

# the Watershed

Tarpon Springs, Florida

May 19, 2006

## Over, Under, and In the Water

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**Technical Program:** The program addresses issues of interest in both West Florida and Statewide. The technical program will begin at 1:00 pm and continue to 5:00 pm. Ms. Chistine Owen with Tampa Bay Water will address the growing issues of mixing water supplies of different sources and qualities. Ms. Owen was recently featured as one of the "Women in Water" in the March 2006 AWWA Journal. Michael Arbuthnot of Environmental Services, Inc. will address state underwater archaeology requirements and discuss some of his more interesting activities (including diving the Titanic!). Shannon Gonzalez of Biological Research Associates will discuss the use of frogs in measuring the success of wetland recovery in a Tampa Bay Water wellfield. Dr. Barbara Kirkpatrick of Mote Marine Laboratory will discuss red tide research, monitoring, control and education programs at Mote. Her specialty is the human health impacts of red tide. Dr. Cindy Heil of the Florida Fish and Wildlife Research Institute (FWRI) will address the red tide research programs at the FWRI. Her specialty is the ecological impacts of red tide. The economy of the west coast of Florida (and the sponge industry in particular) took a large hit from an extended red tide outbreak in 2005. There will be an extended red tide panel and open discussion.

Dinner Speaker: Mr. George Billiris will discuss the history and the future of the sponge industry in Tarpons Springs. Mr. Billiris' family has been in the sponge industry in Tarpons Springs for over 100 years. With over fifty years experience in the business, he is a well-known advocate for the industry and Tarpon Springs.

**Location & Accommodations:** The meeting will be held at the Tarpon Springs Yacht Club ([www.tsyc.net](http://www.tsyc.net)) (727) 934-2136. The Yacht Club is located near downtown and the famous Sponge Docks. Ten rooms have been reserved at the Tarpon Inn located on Spring Bayou (site of the Epiphany celebration). Room rates are \$55/night, including Thursday and Saturday nights. Please call Bonnie Leonard at 727-937-6121 and mention the AWRA meeting. Please reserve early. The Tarpon Inn is located at 110 Tarpon Avenue, Tarpons Springs, Florida 34689. Alternate lodging is available (see page 7).



2006 Meetings: January 13 Jacksonville; March 17 Tallahassee; May 19 Tarpon Springs;  
July 13-15 Key West; September 15 Jupiter; November 17 Fort Myers



**Florida Section Bi-Monthly Meeting**  
**Friday, May 19, 2006**  
**Tarpon Springs Yacht Club • Tarpon Springs, Florida**  
350 North Spring Boulevard • (727) 934-2136  
***Over, Under, and In the Water***

**10:00 am – 1:00 pm**      **Board of Directors' Meeting**  
*Dutch Treat*

**12:00 – 1:00 pm**      **Registration**

**Technical Session**

**1:10 – 1:20 pm**      **Introductions/Announcements**

**1:20 – 1:50 pm**      **What the Titanic and Archaeology in Florida Springs and Waterways Have in Common**  
*Michael Arbuthnot, Environmental Services, Inc.*

**1:50 – 2:20 pm**      **Issues in Using Multiple Water Sources for Potable Supply**  
*Ms. Christine Owen, Tampa Bay Water*

**2:20 – 2:50 pm**      **Using Frogs to Measure Wetland Success in Recovering Wellfields**  
*Shannon Gonzalez, Biological Research Associates*

**2:50 – 3:10 pm**      **Break**

**3:10 – 3:40 pm**      **Mote Marine Laboratory Red Tide Research Program**  
*Dr. Barbara Kirkpatrick, Mote Marine Laboratory*

**3:40 – 4:10 pm**      **Florida Fish and Wildlife Research Institute Red Tide Research Program**  
*Dr. Cindy Heil, Florida Fish and Wildlife Research Institute*

**4:10 – 4:40 pm**      **Red Tide Discussion**

**4:40 – 5:00 pm**      **Announcements**

**5:00 – 6:00 pm**      **Social Hour**

**6:00 – 8:00 pm**      **Dinner**

**History and Future of the Sponging Industry in Tarpon Springs**  
*George Billiris, International Sponge Merchant*





**AWRA NATIONAL NEWS**

**Upcoming conferences hosted by AWRA**

- ◆ GIS and Water Resources IV, May 8-10, Houston, TX
- ◆ Adaptive Management of Water Resources, June 26-28, Missoula, MT
- ◆ Wetlands Restoration Dialogue, September 18-20, Ft. Lauderdale
- ◆ Annual Water Resources Conference, November 6-9, Baltimore, MD

