# May 2005

#### 25 Years of Service to the Hydrographic Community

#### In this issue

#### **Conference News**

- HYDRO05 Recap
- HYDRO07 Announcement
- 2006 CHS Conference

#### **Society News**

- 2005 Annual General Meeting
- National Election Results
- Hydrographer Cert. Program Update
- Student Outreach Progam Update

#### **General Interest News**

- IHO Draft Hydro Manual Released
- NOAA Rolls Out New Processing Model
- NOAA Publishes 2004 Priorities
- NSRS Being Adjusted
- New Digital Newsletter
- Logo Accessories & Attire
- Society Website Remodel

#### **Contracting News**

Contracts

## **Chapter News**

- Houston
- Gulf Coast

### Legislation

Pending Legislation

### Training & Career News

- Training Opportunities
- Hydro Training at U. of Alaska
- IFHS Publishing New Careers Brochure

#### Members

- Welcome New Members
- Members in the News
- Help Wanted
- Membership Application
- Send Us Your News!



Greetings THSoA Member,

Welcome to the first digital version of The Seahorse. Read how we are making changes to improve communications.

If you experience problems viewing this edition, send us an email and we'll provide you with a different format.

## **Conference News**

### **HYDRO05 Recall**

The Society's biennial conference was held March 29-31 in San Diego at the Manchester Grand Hyatt Hotel. This was the tenth conference in the series that alternates with conferences sponsored by the Canadian Hydrographic Service. It was also the first to be held on the west coast since the inaugural conference in Rockville, Maryland in 1984

With nearly 500 attendees, ten workshops and 47 technical presentations a new benchmark was set for information exchange. There was at least one representative from each of the ten national societies and attendees from eighteen countries and thirty states. Fifty companies and Federal agencies exhibited including six which conducted on-the-water equipment demonstrations. Several companies sought exhibit space in the months leading up to the conference but, unfortunately, space limitations precluded their participation. While efforts will be made to ensure there is adequate exhibitor space at the 2007 conference, corporate members should keep their membership current and reserve a space early. More information on this will be passed on later.

The number of workshops expanded from previous years to include a wider variety of technical topics. All were well attended indicating a growing interest in this type of interactive educational forum. The successful expansion of the workshop component is due largely to the tireless efforts of Ray Williams.

The conference opened with remarks by NOAA's Rear Admiral Sam De Bow, Jr., and Captain Roger L. Parsons followed by the Navy's Rear Admiral Timothy McGee, Army Corps of Engineers Moody K. Miles and Dr. Savithri Narayanan representing the Canadian Hydrographic Service. Mr. Paul Hornsby, President, International Federation of Hydrographic Societies, presented the keynote address in which he emphasized the critical importance of hydrography to maritime enterprise.

Attendees were treated to yet another fabulous social program that included a Monday evening Icebreaker, followed by Tuesday's Exhibitors' Reception (aka Beer Social) and Wednesday's Conference Dinner. This year's buffet dinner was held onboard the historic ferryboat Berkeley that was preceded by an open bar onboard the 1863 barque, Star of India. Both vessels are part of San Diego's Maritime Museum which is conveniently located less than one mile from the hotel. The Society is grateful to the outstanding effort put forth by Mr. Bill Gilmour to ensure the social program was a hit.

The Society's Outreach Program was also well represented. Despite the absence of the program's coordinator, Jana DaSilva Lage, ten students were given the opportunity to attend all technical sessions and workshops. This opportunity was due in large part to the generous sponsorship of our corporate members. Many thanks go to Joanna Hawkins for stepping in and coordinating events. For more information read the following article on the Outreach Program.

The successful execution of an event of this size is an accomplishment that warrants recognition of the many volunteers and sponsors who made it possible. Heading the list is Jack Wallace, Conference Coordinator and THSoA Executive Director. Working under the leadership of Andy Armstrong, Conference Chair and THSoA President, Jack was supported by many individuals representing our corporate, government, academic and individual members. A partial list includes Karl Kieninger, Brian Greenawalt, Ray Williams, Chic Ransone, Jerry Mills, Bill Gilmour, Joanna Hawkins John Marinuzzi, Jana DaSilva Lage and Dennis Hill. Fugro Pelagos made the continental breakfasts possible while IVS3D sponsored the Monday Icebreaker. A special thanks to HYPACK for making available the invaluable assistance of John Marinuzzi and Rik Pepe who made registration and picture-taking possible.

There are many more who lent a hand when needed and without whom our success would not have been

possible. A hearty thanks to all.

To ensure the success of the 2007 conference the Society encourages your comments and suggestions. It will also be actively recruiting volunteers to assist in any number of ways. Watch this newsletter for future announcements.

The technical papers were provided to registrants on CD. The presentations will be available shortly as a two CD set for \$25. The Proceedings will be posted for members on the Society website in November.

Pictures may be viewed at http://mysite.verizon.net/res06suc/hydro05pictures

### **HYDRO07 Announcement**

A contract between the Sheraton Waterside (Norfolk) and THSoA has been signed marking the commencement of the planning process for the next U.S. hydrographic conference. This will be the eleventh biennial conference and a return to Norfolk, site of previous conferences.

This will be no ordinary conference. Falling on the 200th anniversary of the U.S. Coast and Geodetic Survey and the 205th anniversary of the USACE it promises to be a unique opportunity to recognize and showcase the long history of this organization. The Society has already entered into preliminary negotiations with NOAA management to ensure the contributions of C & GS to hydrography are adequately recognized. As preparations proceed more information will be reported here.

It's not too early to begin your own planning. Although room rates have not yet been set the Society will make every effort to ensure there are an adequate number of rooms at the Waterside for all attendees. In the meantime, members are reminded to keep their membership current. By doing so, they are guaranteed a discount on conference registration. Non-members may be eligible for the discount by applying for membership. See the article below on membership for costs and guidance.

For more information on the history of C&GS visit the following sites: http://www.publicaffairs.noaa.gov/grounders/noaahistory.html http://www.history.noaa.gov/

FOR FURTHER INFORMATION: thsoa@thsoa.org

### 2006 CHS Conference

Continuing the biennial series of alternating U.S./Canadian conferences next year's event, hosted by the Canadian Hydrographic Service, will be held in Halifax, Nova Scotia, June 5-8, 2006. Plans are still being developed and details will be published here when available.

