize the importance of high-quality data collection for hydrologic studies. Good data collection supports the science of hydrology.
- To demonstrate discipline-level competence.

## What Does the Hydrologic Technician Do for You?

Hydrologic Technicians at all levels works closely with Project Professionals, usually a Certified Professional Hydrologist, a Professional Engineer, or Professional Hydrogeologist in planning and conducting their project activities.



The value of the hydrologic technician to the hydrology profession is demonstrated everyday as they collect data in all weather conditions and environments, ensure representative procedures are used, ensure the proper collection of more uniform and reliable data and follow proper quality assurance procedures.

## Charter Membership Period

For one year, beginning July 1, 2007, AIH will accept application for qualified Hydrologic Technicians as Charter Member. The review panel may recommend that candidates applying for one level of experience may apply for a lower level or that they be tested when examinations begin in 2008. A reduced fee schedule would be in effect for the specified period.

## Some field activities a hydrologic technician performs:

- Stream gage operation, maintenance, and data retrieval
- Discharge measurement
- Instrument calibration
- Record keeping
- Water quality sample collection
- Instrument repair and troubleshooting
- Surveying
- Well drilling
- Data compilation and review
- Database management
- Website maintenance
- Publish data reports
- Evaluate new instrumentation
- Develop new instrumentation, and
- Ground water level monitoring

## How to Join?

### Obtain an application.

- By downloading it from this web site at:  
[www.aihydro.org/Forms/FORM034.pdf](http://www.aihydro.org/Forms/FORM034.pdf)
- Or call (770) 384-1634 and ask to have it mailed or emailed
- Or send an email request to [AIHydro@aol.com](mailto:AIHydro@aol.com)

### Complete the application form.

- Fill the application with as much information as you can. Provide us with one original and two copies of the application and all supporting documents.
- Identify three References that can vouch for your work experience, ethics and character. Send to each person a reference form, which can also be downloaded at [www.aihydro.org/Forms/FORM034.pdf](http://www.aihydro.org/Forms/FORM034.pdf). As a courtesy, also provide them with an addressed stamped envelope for mailing directly to AIH
- Include your application fee of \$75 (**\$25 for charter member period\***), made out to the American Institute of Hydrology, 300 Village Green Circle, Suite 201, Smyrna, GA 30080.

*Continued on Page 7*

## 2007 Fee Structure

- Application fee = \$75 (\$25 for charter member period)
- Test fee = \$200; Test is Waived in 2007-8 for Charter Members
- Certification dues for each level = \$90
- Certificate cost:
  - Level I cost included in application fee
  - Level II = \$25
  - Level III = \$35

**\*From July 1, 2007 through June 31, 2008, AIH is offering for all qualified hydrologic technicians to join as Charter Members.**

### The review process.

- Upon receipt of your application we will check it for completeness and, if necessary, notify you of additional information that may be needed
- The completed application will be submitted to two members of the Board of Registration for review and evaluation, who make independent recommendations that are sent to the Board of Registration.
- The candidate must pass a 100-question multiple choice examination. Examinations are offered in each discipline level for the certification of Hydrologic Technician. The exams are offered twice a year on the second Friday of May and November. All exams are closed book and no papers, books or computers will be allowed in the test room. Calculators are allowed and are recommended. All tests are waived through the charter member period.
- The results of the examination and the recommendations are reviewed by the Chairman and Secretary of the Board of Registration, who in turn send their recommendation to the Executive Committee for approval.

### The Certification Program

- The Hydrologic Technician Certification Program has been structured on an experience level and discipline category approach. There are three experience levels defined by education and length in service. There are three discipline categories; surface water, ground water, and water quality. Each level requires the candidate to pass a written test. Each test is composed of 100 multiple choice questions. To become certified in one of these levels, the candidate must meet the requirements of that level.
- Upon approval as a Certified Hydrologic Technician, AIH will notify you of your achievement. At that time we will send you documents on the proper use of your certification and other information, including a request form for your Certificate.
- A Certificate and membership card is issued by the Institute. The Certificate shall show the specialty and the full name of the member and will be signed by the Chair of the Board of Registration and by the President of the Institute. Failure to pay for the Certificate within 60 days of notification shall cause the membership to lapse. The Certificate shall expire on December 31 of each year unless renewed. The Certificate shall remain the property of AIH and must be returned if membership lapses.