**4<sup>th</sup> World Water Forum**

AWRA played a major role in the 4th World Water Forum (Forum) in Mexico City, March 16-22, 2006. The Forum was co-sponsored by the Comision Nacional del Agua (CONAGUA) of Mexico and the World Water Council (Council). The theme of the Forum was "Local Actions for a Global Challenge". The AWRA delegation, led by President David DeWalle, also included President-elect Gerry Galloway, Past President David Moody, Executive Vice President Ken Reid, and Technical Director Richard Engberg.

During the Council's 4th General Assembly, AWRA was one of 33 organizations worldwide (out of 54 competitors) elected to a seat on the Council. This is a great honor for AWRA and makes the organization a major player on the world stage of water resources.

Secondly, AWRA was pleased to sponsor, together with CONAGUA, the IJC, the IBWC, and AMH, a session on Water Management in Transboundary Basins on Saturday, March 18. Over 500 persons

attended the session, which made it one of the most well attended sessions at the Forum.

Finally, AWRA on March 18-19, hosted a meeting of flood managers from around the world. Organized by representatives of the U. S. Army Corps of Engineers and the Netherlands Rijkswaterstaat, the meeting was attended by flood managers from China, France, Hungary, Japan, USA, and The Netherlands.

**Annual Awards**

Recognition for outstanding service is important to all of us. Is there someone you know in our profession who deserves such recognition? Our AWRA Annual Awards Call for Nominations includes descriptions and eligibility requirements for 8 different categories. **Deadline for Nominations: May 5.**

**Richard A. Herbert Scholarships**

If you are a current AWRA Student Member, you might be eligible to apply for the **Richard A. Herbert Scholarship Program**. These awards are given annually to an undergraduate and graduate student in a water resources program. Are you, or do you know, a deserving undergrad or grad student with an excellent GPA? **Deadline: April 24.**

For more information and to become a member of the National AWRA, go to [www.awra.org](http://www.awra.org), or contact David Watt at 386-329-4355 or [dwatt@sjrwmd.com](mailto:d watt@sjrwmd.com).

**AWRA FLORIDA NEWS**

- Board of Directors Summary
- Technical Program Summary
- Announcements

**Board of Directors Summary**

- by Cathy Vogel

The Board of Directors of the Florida Section, American Water Resources Association, met at the regularly scheduled bi-monthly Section meeting on March 17, 2006 in Tallahassee. Board members learned that the Section's financial health is extremely robust with the Section's new Treasurer, Jay Yingling, reporting a balance of \$47,666 in the Section's bank account, noting that \$22,444 of that amount is resulting from donations to the Sandy Young Scholarship Fund. In the next several weeks, it is anticipated that Marty Gutkin, CPA (and Roseann Clementi's brother) will be conducting an audit of the Section's financial records.

The Section's membership also remains strong. Annette Carter, Membership Chair, reported that all membership data is now up-to-date and nine former members have rejoined the Section. Shortly, the 2006 membership directory will be published.

Several educational awards were approved at the meeting: Suzanne Moellendorf, a member of the UF Student Chapter of AWRA was approved for a \$1,000 Storch Award. In addition, a Hurricane Katrina-related water quality project that the UF Student Chapter is conducting was likewise awarded a \$1,000 Storch Award. The UF Student Chapter reported on their many activities including participation in "E-Fair," a science fair for elementary and high school students, and assisting in the Lake Santa Fe community clean-up. Kudos to our students!

There was considerable discussion and many suggestions for updating and improving the Section's website, which Section Vice President Patrick Victor is overseeing . . . look for a new and improved website in the near future.

After much encouragement from Section President Bob Higgins, the Board finally voted to update Section policy to recognize two new classes of Florida AWRA membership - Fellow Members and Life Members - to honor those members who have made special contributions to the Section and to the appreciation of water resources.