The conference is co-chaired by:

Michael Lamplugh (902) 426-2007 LamplughM@mar.dfo-mpo.gc.ca

Wendy Woodford (902) 426-6255 WoodfordW@mar.dfo-mpo.gc.ca

Return to top

# **Society News**

# 2005 Annual General Meeting

The 2005 Annual General Meeting of THSoA was held on March 30, 2005 at the Manchester Grand Hyatt Hotel, San Diego, California. The meeting began at approximately 4:40PM with a call to order by Karl Kieninger. As the first order of business, the minutes of the 2004 AGM were approved without comment.

Karl next reviewed the Treasurer's Report for 2004. Notably, the Society is in good financial condition with a net worth of approximately \$150K. The report was unanimously approved without comments.

Under the topic of Old Business Andy Armstrong briefly went over last year's activities to include two action items on which the Board was required to vote. The first was a request by the Houston Chapter for an amendment to the Bylaws permitting the creation of trustee positions within each chapter. The request was denied. The second item also involved the Houston Chapter. In a prior action the Board had approved the donation of \$1000 to the chapter's scholarship fund. Upon full disclosure of the conditions under which the recipients would be chosen the Board reversed their decision. Specifically, the Board was not in favor of giving preference to the children of the chapter's members. It took the position that funds originating from the national body should be distributed without membership conditions. It allowed that funds originating from within the Houston Chapter membership could be distributed with conditions set by the local chapter.

The third item of Old Business related to our newsletter, The Seahorse. Andy encouraged wider participation from our membership in contributing information for publication. Without this participation it is difficult to ensure the newsletter will be published on a regular schedule.

Andy then announced the results of the most recent election. Dennis Hill became our new Secretary; while Richard Byrd and Tim Griffin assumed positions as Trustees.

New business consisted of four primary topics. First was the possible transfer of authority for administering the hydrographer certification program from ACSM to THSoA. Jerry Mills, vice chairman of the ACSM certification board, spoke on this issue. He reported that ACSM had originally come to THSoA with the idea. Apparently, their organization is experiencing difficulty properly administering the program due to workload. The Society is currently considering their proposal. Several benefits have been identified which include national recognition for THSoA and more control over the process.

Certification is an important factor to hydrographers who are largely represented by THSoA. Administration of the certification from within the Society may help ensure the process remains credible. The Society annually contributes \$5000 to ACSM to defray expenses. These funds would, in turn, be used by the Society to administer the program.

Andy concluded the discussion by asking Jerry to head a committee that would study the issue further. Members who wish to participate should contact him at jerry.mills@noaa.gov

The second item of new business has to do with THSoA becoming the dominant U.S. member of the International Federation of Hydrographic Societies (IFHS). Present for the discussion was Paul Hornsby, President, IFHS. Andy began the discussion by briefly reviewing the history of hydrographic societies in the U.S. In 1980, the U.S. Branch was formed as the first of five national branches of The Hydrographic Society, founded in the UK in 1972. It was known in the U.S. as The Hydrographic Society of America and became incoporated in 1984. In 1993 a "THSoA Only" membership structure was created which resulted in two organizations; THSoA and the U.S. Branch, each with the same officers. In June of 2000. THSoA divested itself of the U.S.Branch. At about the same time The Hydrographic Society began a devolution of its own by forming the IFHS which was finally realized in 2004. The former U.S. Branch became the Hydrographic Society U.S (HSUS). HSUS (30 members) has proposed a merger with THSoA (500 members) resulting in a larger U.S. presence in the IFHS. This proposal has been well received by members of both organizations, however the Board will study the idea further before reaching a decision. Other organizations seeking membership in the IFHS are the Canadian Hydrographic Association (CHA) and the Hydrographic Society South Africa (HSSA).

One question was raised from AGM attendees: would this affiliation affect THSoA member dues? Andy said that ways are being explored to minimize the effect but qualified his answer by indicating that more information was needed from IFHS.

The third item of new business dealt with a new format for The Seahorse. Dennis Hill is leading this initiative and reported on goals and progress to date. Historically, the Society has published its newsletter in paper format. The benefits of converting to a digital format include lower costs, easier compilation, better capability for graphics, and possibly more frequent issues. Tests have been conducted and from them it has been concluded that a switch over should be relatively easy and should occur soon. Dennis reported that the next edition will be the first all digital publication. Changes to the initial format and manner of delivery will likely occur over time as experience is acquired and feedback from readers is used to make improvements.

The fourth new business item addressed the Society's website. It too, will be undergoing a remodel and Dennis is leading that initiative as well. He reported that an RFP has been circulated and responses from six commercial web designers have been received. Initial analysis indicates the cost of a professionally designed site, which would be database driven and include options for ecommerce and chapter-administered pages, would run approximately \$2000 - \$2400. At this time, the designers are being asked to provide additional details which will be followed by a selection and contract award. The new site is expected to be fully operational sometime this summer.

Andy concluded the discussion of new business by reminding attendees that the next Society election will occur in December. At that time members will vote for their preferred candidates for President, Treasurer and two Trustees.

A motion to adjourn was unanimously approved and the meeting concluded at approximately 5:10PM.

### **National Election Results**

In the recent election the Society gained a new Secretary and two new Trustees. Dennis Hill replaces Jerry Mills as Secretary. Richard Byrd and Tim Griffin replace Art Kleiner and Jeff Lillycrop as Trustees.

Dennis comes to us from the private sector where he provides geospatial, quality assurance and technical editing services through his company, Coastal-ES, LLC. He gained much of his experience from NOAA where he worked in the navigation services program for more than thirty years. He has been a member of THSoA for many years first serving as the NW Chapter Treasurer then Co-Chair. He lives and works in Seattle.

Richard is also a private sector conscript where he is the president of Odom Hydrographic Systems, Inc. The firm, a corporate member, is located in Baton Rouge, LA on the east bank of the Mississippi River. Richard has been with Odom for 32 years where he credits his success to having worked in all aspects of their business. In Richard's own words his, "...association with this industry has been one of the greatest experiences of my life." He adds that once you get to know them, hydrographers, "...really know how to have a good time." I'm sure most of us would agree.

Tim works for another of our corporate members, Fugro Chance Inc., as the Manager, Data Management, International Marine Division which is located in Houston, TX. He's been there since 1984 where his activities and interests are focused on offshore construction surveys. Prior to that somewhere in the distant past he gravitated south from Canada. Apparently, the warm Gulf Coast clime was to his liking and, fortunately for us, he never returned.

Each of these new members of the Executive Board brings with them new ideas and enthusiasm. The Society welcomes them and is grateful for their generous donation of the personal time and energy needed to keep us moving forward. Feel free to contact them with your own ideas and recommendations. Email sent to members@thsoa.org will reach them.