## Level I Certification: All-Disciplines (General)

**Requirements:** This level requires at a minimum one year practical experience under the supervision of a professional hydrologist or senior level hydrologic technician or an Associate or Bachelor of Science degree with a minimum of 12 hours of water related coursework. To achieve the Level I certification, an applicant must pass a 100-question multiple-choice test that includes the specialty areas in the following outline:

### Level I Test Structure

General Surface Water Techniques 30%  
General Ground Water Techniques 30%  
General Water Quality Techniques 30%  
Basic Electronics 5%  
Field Safety 5%

## Level II Certification: Discipline Specific

- Specific to surface water, ground water, or water quality.
- Must have a minimum of 5 years practical experience.
- Must have a minimum of 12 continuing education credit hours in the discipline specific field (there will be exceptions).
- Must pass a 100 question multiple-choice test.

### Level II Surface Water

**Requirements:** This level requires at a minimum 5 years practical experience under the supervision of a professional hydrologist or senior level hydrologic technician and a minimum of 12 continuing education credits in surface water hydrology, field techniques, and advanced monitoring equipment. To achieve the Level II certification, an applicant must pass a 100-question multiple-choice test that includes the specialty areas in the following outline:

### Level II - Surface Water Test Structure

Surface Water Techniques 50%  
Specialized Techniques Not Related to In-stream Flow 20%  
Electronics/Field Repair 10%  
Safety 20%

### Level II Ground Water

**Requirements:** This level requires at a minimum 5 years practical experience under the supervision of a professional hydrologist or senior level hydrologic technician and a minimum of 12 continuing education credits hours in ground-water/surface-water relationships, field techniques, and quality assurance. To achieve the Level II certification, an applicant must pass a 100-question multiple-choice test that includes the specialty areas in the following outline:

### Level II - Ground Water Test Structure

Ground Water Field Techniques 50%  
Ground Water Data Review 15%  
Ground Water Measurement Equipment 20%  
Safety 15%

*Continued on Page 8*

### Level II Water Quality

**Requirements:** This level requires at a minimum 5 years practical experience under the supervision of a professional hydrologist or senior level hydrologic technician and a minimum of 12 continuing education credits hours in the field of water quality to include sedimentation, chemistry, and biology. To achieve the Level II certification, an applicant must pass a 100-question multiple-choice test that includes the specialty areas in the following outline:

#### Level II - Water Quality Test Structure

Water Quality Field Techniques 50%  
Water Quality Data Review and Validation 15%  
Field Measurement Equipment 25%  
Safety (HAZWOPER focused) 10%

### Level III Certification: Discipline Specific

- Specific to surface water, ground water, or water quality.
- Must have 12 years practical experience.
- Must have 24 hours of continuing education in the field of hydrology and database management.
- Must pass a 100 question multiple-choice test.

### Level III Surface Water

**Requirements:** This level requires at a minimum 12 years practical experience under the supervision of a professional hydrologist or senior level hydrologic technician and a minimum of 24 continuing education credits hours in surface water hydrology, field techniques, and advanced monitoring equipment. To achieve the Level III certification, an applicant must pass a 100-question multiple-choice test that includes the specialty areas in the following outline.

#### Level III - Surface Water Test Structure

Advanced surface water techniques 60%  
Specialized techniques not related to in-stream flow 10%  
Electronic/Field Repair 10%  
Safety 15%  
Public Relations 5%

### Level III Ground Water

**Requirements:** This level requires at a minimum 12 years practical experience under the supervision of a professional hydrologist or senior level hydrologic technician and a minimum of 24 continuing education credits hours in ground water science and field techniques. To achieve the Level III certification, an applicant must pass a 100-question multiple-choice test that includes the specialty areas in the following outline.