Finally, President Higgins named the following Board Officers and members to serve as the committee to draft the Section's strategic plan: Bob Higgins, Patrick Victor, Jay Yingling, Cathy Vogel, Garrett Wallace, Steve Nix, and Dave Watt. The committee has already met several times and is in the process of fine-tuning a draft of the Section's strategic plan which it hopes to adopt at the Annual Meeting in Key West.

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### Technical Program Summary

- by Doug Durbin

**Water Data, Coming Soon to a PC Near You, Don McEwen and Richard Butgereit, FDEP Division of Water Resource Management** – The Florida Department of Environmental Protection (FDEP) is finalizing development of a website linking a vast array of data and documents on Florida water resources. It will eventually enable the public to peruse, read and download information on all aspects of environmental resources, ranging from water quality data to ecological restoration, to spatial analysis tools. The latter feature is particularly powerful in that a user can easily search more than fifty data layers associated with locations in Florida, as reflected in many databases maintained by public agencies. The data can be displayed on over 40 base mapping layers, that include aerial photography, USGS Quad maps, roads, hydrography, etc. For example, one can select a street address and a buffer distance around that address and locate information on land use, public lands, regulatory permits issued and environmental monitoring data within that area. FDEP hopes to have the site publicly accessible by mid-2006, although they acknowledge that the dynamic nature of the data means this web-based tool will be a work-in-progress for a long time to come. Richard also discussed an existing site currently available to the public to facilitate the restoration of wetlands and associated uplands. This site also includes a section to help identify available funding sources.

(<http://www.dep.state.fl.us/water/wetlands/fwric/index.htm>)

**Coupling Fluvial Incision, Delta Deposition and Coastal Processes, Sergio Fagherazzi, Ph.D., Florida State University Department of Geology** – Identifying and understanding the history of coastline geomorphological processes provides insight into a number of natural resource issues, including sediment transport and accumulation, the historic characteristics of now-submarine river systems, and even oil and gas reserves identification. Models can be developed to portray the long-term morphodynamics of coastal river systems that were inundated by sea level rise over the last several thousand years. Such tools also allow a better understanding of modern-day coastal dynamics, including barrier island formation processes.

**Morphological Recovery of Dune Fields in Barrier Islands after Hurricanes, St. George Island, Florida, Anthony Priestas, Graduate Student, FSU Department of Geology** – Barrier islands are largely restricted to the Atlantic and Gulf coasts in the United States; wave action is too strong on the US West Coast to allow their formation in most places. Florida's barrier islands are typically about 3,000 to 5,000

years old. Most barrier islands are characterized by sand dunes on their waterward side and vegetation plays a major role in protecting those dunes, particularly during storms. Hurricane Dennis completely obliterated the foredunes on St. George Island. Sand moved from the foredunes in this manner is pushed landward, resulting in a net movement of a barrier island toward the mainland, with the overall movement based on the width of a barrier island and the supplemental protection provided by any additional dunes behind the foredunes. Ongoing research is looking at quantifying the relationship between dune vegetations and sand transport processes associated with storms.

**Velocity Asymmetry in Salt Marsh Channels, Muriel Hannion, graduate student, FSU Department of Geology**

Ms. Hannion's research is looking at the dynamics of salt marsh formation as controlled by tides, water velocity and vegetation. A model is being developed to simulate water velocity in salt marsh channels and in the marsh vegetation (the marsh "platform"). The model indicates an asymmetry between the ebb flow velocities and the flood flow velocities, and this asymmetry is assumed to be a forcing function for the creation and maintenance of salt marshes.

**Integration of Membrane Filtration into Water Treatment Systems, Johnathan Pressdee, Black & Veatch**

A variety of membrane types are becoming more frequently used in water treatment. Uses include removal of particulates, bacteria and other organisms and desalination. Experience shows that pilot tests are essential in evaluating membrane filtration efficacy, especially where there is variability in source water quality. Pilot testing and evaluation of membrane integrity increases assurance of the performance of membranes for specific applications. A case study was discussed where a treatment system in Singapore uses ultrafiltration to produce 72 million gallons per day for potable use. A second example is the Minneapolis Water Works which draws water from the Mississippi River and uses filtration to produce potable water for the city. Other case studies in England and Australia were discussed.