# **Hydrographer Certification Program Update**

By Jerry Mills

The American Congress on Surveying and Mapping (ACSM) Hydrographer Certification Board held their annual meeting in San Diego on March 28. At this meeting Jon Dasler of David Evans and Associates was elected Chairman of the Board and Bill Bergen was elected Secretary. In accordance with the Board's Charter, the prior Chairman, Jerry Mills, will now serve as the Vice-Chairman.

For those not familiar with the Hydrographer Certification program, a brief summary of its development over the years may be of interest. The Board was established in the early 1980's to provide official recognition of individuals that had demonstrated professional integrity and competence in the field of hydrography. This was accomplished through the evaluation of resumes and review of other field experience documentation. While this Direct Certification process was adequate in the early years to "grandfather" those more senior hydrographers who had been actively involved in the profession, it became obvious that a more rigorous process would be needed for the long term.

Beginning in 1993, applicants (minimum of five years of hydrographic experience) were given six months to prepare a detailed, comprehensive plan for conducting a hydrographic survey in an assigned project area. Although this demonstrated an individual's knowledge and comprehension, it proved to be too time-consuming for not only the applicants but also for the Board members who were evaluating it.

In 1995, it was decided that a one-day proctored examination would be more expedient and also more consistent with surveying licensing procedures conducted by

various states. Over the next two years a detailed databank of questions were developed which were based on topics recommended by the International Hydrographic Organization (shore control, vessel positioning, soundings, vertical control, administration and data management and nautical science). This databank was used to generate the new exam beginning in September 1997. Since that time the questions in the databank have been reviewed, modified and updated on an annual basis in an attempt to continually improve the quality and relevancy of the examination.

The ACSM Hydrographer Certification program has had its share of growing pains, particularly since the adoption of the one-day proctored examination. However, interest has been growing recently - the number of applications per year has doubled since 2002. Some of this can be attributed to individuals recognizing the value of hydrographer certification on their resume. In addition, companies may be encouraging employees to become certified to add value to their proposals as they compete for hydrographic services contracts from NOAA, the Corps of Engineers and port authorities. While the examination is admittedly difficult and the range of topics is broader than that usually encountered by any one individual, almost 70 percent of those taking the exam in the past three years have passed and become certified

All hydrographers should consider applying for certification. Since the first certificates were awarded in October 1984, nearly 150 hydrographers have been certified. It is a great opportunity to obtain professional recognition of your surveying abilities, increase your marketability and add credibility to your contract proposals. Prospective examinees must have five years of experience in hydrographic surveying, two years of which have been in technical charge of surveys in the field. Applications, which include a short essay on the fundamentals of hydrography, must be reviewed and approved by the Hydrographer Certification Board prior to sitting for the examination. For program details, visit the ACSM site <a href="http://www.acsm.net/hydrocert.html">http://www.acsm.net/hydrocert.html</a>

The Hydrographic Society of America is exploring ways in which it can contribute more to the administration of the Hydrographer Certification program. Stay tuned for future developments.

FOR FURTHER INFORMATION: jerry.mills@noaa.gov

# **Student Outreach Program Update**

By Jana DaSilva Lage and Joanna Hawkins

After months of planning, coordinating and fundraising, ten undergraduate students from eight schools attended the 2005 US Hydrographic Conference in San Diego, California. The students came from different backgrounds and different parts of the country, from Alaska to Florida, as well as having a varied knowledge of hydrography prior to attending the conference. One thing they all shared was an enthusiasm to learn more about the field of hydrography. An "exit survey" indicated that the students' experience was very positive, with several students keen on pursuing employment or further education in the field. In fact, two of the students are now employees for, at least, the summer season with some of the others looking at this option as well. One student expressed his gratitude and thoughts saying, "...I really don't think any of us grasped the vast depth and breadth of this industry. The contacts we made [will] be invaluable as [we] enter the field. I think the land-based students have converted to hydro!"

Joanna Hawkins stepped in as the student liaison at the conference and was able to introduce the students (JH Bridge, Jonathon Correa, Katie Larson, Rebecca Davis, Kevin Harrison, Wes Underwood, David Cartwright, Brett Butts, Daniel Percival, and Nathaniel Johnson) to the volunteer mentors before the icebreaker on Monday night. The mentors were integral in providing the students with the necessary information, introductions, and comfort level to enter into this unknown community of hydrographers. We would like to thank the following mentors who participated in the program: Richard McGee, Parametrix; Tom Neumann, Terra Surveys; Mike Williams, USACE; and Gretchen Imahori, NOAA. The students appreciated the time they were able to share with the mentors.

On Tuesday, the University of New Hampshire, the University of Southern Mississippi, and the Hydrographic Society of America sponsored a luncheon for the students. The luncheon was presided over by Joanna Hawkins, and provided a forum to informally introduce the students to the available hydrography graduate programs and employment opportunities at NAVO, NOAA, and USACE. Attendees included: the students, David Dodd and Don Roman (USM), Dave Wells (USM, UNH, UNB), Brian Calder (UNH), Andy Armstrong (UNH, NOAA), Capt. Roger Parsons (NOAA), Max van Norden (NAVO), Ray Williams (USACE), Garry Kozak (L-3 Klein), Mike Kalmbach (Hypack), Richard Byrd (Odom), John Oswald (John Oswald and Associates), George Reynolds (Ocean Services, Inc), Bob Richards (Fugro Pelagos) and, we were again honored by the presence of, Rear Admiral Ken Barbor (IHB). The intimate setting provided the students an excellent opportunity to converse with some of the best, and most notable, in our field.

In addition to sharing opportunities about the USACE, Ray Williams, as the workshop coordinator, also provided opportunities for the students to attend workshops ranging from RTK and Tides to LIDAR and Multibeam. While the students enjoyed the workshops, there were several requests for a "Basics of Hydrography" course for future students, as much of the training presented in the workshops were geared towards experienced hydrographers. This is an improvement that we will likely implement for the 2007 conference.

The students found the interaction with vendors and on-the-water demonstrations to be both educational and interesting. They would especially like to thank the corporate donors who made the Student Outreach Program possible. The students are very thankful to THSoA, L-3 Communications/Klein Associates, Inc., Hypack, Inc., Odom Hydrographic Systems Inc., John Oswald and Associates, Ocean Surveys Inc., Fugro Pelagos, Inc., and Mercator Inc. These companies provided the funds necessary to support to the Student Outreach Program. Without them, the program would not have been such a success.