#### Level III - Ground Water Test Structure

Advanced ground water concepts 60%  
Resource knowledge 15%  
Network design and decision-making 5%  
Safety 15%  
Public relations 5%

### Level III Water Quality

**Requirements:** This level requires at a minimum 12 years practical experience under the supervision of a professional hydrologist or senior level hydrologic technician and a minimum of 24 continuing education credits hours in the field of water quality to include sedimentation, chemistry, database management and biology. To achieve the Level III certification, an applicant must pass a 100-question multiple-choice test that includes the specialty areas in the following outline.

#### Level III - Water Quality Test Structure

Water quality concepts 60%  
Resource knowledge 15%  
Network design and decision-making 10%  
Public Relations 5%  
Safety 10%

### New Water Quality Trading Guide Available

A new EPA publication will help the regulated community design and implement voluntary water quality trading programs consistent with EPA's 2003 National Water Quality Trading Policy. This new guide will provide stakeholders with detailed guidance on the fundamental concepts of trading which can accelerate water quality improvement and reduce compliance costs.

"EPA's Trading Toolkit is the first-ever 'how-to' manual on water quality trading," says Assistant Administrator for Water Benjamin H. Grumbles. "This Toolkit will be useful not only for permit writers but for anyone interested in designing a trading program to improve water quality. It is part of EPA's efforts to support and encourage innovation for water quality progress."

Water quality trading is a voluntary option that regulated point sources can use to meet requirements under the Clean Water Act. The Water Quality Trading Toolkit for Permit Writers provides permitting authorities with the tools they need to incorporate trading provisions into required permits. The guide is focused on trading nitrogen and phosphorus, but other pollutants may be considered for trading on a case-by-case basis. The Toolkit discusses the fundamental concepts of designing and implementing trading programs including the relevant geographic scope, effluent limitations and other factors involved in defining a credit. The document also includes a set of appendices which feature detailed case studies based on actual trading programs.

EPA is interested in public comment on the Toolkit. Comments received through the document's Web site will be considered for future updates.

The Toolkit, a Web-based document, is available on the EPA's Water Quality Trading Web site at:

<http://www.epa.gov/owow/watershed/trading/WQTToolkit.html>

A limited number of hard copies are also available through the National Service Center for Environmental Publications:

<http://www.epa.gov/nscep/>

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## Look where you can do your banking now!

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LGE Federal Credit Union, through its association with American Institute of Hydrology would like you to know that you have a new choice in banking. As a member of American Institute of Hydrology you and your immediate family members are eligible to do your banking at LGE Federal Credit Union. Accounts are federally insured to give you full peace of mind.

Being a credit union, we pay more interest on deposit accounts, charge less interest on loans, and have lower fees than you will typically find at a bank. Why? Because we have no stockholders to draw profits and our Board of Directors are unpaid volunteers. Lower costs to us means better deals for you.

### LGE offers all these services:

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#### Checking and Savings

- Checking Accounts
- Debit Cards
- Savings Accounts
- Money Market Accounts
- Health Savings Accounts
- Certificates Of Deposit
- IRA Certificates
- IRA Savings
- Visa® Gift Cards

#### Loans

- Credit Cards
- Auto Loans
- Home Equity Loans, Including Lines Of Credit
- Personal Loans
- Personal Loans

#### Electronic Services

- ATM's
- Home Banking
- Web Bill Pay
- eStatements

#### Financial Counseling

- Insurance
- Trust Services
- Investment Services
- Free Identity Theft 911 Service for LGE Checking or Visa® Credit Card Members

For more information, visit our website at [www.lgefcu.org](http://www.lgefcu.org).

You can also stop by any branch or call us at 770-424-0060 or 800-541-8921.

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## Job Postings

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AIH will post job opportunities for hydrologists nationwide on our website. For more information and ad rates please contact AIH Headquarters at [Aihydro@aol.com](mailto:Aihydro@aol.com) or call 770-384-1634.

Candidates looking for positions should frequently check our website for new opportunities.

[www.aihydro.org](http://www.aihydro.org)

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### Director - Watershed Protection Somerville, New Jersey

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Excellent opportunity with major water supply utility at our Somerville NJ office. High visibility position includes responsibility for organizing, managing, and overseeing programs, projects, and staff associated with watershed protection programs and water resource planning activities.