**2006 Legislative Update – Hot Water Topics, David Still, SRWMD**

Since 2006 is an election year and water issues are often controversial, there are relatively few legislative water initiatives in the works. One bill proposes to let the Legislature set millage rates for the Water Management Districts, rather than allowing the Districts to set their own tax rates. Another bill would allow various public lands to be converted to hunting lands. Protection of springs is addressed in a bill that would provide for developing BMP's associated with springs. A bill is also being proposed to refine the professional capabilities and responsibilities of water well contractors. There is discussion of levying a tax on bottled water in Florida although no bill has been filed yet.

The technical program for this meeting was enhanced by the use of the planetarium dome at the Challenger Learning Center for displaying the presenters' slides. Thanks to Don McEwen for arranging the meeting in an "out-of-this-world" venue!

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**AWRA Florida Section Fellow Members**

The Board of Directors recently adopted a policy in regard to having Florida Section Fellow Members. Nominations are now being accepted by Bob Higgins or Alan Biddlecomb (or contact any Florida Section Board member). Qualifications for being elected to the Fellow member status are: must have been a Member in good standing of the Association for at least 10 consecutive years, must remain a member in good standing, and must have served at least one year as a Director or Officer of the Section or one of its committees. In addition, the Member must have an eminent record in some branch of water resources.

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**Membership**

The 2006 Membership Directory will be published and distributed this month! Many members consider the directory an important networking tool and one of the best benefits of Membership in AWRA. We want to thank the Sponsors for underwriting the cost of producing and distributing this important business



tool. Also, we would like to thank Patrick Victor and the CDM staff for their patience and hard work coordinating the production.

If you're not current on your membership dues, please take a moment now and complete the application in this newsletter, or the one on our web page at [www.awraflorida.org](http://www.awraflorida.org). We don't want you to miss out on all the great benefits of belonging to one of the best professional organizations in the State!

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### **Florida Section Meeting Notice – July 13-15, 2006**

Mark your calendars for the July 13-15, 2006 meeting in Key West. Remember, late registrations will not be accepted and the hotel is filling fast! Conference and registration information is available under "Meetings" at [www.awraflorida.org](http://www.awraflorida.org). The hotel registration deadline is 6/14, but we expect a sell-out well before then! The conference registration deadline is 6/30. Don't delay, register today!

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### **Tarpon Springs, Florida**

**Local Activities:** Tarpons Springs has a rich Greek heritage related to sponge divers that have migrated to the area over the last century. The Sponge Docks have great shopping, dining and attractions with a Greek theme. You're as likely to hear Greek spoken as English. Charter fishing and trips are available at the Sponge Docks along with sponging demonstrations. Tarpon Springs is also the northern terminus of the paved Pinellas Trail – likely the premier urban biking and roller blading trail in the state ([www.pinellascounty.org/trailgd/default.htm](http://www.pinellascounty.org/trailgd/default.htm)). It runs 34 miles through Pinellas County and has a trail spur to the nearby Honeymoon Island and Caladesi Island State Parks. The trail is located close to the lodging facilities above and the Sponge Docks. Bicycle rentals (\$25/day) are available Monday through Saturday on the Trail at Neptune Cyclery (727-943-5805) located on the trail at 13 Safford Ave. Call ahead to reserve. Music lovers listen up!!! WMNF Community Radio is holding its 25<sup>th</sup> annual *Tropical Heatwave* fundraiser that Saturday evening (May 20<sup>th</sup>) at the Cuban Cub (and adjacent venues) in Ybor City, Tampa. This is one of the best bargains in entertainment with thirty featured national and local acts covering a very wide spectrum of music. Check the website at [www.wmnf.org/heatwave/index.php](http://www.wmnf.org/heatwave/index.php) for ticket and location information. Closest lodgings are at the Hilton Garden Inn ([www.hiltongardeninn.com](http://www.hiltongardeninn.com)) and the boutique hotel Don Vicente De Ybor ([www.donvicenteinn.com](http://www.donvicenteinn.com)), both within walking distance of the Cuban Club. Reserve early and wear comfortable shoes!