This is the second conference for the Student Outreach Program, which keeps growing and getting better each year. THSoA feels it was another great year and would like to thank, once again, all those who donated their time, knowledge, interest, and financial support, helping to make this program such a success. We look forward to doing it again in 2007.

Please contact Jana Lage <u>ilage@fugro.com</u> with any comments about the past Outreach Program or any ideas for the next one.

Visit Kevin Harrison's website to view some great photos of the conference. http://bellsouthpwp.net/m/a/martech/hydro2005/ush 2005

#### **General Interest News**

# **IHO Draft Hydrographic Manual Released**

The International Hydrographic Organization (IHO) recently released the Final Draft of the "IHO Manual on Hydrography" for public comment.

This 500+ page manual was developed over a period of four years by representatives from several Member States and is a high level overview of hydrography. It consists of seven chapters: (1) Principles of Hydrography, (2) Positioning, (3) Depth Determination, (4) Seafloor Classification and Feature Detection, (5) Water Levels and Flow, (6) Topographic Surveying and (7) Hydrographic Practice.

The draft may be viewed at <a href="http://www.iho.shom.fr">http://www.iho.shom.fr</a>. From this page click on Publications, Catalogue then M-13. Comments and/or corrections are encouraged and can either be submitted directly to the International Hydrographic Bureau (info@ihb.mc) or to one of the U.S. representatives to the committee that worked on the

# **NOAA Rolls Out New Processing Model**

In an effort to streamline the delivery of hydrographic data to its chart production division, NOAA's Office of Coast Survey has developed new techniques and products. With the goal of making data compatible with ENC's, deliverables from the data processing centers will soon consist of what is being called an H-Cell. This digital product consists of processed hydrographic data with S57 attribution. Rollout is expected to occur in June. NOAA has announced plans to use this new process on all future surveys, but it is not clear if and when the specifications for contract deliverables will be revised.

FOR FURTHER INFORMATION: Captain Roger L. Parsons, roger.l.parsons@noaa.gov

Return to top

# **NOAA Publishes 2004 Survey Priorities**

NOAA 29 March 2005

Updated Charting Data Promotes Safe Navigation NOAA, the National Oceanic and Atmospheric Administration today announced the release of the NOAA Hydrographic Survey Priorities (NHSP) for 2004. The NHSP identifies and prioritizes navigationally significant areas within the U.S. Exclusive Economic Zone (EEZ) and U.S. territorial waters. Created by NOAA's Office of Coast Survey, the revised NHSP also provides the dates of previously charted hydrographic surveys and is part of a continuing effort to support the navigational needs of the maritime community.

"Updating the NOAA Hydrographic Survey Priorities is a part of NOAA's effort to maintain and produce accurate and reliable navigational charts." said retired Navy Vice Admiral Conrad C. Lautenbacher, Jr., Ph.D., under Secretary of Commerce for Oceans and Atmosphere and NOAA administrator.

Available at http://nauticalcharts.noaa.gov/staff/NHSP.html

FOR FURTHER INFORMATION: Captain Roger L. Parsons, roger.l.parsons@noaa.gov

# **NSRS Being Adjusted**

NOAA April 26 2005

Beginning in June 2005, NOAA will perform a general readjustment of the horizontal position and ellipsoidal heights in the National Spatial Reference System (NSRS) using high accuracy global positioning system (GPS) data. The NSRS is a consistent national coordinate system that specifies latitude, longitude, height, scale and gravity throughout the nation.

"The readjustment is a part of NOAA's continuing effort to provide accurate and reliable navigational products and services," said retired Navy Vice Admiral Conrad C. Lautenbacher, Jr., Ph.D., NOAA administrator. "The National Spatial Reference System is critical to supporting the nation's commerce with information for safe, efficient and environmentally sound transportation."

The general readjustment is part of NOAA's efforts to create a Global Earth Observation System of Systems (GOESS). GOESS will link existing technology in space, the ocean, and on land in order to provide a framework for systems, data and vital information so scientists and policy makers in different countries can design, implement and operate compatible observation systems.

Scheduled for completion in February 2007, the readjustment will incorporate vast improvements in observational accuracies furnished by GPS derived observations, which were not available for earlier computations of coordinate positions.

On the Web: National Geodetic Survey: http://www.ngs.noaa.gov/

# **New Digital Newsletter**

For nearly the last 25 years THSoA has published and distributed its newsletter, The Seahorse, in paper form. Beginning with this edition the newsletter converts over to a new digital format. While the cost of the paper publication was not exceptionally high, the effort required to coordinate the many phases of the publication process was demanding.

With the conversion to the new format comes the end of an era that began in 1983 with the first publication of a newsletter and continued from 1990 when The Seahorse was first distributed. During that period of time the Society, through the efforts of its volunteer staff, published on an irregular basis but most recently attempted a minimum of three editions each year. Notable among those to whom we are indebted are Mr. John Hammer, Mr. Dale Westbrook and most recently, Mr. Jerry Mills. Each brought a bit of their own unique character to the task and without their generous donation of time and effort a regular newsletter would not have been possible. Also assisting with technical and editorial support was Mr. Tom Slater. While Tom is not a Society member he provided his editorial skills to us for a nominal fee.

Because the digital format is considerably easier to compile and distribute the Society anticipates issuing editions more frequently. The schedule has yet to be determined but as always, will depend on the availability of newsworthy information. Members are encouraged to continue reporting events, accomplishments, projects and other information they would like to share. Articles written by members will be published with the author's by-line.

The digital format also permits quick and easy modifications to content and layout. This should facilitate the incorporation of new types of information such as imagery, graphics and tabular data. However, the constraints associated with transmitting large files via email may dampen our enthusiasm to deliver a new and improved publication. We will continue to work on solutions.

The Seahorse has traditionally included regular columns on topics including upcoming events, chapter news, contracting and training opportunities. Members may have ideas for other topics they would like to see covered. Please contact the Society with your comments, ideas and suggestions for improvement.

The Seahorse has traditionally included regular columns on topics including upcoming events, chapter news, contracting and training opportunities. Members may have ideas for other topics they would like to see covered. Please contact the Society with your comments, ideas and suggestions for improvement.

Readers should be aware that problems may occur in viewing the newsletter. We have tried to anticipate the common problems created by different browsers and computer screen settings. Hopefully, we've solved most of them. However, if your computer just doesn't want to cooperate, let us know. We'll put you on the list to receive a simple text format or a paper copy. Members are also advised to check their email spam settings. It is quite possible that your email program will incorrectly identify The Seahorse as junk mail and block it.