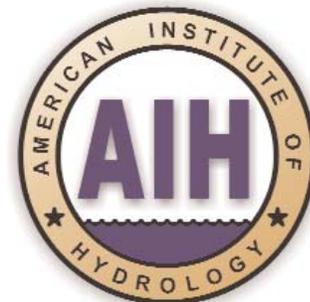
Other responsibilities include: promotion of stakeholder involvement in developing and implementing water resource protection strategies; development of funding proposals and partnership arrangements for watershed protection activities; (including applications for and management of grant funding); development and oversight of educational outreach programs; etc. Position requires a Masters Degree in Environmental Planning, Planning, Science, or Engineering or similar field plus a minimum of 10 years professional experience in water resource management or community/environmental planning work including at least 2 years supervisory or program management responsibility. NJ Professional Planner License a plus. We offer good starting salary and excellent fringe benefits.

To apply, e-mail resume including salary requirements/history to [employment@njwsa.org](mailto:employment@njwsa.org) or mail to:

NEW JERSEY  
WATER SUPPLY AUTHORITY  
Att: Human Resources  
PO Box 5196  
Clinton, NJ 08809

Equal Opportunity Employer

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## Reduce Your Dues Payment... And Still help AIH?

AIH needs to increase our membership. For the past three years, our membership roles have been dwindling as the Charter members of the 1983-1985 period start to retire. There is only one effective way to stabilize revenues and build a foundation for growth of the Institute. Government labor projections for Hydrologist indicate a need for 8,000 to 12,000 hydrologists by the year 2014. This represents a growth rate above the average for related professionals. In addition, there is an increasing demand by employers, government agencies and the public for certification, registration and licensing of professionals that will provide greater assurance and confidence in the products delivered by these professionals. In the future, certification of your professional credentials will be essential for a successful career.

Beginning **September 1, 2007**, AIH members can earn credits towards their annual dues for each new member, they recommend AIH. All members in good standing can earn a credit of 20 percent of the member's dues, for each candidate that they recommend, and who ultimately becomes an approved member. The credit can be claimed as soon as the candidate meets the conditions for membership that apply to the member class. The credits are accumulative to five new members per year. Unused credits can "carry over" from one year to the next. A credit can only be claimed by one member. Only one credit can be claimed against a given candidate. Credits can only be applied to the member's dues in the year or subsequent years following the candidate's acceptance in the membership class selected.

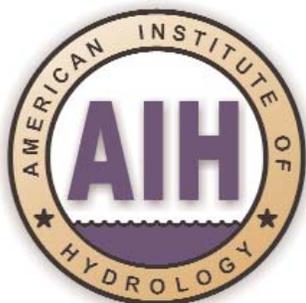
To claim your credit, you must be a member in good standing. There are two methods that you may follow:

1. You may sign the candidate's original application before the candidate submits the application to AIH, or
2. You may complete a form we provide to you. This form must be completed by you and also be signed by the candidate, agreeing with the credit assignment.

A copy of either of these two assignments for each candidate claimed, must be attached to your dues payment statement, to claim your credits

Candidate applications postmarked prior to September 1, 2007 are ineligible. Student Members are ineligible for this program.

You will be advised of this program as we develop it further. Your input at any time is welcomed and solicited.



## Wanted: Hydrology Editors for the AIH web page

The AIH Bulletin is a newsletter currently published four times a year. This idea is in need of an overhaul. AIH is looking for a managing editor that will take the lead in collecting materials, presenting some as information or links, editing those that are new, writing some articles, and publishing on the AIH web page in a timely manner. We also are looking for assistant editors that will cover the groundwater, surface-water, and water-quality areas. The Executive Committee feels that the purpose of the existing printed Bulletin (and currently the same format and timing now placed on the web) has been superseded. The web-page hydrology editor and assistants will be expected to search for current hydrologic news and developing issues and programs, and to present articles and links of interest to professional hydrologists. In addition on a more scheduled timeframe, the editors will be expected to distribute member news, inform members of technical, regulatory and educational opportunities, track and comment on upcoming meetings and conferences, and report on committee work. The new editors will be expected to commit about 40 hours collectively per quarter to gather materials and update the web. They will work closely with the AIH website manager, who will provide assistance in the required programs and access to facilitate the updating, editing, and graphic input. These will be three year appointments staggered in such a fashion as to insure continuity.