If you have any questions:

Contact:

Jay Yingling

(800) 423-1476 x4406

[jay.yingling@swfwmd.state.fl.us](mailto:jay.yingling@swfwmd.state.fl.us)

Alternate Contact:

Doug Durbin

(813) 664-4500 or (813) 625-5033

[ddurbin@biologicalresearch.com](mailto:ddurbin@biologicalresearch.com)





# 2006 Membership Application

## MEMBERSHIP DUES

New  \$20 Regular   
 Renewal  \$ 4 Student

## DIRECTORY INFORMATION

Please give us the information requested below, as you would like it to appear in the membership directory.

Name: \_\_\_\_\_  
First Middle Initial Last Suffix (Ph.D., PE, PG, etc)

Company/Affiliation: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
Box, Street or Route Suite or Apartment  
City State Zip Code

Daytime Telephone: \_\_\_\_\_  
Area Code

Facsimile: \_\_\_\_\_  
Area Code

E-mail: \_\_\_\_\_

## MEMBERSHIP INTERESTS

Would you like to receive our newsletter via e-mail? Yes  No   
 Are you an AWRA National Member? Yes  No   
 If not, would you like information? Yes  No   
 Are you interested in sponsorship opportunities? Yes  No   
 Would you like to be part of a bi-monthly meeting team? Yes  No

**SPONSOR/RECRUITER:** \_\_\_\_\_

## PAYMENT INFORMATION

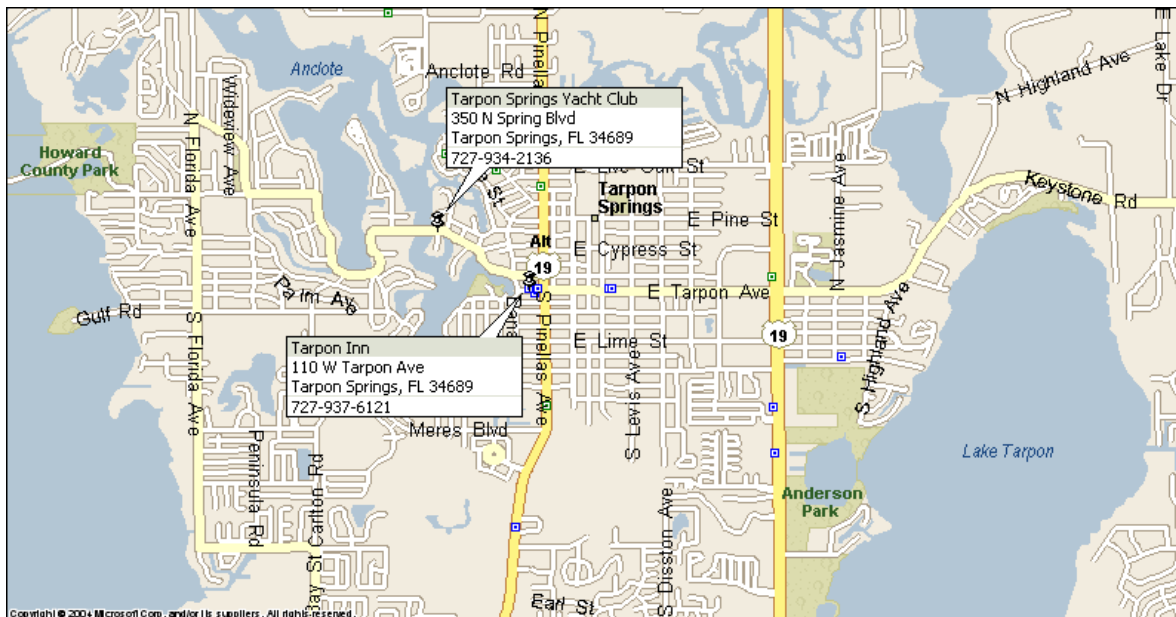
\$ \_\_\_\_\_ Annual dues (please indicate if you are paying for additional years)  
 \$ \_\_\_\_\_ Florida Section Water Resources Education Fund (tax deductible contribution)  
 \$ \_\_\_\_\_ Sandy Young Scholarship Fund (tax deductible contribution)  
 \$ \_\_\_\_\_ **TOTAL (Please make checks payable to AWRA Florida Section, THANK YOU!)**

**Return application & your check to:**  
**Annette Carter, Membership Services Coordinator**  
**c/o Tetra Tech EC, Inc.**  
**759 South Federal Highway, Suite 100**  
**Stuart, Florida 34994**

Florida Section membership dues are due January 1 and are good through December 31. Contributions or gifts to the Florida Section are deductible as charitable contributions for federal income tax purposes. Dues payments may be deductible by members as an ordinary and necessary business expense. For membership information, please contact Annette Carter at [Annette.Carter@ttech.com](mailto:Annette.Carter@ttech.com) or (772) 781-3403.