FOR FURTHER INFORMATION: members@thsoa.org

# Logo Accessories and Attire

Since the 1980's the Society has been without personal accessories or logo clothing. At that time members were offered a very nice necktie displaying the traditional Seahorse logo. THSoA has since redesigned the logo to represent its standing as an independent society. It may now be time for the Society to once again offer its members distinctive items to acknowledge their membership.

If you are interested in purchasing either clothing or accessories please drop us a line with a simple comment. Tell us what you would consider purchasing: tie, shirts, hats, coffee mugs, etc. Add other items that you think would be popular. Based on the responses the Board will make a decision whether this venture is something worth pursuing.

click here to view examples

FOR FURTHER INFORMATION OR TO SEND US A COMMENT: members@thsoa.org

# Society Website Remodel

According to a February 2005 study by Nielsen/NetRatings these are the most visited websites. The figures below represent unique visitors per month.

- 1. Microsoft ~ 106,509, 000
- 2. Time Warner/AOL ~ 95,744,000
- 3. Yahoo! ~ 93,820, 000 4. Google ~ 70,460,000
- 5. U.S. Government ~ 52,751,000
- 6. eBay ~ 49,126,000
- 7. Amazon.com ~ 36,392,000
- 8. InterActiveCorp ~ 35,825,000
- 9. RealNetWorks ~ 34,032,000
- 10. Walt Disney Internet Group ~ 31,086,000

Obviously, THSoA didn't make the top ten. However, we are working on that. In our continuing efforts to improve you will soon see a new and improved Society website.

Proposals from six web developers are being reviewed. Each details the technical and cost elements for the redevelopment of the existing website. The new site will provide new functionality and allow you as members to access more information. The administration of Society business will be significantly eased with the addition of ecommerce functions and a web-based dynamic database. Once the site is operational Jack Wallace will be relieved of the tedious chore of manually processing every membership, conference registration and member purchase transaction as he does now.

You will see a completely new interface but will still be able to access the same information that you have become accustomed to on the existing site plus more.

It is hoped that other functionality such as chapter-driven updates of their news items, searching of the member database and purchase of logo accessories and apparel will enhance the benefits the Society provides it members. More on this project will be reported as development progresses.

In the meantime, your comments and suggestions on what your ideal site would function and look like are welcome.

FOR FURTHER INFORMATION OR TO SEND US A COMMENT: members@thsoa.org

### **Contracting News**

### **Contracts**

In late March 2005 NOAA/NOS/Office of Coast Survey selected five firms to receive to receive a five-year multiple-award hydrographic services contract. The selectees are Fugro Pelagos, SAIC, Terra Surveys, David Evans & Associates and C & C Technologies.

In separate actions OCS is currently in negotiations with Fugro Pelagos for a survey off the Southwest Alaska Peninsula. SAIC is continuing work off the New Jersey coast under an existing contract. In addition, they will continue UNCLOS work in the Gulf of Maine and off the southeast U.S. C&C Technologies continues work off the Texas coast and upon completion will begin working off Louisiana as part of the new contract. OCS is currently negotiating with Terra Surveys for surveys off Nome and Port Clarence in northwestern Alaska under an Alaska Small Business Contract. Tenix LADS will conduct lidar operations off the Southwest Alaska Peninsula and in the vicinity of Sitka. David Evans & Associates' first task order under the new contract will require a deployment in 2006 to a yet to be announced area.

A partial list of subcontractors includes: Jon Oswald & Associates Gehagan & Bryant Associates, Inc Coastal-ES, LLC McLane Consulting Group St. George Chadux Corporation Zephyr Marine Edison Chouest Offshore Global Seas, LLC Hydro Data, Inc. **Briah Conner Consulting** 

FOR FURTHER INFORMATION: mark.t.lathrop@noaa.gov

Olympic National Marine Sanctuary has issued a solicitation notice to procure technical assistance for a side scan sonar survey. The need is for four experienced individuals to accomplish mobilization and demobilization of the survey equipment and winch and assist with operation and troubleshooting of survey equipment and winching device. Period of performance to begin June 15th in Port Angeles, Washington.

FOR FURTHER INFORMATION: Shannon.C.McIlroy@noaa.gov

USACE released a solicitation for a proposed contract for hydrographic surveying in support of the Vicksburg District maintenance dredging program has been announced. The contract is scheduled for award in June 2005. Work will be accomplished under indefinite delivery contract not to exceed \$400,000 per year. [Closes 5/12/05]

FOR FURTHER INFORMATION: Mrs. Jennifer Chambers, (601) 631-5562

### **Chapter News**

# Houston

The Houston Chapter continued its successful program in 2004 and introduced a program for 2005 with more social events than in previous years.

At the September, 2004 meeting, Bob Curtis, from Oceaneering International, spoke on Subsea Simulation Benefits. Bob described Oceaneering's Virtual Subea Intervention Solutions (VSIS) software, a 3D simulation system, and its many real world benefits. Bob focused on "Collision Dynamics", "Electronic SIT's", "Electronic Wet Test", "Beach Learning Curves", "Loop Currents", "Surface Storm Interaction" and "Savings Analysis" in addition to simulators and the future direction of simulators.

For October, the chapter tried a new event - a Bowling Night. Everyone who participated had a great time - so much so that the event will be repeated in 2005. Congratulations to the winning teams from Oceaneering/Geospace (Dave Medeiros, Lisa Medeiros, Rob Craft), Ashtead (Chris Echols, Wendy Post, Kimberly McKee)and Hydro-Projects (Lisa Morton)

At the November meeting, the presentation was given by Dr. Timothy Dellapenna, who is a coastal marine geologist with the Departments of Oceanography and Marine Sciences at Texas A&M, Galveston, and three of his graduate students. Dr. Dellapenna's research program largely focuses on the application of highresolution marine geophysics to investigate sedimentary processes and assess marine habitat. Work that he and his students presented included an investigation into the sedimentary processes in an Alaskan fjord, the impact of Hurricane Claudette on Matagorda Peninsula and the mapping of Lavaca Bay.

In December, the chapter held its annual Houston Chapter Christmas Party. This event was again held at Churrascos restaurant in Houston and was again an unqualified success. The South American cuisine extended from herbed yuca polenta cake and roasted Oaxaca quesadilla appetizers to roasted achieve citrus salmon with corn pasta in a sherry & lemon butter cream sauce entrees. The function provided a very pleasant end to the chapter events for 2004.