To indicate your interest in volunteering for these positions, please send by email, your name, phone number and brief discussion of any qualifications you have in editorial or web-page work, or additional ideas you might have regarding the scope of the posted position. Responses will be accepted until November 1, 2007.

### Newly Certified Professionals

Name	Certificate No.
Kang-Sheng Wu	07-H-1671
Robert Byer, Jr.	07-HGW-1690
Rik Lantz	07-HG-1691
Kenneth Heim	07-H-1692
Bruce Allen Pruitt	07-H-1693
Sharika Senarath	07-H-1694
Michel Boufadel	07-H-1695
Sharika Senarath	07-H-1694
Christian Carleton	07-H-1696
James Selegean	07-H-1697
Kang Sheng Wu	07-H-1698
Kyle Dittmer	07-H-1699
Scott MacFabe	07-HG-1700
William Greer	07-HGW-1701

### Associate and HIT

Brian Murphy	07-HIT-048
David Huer	07-HIT-050
Blaine Jones	07-HIT-051
Xiangjiang Huang	07-HIT-052

**Congratulations and Best Wishes!**

## On-Line Registry New Member Service

There has been confusion about the AIH Registry, a printed journal of the membership, and the fee based On-Line Registry, which was developed to offer the members easier access over the Internet to the public seeking hydrologists. This article is presented to explain and set guidelines for the use of the On-Line Registry. Except to refer to the AIH Registry for comparisons with formats, this article refers exclusively to a new On-Line Registry in development. Moreover this article sets forth a completely new format from the existing version.

Beginning September 1, 2007 this new On-Line Registry, accessed at [www.aihydro.org](http://www.aihydro.org), will be available to anyone seeking hydrology expertise. We have found that this service has been useful to attorneys seeking experts, to local agencies looking for specialty services and to others looking for assistance with local drainage problems, ground water questions or water quality advice.

The On-Line Registry will be an annually recurring fee based service that will be invoiced and paid before access. It will offer three levels of exposure to provide you with the control of information you want to offer. This service will be available for order on line in the registry section of our web page.

Level	Description	Cost
1	Members name, title, city and state	\$10
2	Member name, title, company or institution (with approval), full address, one telephone number, one email address and expertise (this is similar to the information printed in the AIH Registry and each element is optional)	\$25
3	Level 2 Plus up to 50 words to discuss depth and breadth of your expertise (no graphics)	\$50

Each member will fill out an order form on the web with their registration data and for the level chosen, so that the information given indicates what you want to be presented on-line. The preliminary information in levels 1 and 2 must be in our office database, but need not be the primary information used in the on-line database. Each element of information will be optional at the member's choice for use in this On-Line Registry. AIH reserves the right to edit or deny any of the information sent in with regard to inappropriate content or language.

### Initial Roll Out

We will enter every Member's Name, including Associate Members, HIT members, Emeritus members and Hydrologic Technician Members, into the On-Line Registry by December 31, 2007. Student Members are excluded from this service. All orders received by year end to upgrade to Level 2 or 3 may claim a \$10 waiver on their 2008 Dues. The waiver expires on January 1, 2008.

Members wishing not to participate must submit their order forms indicating a NO preference and their information will be removed at the next schedule maintenance date. Because the Member is solely responsible for the information used in the On-Line Registry, AIH accepts no liability with regard to a member presenting false or misleading information. Also AIH will not be liable for the use and misuse of this information by others, as well as issues related to identity theft. Members concerned about identity theft should take care in choosing the information to present.

## Quickie Questions

To offer an opportunity to comment and opinions on what is going on at AIH during the critical period, We have prepared a questionnaire to allow you to provide your feedback

The mission of AIH is to define hydrology, certify Hydrology Professional and Hydrologic Technicians and provide education in hydrology. Can you offer ideas to improve or change the direction AIH is headed?