### Section Use Only:

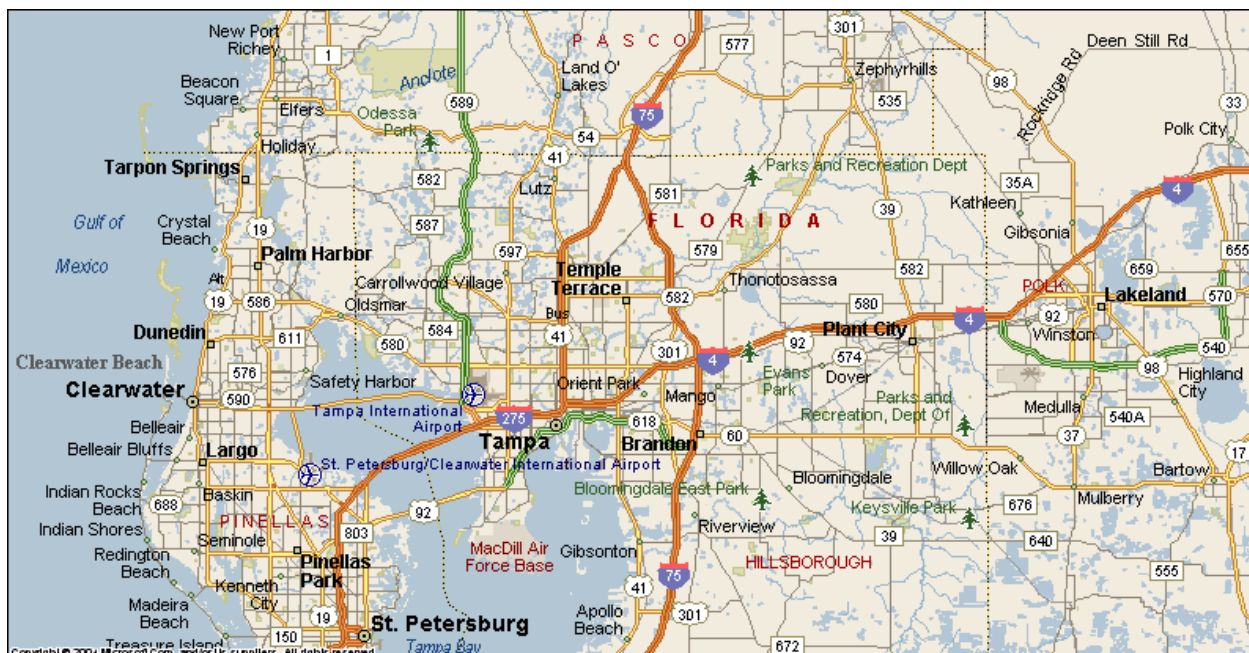
Date Received: \_\_\_\_\_ Check #: \_\_\_\_\_ Amount: \_\_\_\_\_



**Location:** The meeting will be held at the Tarpon Springs Yacht Club ([www.tsyc.net](http://www.tsyc.net)) (727) 934-2136. The Yacht Club is located near downtown and the famous Sponge Docks.

**Lodging Info:** Ten rooms have been reserved at the Tarpon Inn located on Spring Bayou (site of the Epiphany celebration). The Tarpon Inn is undergoing renovation but has assured us they would have at least 10 suitable rooms by the meeting date. Room rates are \$55/night for this event. The \$55/night rate applies for Thursday and Saturday nights as well. Please call Bonnie Leonard at 727-937-6121 and mention the AWRA meeting. Please reserve early. Alternative lodging is available at nearby Spring Bayou Inn Bed and Breakfast and the Bavarian Inn Bed and Breakfast. For more information, please visit the following links:

- [www.springbayouinn.com](http://www.springbayouinn.com)
- [www.bedandbreakfast.com/florida/bavarian-inn.html](http://www.bedandbreakfast.com/florida/bavarian-inn.html)
- [www.discoverourtown.com](http://www.discoverourtown.com)