The first meeting of 2005 for the chapter was the Annual General Meeting including the election of officers. The chapter committee for 2005 is:

Chairperson — Melissa Wood Co-Chair — Andy Bogle Treasurer — Phil Roberts Secretary — Lisa Medeiros National — Timothy Griffin "At Large" Fund Raising/Social Coordinator — Wendy Post

"At Large" Membership/Student Liaison — Shorty Shipp

"At Large" Publicity — Larry Buchanan

Following the election, there was a general discussion of the ideas and proposals for the 2005 year.

In February, the chapter hosted the 27th Annual Geophysical Superbowl Chili Cook-Off at Danny's Sport's Bar. The standards were high for the cook-off and this year's winner was Nigel Morrow.

In March, instead of the regular meeting at the Black Labrador, the chapter met at the facilities of Oceaneering International. Following up the November presentation of Bob Curtis on the Oceaneering ROV simulator, chapter members got an opportunity for hands-on experience of piloting an ROV through several virtual scenarios with added variations of weather conditions, currents, tether management and manipulator skills. Every attendee got an opportunity to test their abilities.

At the April meeting, Dr Stacey Lyle from Texas A&M University, Corpus Christi, outlined plans at the university to offer both full degree programs and shorter courses aimed at the offshore industry. Dr. Lyle highlighted the fact that one of the challenges facing the offshore industry is an impending shortage of qualified offshore personnel. At the end of the presentation, he invited the membership and the offshore industry to communicate their views and ideas.

On May 8th, both members and non-members are invited to attend the OTC BBQ held during the week of the Offshore Technology Conference. This year, the event is being held at:

Saint Arnold's Brewing Company 2522 Fairway Park Drive Houston, TX 77092

Open bar from 6-8 PM BBQ Buffet from 6-7 PM

The Houston Chapter of The Hydrographic Society of America meets on the second Tuesday of the month at the Black Labrador, located at 4100 Montrose in Houston, Texas.

## **Gulf Coast**

LCDR Don Clark Ventura RN (Ret) has assumed the position of Gulf Coast Chapter. For additional information on Don see the related article below, Members In the News.

### Legislation

# **Pending Legislation**

The Bush Administration has sent a bill to Congress that codifies the establishment and purposes of NOAA, the National Oceanic and Atmospheric Administration. Announcement of the action was made April 5, the inaugural meeting of the Cabinet-level Committee on Ocean Policy.

The bill was originally introduced last year as part of the Administration's response to the report of the U.S. Commission on Ocean Policy that recommended putting a NOAA Organic Act into law.

NOAA needs an all encompassing charter to continue its important work, said retired Navy Vice Admiral Conrad C. Lautenbacher, Jr., Ph.D., Under Secretary of Commerce for Oceans and Atmosphere and NOAA administrator.

NOAA was formed by executive order in 1970. Created as part of the U.S. Department of Commerce, NOAA has never had a statutory basis for its existence or to conduct its activities and missions. Instead, NOAA has operated under 200 different authorizations.

In its report, the U.S. Commission on Ocean Policy stated that a NOAA Organic Act would strengthen the agency and would help to ensure that its structure is consistent with its primary functions of management, prediction, research and education. The report said the Act would help NOAA achieve better management of oceans and coasts through an ecosystem-based approach.

### **Training and Career News**

# **Training Opportunities**

The **USACE** has several slots available for USACE personnel in the following PROSPECT course:

Title: HYDROGRAPHIC SURVEY TECHNIQUES (http://pdsc.usace.army.mil/CourseListDetails1.asp?Cntrl Num=56)

Control Number: 56

Course Number: 35HST01A

Purpose: This course provides participants with the knowledge and technology required in performing hydrographic surveys in support of USACE navigation, dredging, surveying, coastal engineering, inland waterways and related marine construction activities. The course is designed to provide engineers, engineer technicians, field survey technicians, and A-E contract administration personnel with a technical familiarization of the criteria, standards, and specifications in EM 1110-2-1003, "Hydrographic Surveying", and applying this manual in performing in-house and contracted hydrographic surveys.

Description: This course provides instruction on the process and technology used to conduct hydrographic surveys. The instructional program emphasizes the processes required to most effectively perform hydrographic surveys. The major subject areas covered include: hydrography, survey datums, depth and position determination, horizontal and vertical error estimation and analysis, tidal theory, computer hardware and software used for automated hydrographic surveys, fluff measurement, volume computations, multi-beam swath and multitransducer sweep systems, GPS positioning, LIDAR, and project planning. Some horizontal and vertical measurement concepts and techniques will be demonstrated in the field.

Prerequisites: Nominees must be assigned (a) Occupational Series: 0800 (engineers, engineer technicians), 0817 and 1300 (field survey technicians), and 0095 and 1100 (A-E contract administration personnel); (b) Grade: GS-05 or above. Waivers will be considered.

Course Length: 38 hours

Tuition: \$1920

Location: Plymouth, MA Dates: 6/20 - 6/24/2005 Seats Available: 2

Continuing Education Units: 3.3 Professional Development Hours: 33

The U.S. Army Corps of Engineers Proponent Sponsored Engineer Corps Training (PROSPECT) Program Course Catalog, The Purple Book, at <a href="http://pdsc.usace.army.mil">http://pdsc.usace.army.mil</a>, provides details about other surveying courses and registration.

You should contact the PROSPECT Program's Registrars: Bobbi Stoddard for the Hydrographic Survey Course, via email Roberta.K.Stoddard@hnd01.usace.army.mil , Voice at (256) 895-7421, and or Sherry Whitaker for Survey II, (256) 895-7425. The FAX number is: (256) 895-7469. Please request spaces as soon as possible since the number of spaces is limited.

These classes are open to Federal, state, and local government employees. Since only payment from government agencies can be accepted, in order for government contractors or private individuals to attend, a government agency must provide the payment for tuition.

FOR FURTHER INFORMATION: Contact Ms. Diane Hollingshead, (256) 895-7449.

The **University of New Hampshire** offers Ocean Mapping options on the Master of Science and Doctor of Philosophy degrees in Ocean Engineering and in Earth Sciences. These interdisciplinary degree programs are provided through the Joint Hydrographic Center and the respective academic departments of the College of Engineering and Physical Sciences. The University has been awarded recognition as a Category A hydrographic education program by the International Federation of Surveyors (FIG)/International Hydrographic Organization (IHO).