**Name one benefit you derive from AIH:**

\_\_\_\_\_

\_\_\_\_\_

**Name one thing you do not like about AIH:**

\_\_\_\_\_

\_\_\_\_\_

**Do you value:**

	YES	NO
The On-line Bulletin	<input type="checkbox"/>	<input type="checkbox"/>
The On-line Registry	<input type="checkbox"/>	<input type="checkbox"/>
On-line Dues and Registration Payment	<input type="checkbox"/>	<input type="checkbox"/>
Name other On-line Services you prefer:	_____	

\_\_\_\_\_

\_\_\_\_\_

**Do you prefer:**

	YES	NO
An All Volunteer management team?	<input type="checkbox"/>	<input type="checkbox"/>
A Professional Management Team?	<input type="checkbox"/>	<input type="checkbox"/>
A Combination of the two?	<input type="checkbox"/>	<input type="checkbox"/>

\_\_\_\_\_

\_\_\_\_\_

**Would you favor expanding the related disciplines that could be certified by AIH?**

	YES	NO
Water Resources Engineer	<input type="checkbox"/>	<input type="checkbox"/>
Water Resources Planner	<input type="checkbox"/>	<input type="checkbox"/>
Wetlands Hydrologist	<input type="checkbox"/>	<input type="checkbox"/>
Watershed Manager	<input type="checkbox"/>	<input type="checkbox"/>
Storm Water Sediment Control Manager	<input type="checkbox"/>	<input type="checkbox"/>
Meteorological Flood Forecasters	<input type="checkbox"/>	<input type="checkbox"/>
Others (specify):	_____	

\_\_\_\_\_

\_\_\_\_\_

**Mail or fax your response to:**

AIH  
300 Village Green Circle, Suite 201  
Smyrna Georgia 30080  
PH: 770-384-1634  
FX: 770-438-6172  
Email: [Aihydro@aol.com](mailto:Aihydro@aol.com)

American Institute of Hydrology  
300 Village Green Circle, Suite 201  
Smyrna, GA 30080  
Tel. (770) 384-1634, Fax (770) 438-6172  
Email: AIHydro@aol.com Website: www.aihydro.org

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## Remember the Alamo

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Did you know that AIH receives a commission for all member rental of vehicles through Alamo Rent a Car? A 24-hour reservation is required and can be made by calling **1-800-354-2322** and request your membership ID No. as **690339** with the rate code **BY**.

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## Do You Miss Your Bulletin?

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If you have not read your Bulletin during the past 6-9 months, you may not have heard that AIH has decided to forego the postage charges and make the Bulletin available online at [www.aihydro.org](http://www.aihydro.org). The Bulletin is still the place to go to get all of the latest activities of AIH and all of colleagues. Some of the regular topics include:

**Job Opportunities** - Check this department regularly. We post employers job opportunities. These are for more advanced positions and are well worth your time to review on a regular basis.

**Current Affairs and Special Projects** - The Bulletin is the information source for virtually all the projects underway in AIH. Please visit your web site and see what is going on in AIH.

If you do not have an email address or if AIH does not have your email address, please let us know and we will mail you a paper copy of the Bulletin.

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## Speakers Bureau

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Following the disaster of Hurricanes Katrina, Rita and Wilma, AIH received several phone calls from news agencies - CNN and NPR - and several of the print media. The reporters were mainly interested in talking to experts on or off camera to gather information and become more knowledgeable of the causes and effects of these hurricanes. They also wanted to have access to experts living in the area to hopefully help them develop a story.

AIH wants to be able to respond to these requests. We want to be known as the "go to" organization for reporters to contact our experts in these areas.

To respond to this need, AIH has proposed to develop a Speaker's Bureau and solicit volunteers to offer themselves as "Experts" to a variety of groups, from small children to national news agencies. We would offer this service at no charge to the user, but with limited access (temporary password) to the Speaker Bureau Registry and the members in the Speaker's Bureau. AIH would provide access to our experts by using our already existing online Registry. With several modifications, AIH could implement the services without difficulty. Participating members would define their area of expertise and any limitations on the scope of their service.

You will be advised of this program as we develop it further. Your input at any time is welcomed and solicited.