***Thank you to our meeting  
sponsors!***





**AWRA Florida Section Meeting**  
 Friday, May 19, 2006  
 Tarpon Springs Yacht Club  
 Tarpon Springs, Florida

**Registration Form**

Meeting Registration Deadline – May 12, 2006  
 Please Make Hotel Reservations ASAP

**Name** \_\_\_\_\_

**Organization** \_\_\_\_\_

**Mailing Address** \_\_\_\_\_

\_\_\_\_\_

**Phone** \_\_\_\_\_

**E-Mail** \_\_\_\_\_

**Guest Name** \_\_\_\_\_

*Registration includes Dinner — Please indicate choice for you and any guests:*

\_\_\_\_\_ **Mahi Mahi with Fruit Salsa**      \_\_\_\_\_ **Roast Chicken Breast with Pistachio Stuffing**

**Make checks payable to AWRA Florida Section and mail to:**

Jay Yingling	Registration (Includes Dinner)	_____	X \$40 =	\$ _____
SWFWMD	Guests	_____	X \$30 =	\$ _____
2379 Broad Street	Students*	_____	X \$20 =	\$ _____
Brooksville, Florida 34604-6899			<b>TOTAL</b>	<b>\$ _____</b>
(800) 423-1476 ext. 4406				
<a href="mailto:Jay.Yingling@swfwmd.state.fl.us">Jay.Yingling@swfwmd.state.fl.us</a>				

**Number attending the Board Meeting** \_\_\_\_\_ **Dutch Treat**

\* You may sponsor a student to attend the event by paying their registration fee. We will include your name with a thank you in the program brochure. If you wish to do this, please fill in the requested information at the top of the form.

**PDH Credit for Florida Professional Engineers**

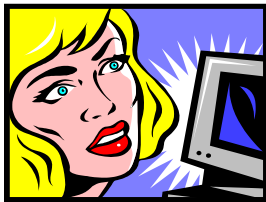
We have been approved by the Florida Board of Professional Engineers (FBPE provider # EX00089) to offer Professional Development Hour (PDH) credit to Florida registered Professional Engineers. You will only receive credit if you attend the entire technical session. Please check the box below and include your PE number if you would like to obtain PDH credit.

[ ] **I plan to be present for all technical sessions and would like PDH credit.**  
**My PE number is** \_\_\_\_\_.



**AWRA Newsletter Editor:**

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**VISIT THE FLORIDA SECTION WEBSITE AT:**  
[www.awraflorida.org](http://www.awraflorida.org)

**☞ Contact Upcoming Meeting Chairmen Regarding Sponsorship or Assistance ☞**

**Tallahassee**  
 March 17, 2006  
 Don McEwen  
 850-539-9508

**Tarpon Springs**  
 May 19, 2006  
 Jay Yingling  
 352-796-7211 x4406

**Key West**  
 July 13-15, 2006  
 John Wehle  
 561-253-4309

**Jupiter**  
 September 15, 2006  
 Patti Lodge  
 561-254-1792

**Ft. Myers**  
 November 17, 2006  
 Ron Hamel  
 863-675-2180

**Welcome New Members!**

Stephen E. Bell, South Florida Water WMD, West Palm Beach  
 Jane K. Bucca, South Florida WMD, West Palm Beach  
 Beatrice A. Burkett, Baskerville-Donovan Inc., Pensacola  
 Joanne Chamberlain, BEM Systems, Inc., West Palm Beach  
 Charles R. Faulkner, Flagler Beach  
 Richard Harpin, PhD, Halcrow Inc, Tampa  
 Travis K. Hill, PE, Baskerville-Donovan Inc., Pensacola  
 Maria G. Martin, MACTEC Engineering & Consulting, Newberry  
 Clayton C. Miller, Diversified Drilling Corporation, Tampa  
 Anthony R. Morris, Water Resource Solutions, Fort Myers  
 Kim R. Olsen, Continental Shelf Associates, Jupiter  
 Casey A. Schmidt, University of Florida Student, Gainesville  
 Charles M. Shinn, Florida Farm Bureau Federation, Vero Beach  
 Wendy Sotera, Scheda Ecological Associates, West Palm Beach