FOR FURTHER INFORMATION: Visit http://www.ccom-jhc.unh.edu/education.htm or call: (603) 862-3433, info@ccom.unh.edu

The **University of Southern Mississippi Department of Marine Science** has joined with SAIC in the development and delivery of a series of workshops covering various subjects in and related to the field of hydrography. A number of 3-day workshops covering six topics are presented this year to corporations, military and governmental agencies.

Workshop topics include:

- -Intro. to Hydrography for Non-surveyors
- -Intro. to Hydrography for Surveyors

- -Hydrographic Planning for Surveyors
- -Hydrography and the Military User
- -Hydrographic Surveys, Specifications, and Products for the Non-Surveyor
- -Tides. Water Levels and Geodetic Controls

To learn more about these workshops contact Don Ventura, (228) 463-7181, venturado@saic.com; or Charles Meador, (228) 688-3520, Charles Meador@usm.edu.

FOR FURTHER INFORMATION: Visit the program's website at www.usm.edu/marine/hydro

The USM Department of Marine Science has graduate programs in Marine Science leading to both the Master's and Ph.D. degrees.

The Hydrographic Science master's program is designed in cooperation with the U.S. Navy to meet Category A certification requirements by the Féderation Internationale des Géométres/International Hydrographic Organization (FIG/IHO) International Advisory Board. This demanding and intensive curriculum covers all aspects of geodesy and hydrographic science leading to a Masters of Science degree.

This will be the program's seventh year of operation. To date 56 students have graduated with ten more expected this summer. There are currently three students in the PhD program. Graduates have come from U.S. Navy, NAVOCEANO, NGA, USACE, NRL, Sweden, Tonga, Mexico, Tunisia, Turkey, Peru and Canada.

While the Department of Marine Science does not offer undergraduate degrees, it does open several of its courses to undergraduates.

FOR FURTHER INFORMATION: Visit the Department's website at http://www.marine.usm.edu/

The **University of Alaska** offers an upper division course, GEO 433 Hydrographic Surveying, through its School of Engineering. Students must be upper division to qualify. Based on the USACE Hydrographic Manual, EM 1110-2-1003, the course introduces students to the science of hydrography and prepares them with a working level knowledge of the fundamentals. Included in the program is a short period of field time. Text books on CD are provided. The 3 credit course currently costs \$800 and credits may be applied to graduate degree requirements.

FOR FURTHER INFORMATION: Contact Bob Pawlowski at oceans@alaska.net

The **Ernest F. Hollings scholarship program** is accepting applications for 2005. The program was established through the Consolidated Appropriations Act, 2005. The scholarship program will provide selected undergraduate applicants with opportunities to increase recognition of and disciplined study in oceanic and atmospheric studies.

DATES: Applications for the Ernest F. Hollings scholarship program will be available on April 22, 2005. Completed applications must be received by 5 p.m. e.d.t. May 23, 2005.

ADDRESSES: Applications for the Earnest F. Hollings scholarship program will be available through ORISE at the following web address <a href="http://www.orau.gov/noaa/HollingsScholarship">http://www.orau.gov/noaa/HollingsScholarship</a>. If an applicant does not have Internet access, hardcopy applications can be requested by contacting NOAA/Hollings Scholarship, Oak Ridge Institute for Science and Education, P.O. Box 117, MS 36, Oak Ridge, TN 37831-0117; telephone: 865-576-3424.

FOR FURTHER INFORMATION CONTACT: NOAA/Hollings Scholarship, Oak Ridge Institute for Science and Education, telephone: 865-576-3424 or NOAA/OESD at noaa.education@noaa.gov or 202-482-3384.

Black Laser Learning has released a training DVD, The Sonar Operator's Not In the Manual Guide To Side Scan Sonar and Image Interpretation. The company describes itself as, "...focused on training clients in underwater technology, geophysics and remote sensing."

FOR FURTHER INFORMATION VISIT: http://blacklaserlearning.com/

If members are aware of other opportunities the Society would like to know about them. Contact us at the address below.

# Hydrographic Training at the University of Alaska

By Captain Bob Pawlowski, NOAA (ret)

In addition to expanding opportunities in hydrographic surveying in Alaska, the Hydrographic Services Improvement Act of 1998 and its subsequent re-authorization set the stage for teaching Hydrographic Surveying in the Geomatics program at the School of Engineering, University of Alaska Anchorage.

The class, now GEO 433, grew from a team commitment by Captain Bob Pawlowski, NOAA (Ret); John Oswald, John Oswald & Associates; Tom Newman, Terra Surveys, LLC; and Dr. Orson Smith, University of Alaska Anchorage. The team developed a curriculum to provide a working knowledge of hydrographic surveying and create a set of "hands" capable to apply their geomatics, survey, or engineering backgrounds to hydrographic survey operations. Each team member contributed their knowledge and field expertise to provide a practical course to upper division engineers and surveyors.

Today, Captain Bob remains the instructor of record and covers the fundamentals of hydrography and its multidisciplinary applications. John Oswald and his associates (past students of the Geomatics program) provide the theoretical understanding and practical aspects of horizontal and vertical control, including collecting tidal data, establishing tidal datums, and developing tidal zoning models. Dr. Orson Smith provides professorial detail to acoustic theory, oceanographic properties, and the statistics of errors in meeting agency standards. Tom Newman and his hydrographers (also past students of the Geomatics program) provide on-water hydrographic survey orientation, a practical review of the echosounder technology and field calibration, and several classes in data processing with commercial software packages. These efforts expand upon the suite of hydrographic surveying and technology lectures and navigation, sheet layout, and cost estimating exercises that are the backbone of the course.

The team works from on-line publications including the USACE Hydrographic Survey Engineer Manual, NOAA's Chart Users Manual and the Hydrographic Surveying Specifications and Deliverables, and the myriad of publications for tides and tidal datums.

The course continues to grow as more projects are brought forward by students. Overview lectures are ongoing with geomatics and engineering classes, including Design of Ports and Harbors, Coastal Measurement and Analysis, and Marine GIS. The goal remains to stimulate interests in hydrographic surveying, develop hydrographic surveyors to work in the hydrographic surveying industry, and to develop technically proficient graduates to work with the data for coastal engineering, navigation safety, and habitat assessment projects throughout Alaska.

FOR FURTHER INFORMATION: Contact Bob Pawlowski oceans@alaska.net

# **IFHS Publishing New Careers Brochure**

Special Publication No. 3, Hydrographic Surveying as a Career, 5th Edition, Revised March 2005, will be available soon from the IFHS. Available as a PDF file, the document provides a comprehensive overview of the industry, performance standards and educational opportunities. This is recommended reading for anyone considering a career in hydrography.

The Society contributed financial support to this endeavor for which it was given rights to include specific mention of opportunities within the U.S.

The brochure will be available free of charge from the IFHS website at http://www.hydrographicsociety.org/Publications/welcome.html

#### **Members**

### **Welcome New Members**

2005 is turning out to be a very good year for the Society's membership campaign. To date we have added 69 names to the individual membership roster and since HYDRO05 one new corporate member. Welcome one and all!

#### **New Corporate Members**

U.S. Coast Guard

#### **New Individual Members**

- Ms. Lenet Adams Mr. Keith Alexander Mr. Randy Ashley Mr. Tony Banire Ms. Cathleen J. Barry Mr. Steve Brodet Ms. Helen A. Brohl
- Mr. Mike Brown Mr. David K. Burdeaux Mr. Jeff Carothers Mr. David L. Cartwright Mr. Jonathan J Correa Ms. Holly DeHart Mr. Peter M. Doherty
- Ms. Mercedes Erdey Mr. Stephen Farrell Mr. Jeffrey A. Ferguson LCDR Rick Fletcher, NOAA CAPT Lisa B. Frailey, USN Mr. Erich Frey
- LCDR Gregory Gahlinger, USN CDR Donald W. Haines, NOAA Mr. Chris Ham Mr. Greg Harbeson Mr. Fred Herman Mr. Kenneth Jackson
- Mr. Matt Kaplinski Mr. Richard G. Kiss Ms. Kathy Koon Mr. Mark Lathrop Mr. Richard A. Lehr Mr. Dale Lipps Dr. Stacey D. Lyle
- Mr. Stephen McCavour Mr. Richard McGee RADM Timothy McGee, USN Mr. Darwin Monita CDR James Monroe, U.S. N Ms. Kathryn Mork
- LCDR Abubakar A. Mustapha Mr. Richard E. Pearce Ms. Debra Peat Mrs. Gina M. Peery Mr. Daniel Percival Mr. Derrick Peyton
- Ms. Cindy Pratt Mr. Jack L. Riley Ms. Lorraine Robidoux Mr. Brooks A. Robinson Mr. Marcelino Rodriquez Ms. Sherry Rose Mr. Thomas Rybarski
- LCDR Paul L. Schattgen, NOAA Mr. Ralph A. Scheid Ms. Kate Sheil Mr. Dan W. Stabbert Mr. Geoffrey Stankiewicz Mr. Eric Steele
- Mr. Eddie Stutts Mr. Gilberto Suarez Mr. Robert Taphorn Mr. Jaime A. Valdez LT Mark Van Waes, NOAA Mr. Stephen E. Walsh
- Mr. W. Guy Weeks Mr. Charles Wiggins Ms. Jennifer Wozencraft Mr. Daniel Wright Mr. Michael Zieserl

# **Members in the News**

#### **Larry Whiting Retires**

Mr. Larry Whiting, one of three founding members of Terra Surveys, LLC, has retired. His departure leaves the company in the capable hands of the remaining owners, Mr. Tom Newman and Mr. Bob Kohut. The company reports that Larry will continue to provide consulting services to it on a part-time basis. Founded in 1994 Terra Surveys, LLC provides hydrographic and land survey services to the Alaska region and the Gulf of Mexico out of their Houston expansion office. We wish Larry continued success in his new endeavors

FOR FURTHER INFORMATION: Contact Tom Newman tom@terra-surveys.com or telephone 907-745-7215

#### LCDR Don Clark Ventura (RN Ret) Assumes Position As President, Gulf Coast Chapter

Don Ventura is a Senior Hydrographic Surveyor with Science Applications International Corporation (SAIC) and is currently working at Stennis Space Center, Mississippi as Team DART Program Manager. DART is the National Data Buoy Center's (NDBC) Deep Ocean Assessment and Reporting of Tsunami program. Don retired from the British Royal Navy after 22 years service in October 2003, Following a very enjoyable final three years on exchange duties with the U.S. Navy at the Naval Oceanographic Office (NAVOCEANO), where he served as Hydrographic Advisor to NAVOCEANO's Hydrographic Department (N4).

Don's career in hydrographic surveying began in 1983 when he was assigned to the Hydrographic Squadron. He went on to complete training in both IHO Category B and Category A programs and has conducted surveys from the North Sea to the Indian Ocean.

He and wife Jane have two daughters, Sophie and Simone. The family resides very happily in Slidell, Louisiana, where Don interests are largely outdoor and sporting in nature, with several forms of angling and hunting among his favorites. He mixes that with visits to museums, heritage and cultural sites whenever possible.

### Jana DaSilva Lage Delivers

Jana DaSilva Lage and husband Oscar proudly announced the arrival of Marcos Aquilino Lage on Saturday April 23, 2005 at 1:33 PM. Weighing in at 8 lbs. 5 oz. and 22 inches long it's reported that all are doing well. Jana will be on a medical release from work for six weeks, but will be checking in from home if anyone needs to reach her.

# **Help Wanted**

Ocean Surveys, Inc. (OSI) currently has openings for experienced Hydrographers as well as a Hydrographers in training. Duties include project setup, fieldwork, data processing, analysis of survey results, report preparation, client liaison and all other activities associated with OSI's scientific and engineering support services. For more information visit <a href="http://www.oceansurveys.com/">http://www.oceansurveys.com/</a> or contact George Reynolds at 860- 388-4631, x112 or <a href="mailto:ggr@oceansurveys.com/">ggr@oceansurveys.com/</a>

# **Membership Application**

Membership in the Society is open to anyone who agrees to further THSoA's mission of promoting education in hydrography.

Dues are paid annually.

\$20 ~ Member

\$30 ~ Members of Houston Chapter

\$10 ~ Retired and no longer participating in surveying

\$5 ~ Student

\$100 ~ Corporate

Online membership application:

http://www.thsoa.org/pg membership.htm

## Send Us Your News!

Got news? Send it to us.

We are interested in receiving news from our individual and corporate members. Tell us about your accomplishments, awards, recognition or any other successes. Tell us who's new, retired, and promoted. If you've been involved in a particularly interesting project send us a summary.

For those who would like to contribute but need a little assistance in coming up with a topic, click the link below to review some guidelines and suggestions.

http://tinyurl.com/5gt94

The Hydrographic Society of America - P.O. Box 732, Rockville, MD, 20848, United States

email: members@thsoa.org voice: (301) 460-4768