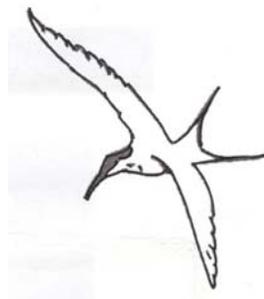




of TARS & TERNS



Volume XXXVIII Number 6

June 2004

BRIDGE OFFICERS



COMMANDER

Cdr Keith B. Segerson, P



EXECUTIVE OFFICER

Lt/C Richard P. Davis, AP



EDUCATION OFFICER

Lt/C G. Jay Nelson, P



ADMINISTRATION OFFICER

Lt/C Glenn A. Fahey, S



SECRETARY

Lt/C Cathy F. Sheffield, AP



TREASURER

Lt/C Joel P. Bailey, AP

Northern Virginia
Sail and Power Squadron
District 5

A unit of the

United States Power Squadrons®
Sail and Power Boating

www.usps.org/localusps/nva/
www.usps.org/localusps/d5/

Calendar of NVSPS Meetings and Events

June

- 9 NVSPS Membership Meeting
- 15 *Inputs due to oT&T*
- 18 -20 [D/5 Southern Chesapeake Bay Rendezvous](#)
- 19 - 24 NVSPS Cruise
- 20 NVSPS Rendezvous & Navigation Contest
- 23 - 27 Smithsonian Folklife Festival
- 27 NVSPS Day at Folklife Festival
- 30 - 4 July Smithsonian Folklife Festival

July

- 4 Rendezvous - Olverson's Marina
- 14 NVSPS Membership Meeting
- 23 -29 [D/5 Cruise, North and South](#)
- 29 - 1 Aug [D/5 Summer Rendezvous/Council and Navigation Contest](#)



Scheduled Meetings

Unless otherwise noted, the General Membership Meetings will be held at the BoatUS* Headquarters facility at 1930. Any changes will be posted in this newsletter or on the Squadron web site.

BoatUS Headquarters and meeting location: 880 South Pickett Street, Alexandria VA. From the Capital Beltway, take the VA-613/ Van Dorn Street exit, exit number 173 (aka exit 3), towards Franconia. Turn left onto South Van Dorn Street / VA-613 North. Turn left onto South Pickett Street. Go less than .5 miles and turn in at the BoatUS sign and go to the lighted parking lot in the rear. Proceed to the entrance.

Please note the new parking instructions !!

See 'Dock Talk' page.

Commander

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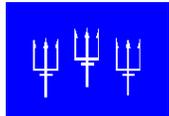
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COMMANDER'S CORNER



I am not a happy Commander! It is Friday, 14 May, and I have not yet gotten my boat off of blocks. Even worse, I'm not going to be able to do so any time soon. Work, family, other "stuff", and even the weather have thwarted earlier attempts to get afloat! Given all that summer has to offer, it's no surprise that boating can sometimes get pushed aside. Unfortunately, life occasionally deals from the bottom of the deck!

I am happy to report that Martha Jane Dodd and the Membership Committee have been highly successful with their new member recruitment efforts this past month. We are attracting very exciting new members with broad experience and professional affiliations that will enrich our organization for years to come. Keep up the great work!

The Smithsonian Folklife Festival is rapidly approaching. Your Northern Virginia Sail & Power Squadron is responsible for providing all volunteer staff on Sunday, 27 June, 2004 from 1000 to 1600 at the USPS booth on the Mall in Washington near the Smithsonian Castle and Metro stop. Our shifts will be 2 hours and we'll need 4-5 volunteers to staff each shift. Volunteers will staff our booth; answer questions on the Power Squadron; and participate (if those that are so inclined) in narrative demonstrations on boating safety as required. It is a great event where the Power Squadron will get great publicity and outreach to the over 2,000,000 attendees to the Festival. Come early and stay late to see the rest of the great events that day. We need YOU to assist on the 27th.

Please email me at segerson@gmu.edu or call me at (703) 277-7724 (work) or (703) 670-2270 (home) if you have any questions and to sign up as a volunteer.

My hat is off to our wonderful and very hard working Vessel Safety Examiners. They have been going to many marinas to perform Vessel Safety Checks (VSCs) with some even conducting VSCs while on vacation! Now that's dedication. Our goal is to be the best Squadron in the total number of VSCs performed this year. The competition is great but I know that we can do it. It is great for our community to be so involved!

As you read this, our Squadron's Summer Cruise is about to get underway. Even if you aren't going on your boat, please join the large group already signed up to participate in the 19 June, 2004 Rendezvous at the Spring Cove Marina. There will be great fun and camaraderie. More information is available in this newsletter and on the NVSPS website.

And, as always, I urge each of you to make every effort to participate this year and get to know your fellow members. Hopefully, you will be as rewarded as I have through my participation with the Northern Virginia Sail and Power Squadron! For more information on upcoming NVSPS courses, please refer to the NVSPS web site or go directly to the list of courses by typing in the URL <http://www.usps.org/localusps/nva/educ/schedmem.htm>

Respectfully submitted,
Commander Keith B. Segerson, P





The Exec' Officer's Moment

By Lt/C Richard Davis, AP



The water has always been a big part of my life. As a young boy, my family lived in Pensacola Florida, on the Gulf of Mexico and Escambia Bay. The beauty of the islands and streams that fed the warm waters of the Bay and the Gulf is with me today. Memories of surf fishing with my father and the sound of my father's shiny green 10 horsepower Johnson outboard on the stern of the boat bring me back to simpler days.

As I grew older, I became interested in sailing, and joined the Junior Yacht Club affiliated with the local yacht club. It was here I first heard of the USPS. My days of learning sailing were under a true sailing master, Captain Turner. It was here that I became part of the boating fraternity sailing a 21 foot Fish Class sloop, not the kind that comes to mind now. A wooden hull, center board, gaff rigged and ideal for the shallow waters of the Gulf bay area. They were a nice wooden boat.

These boats were to become the focus of several summers throughout my teen years. They were not to be a fishing boat or a family cruiser, they were for racing and so equipped. The club owned a fleet of them for racing. To some of my friends it was a fast, sleek, sexy boat perfect for impressing the girls on the beach or dock. To the club yachtsman, it was the vessel to sail in competition with the other clubs along the coastline.

At first, I was the jaunty teenager perched on the fore deck, responding to the commands of the helmsman to adjust the jib. Later, I handled the mainsail and then I became the helmsman. "The skipper's command?" "Head toward the bay entrance and don't stop 'till its out 'a sight." Our almost due south course would leave the shoreline far behind as we passed the old Spanish fortresses guarding the bay entrance. Would we reach the south bay shore and then we would have to turn back and sail in the slip before darkness fell. We never made the trip out to the Gulf, but we did find a bond in the healing power of the water.

It was in those innocent days that I took my first boating course under Captain Turner. My parents insisted, as well as the yacht club, that if I was ever to have the responsibility of skippering a team, I had to know what I was doing, and I had to know the boat. The time spent in the first Summer working on the boats resulted in a true understanding of boats and the water and in following years numerous wins. It gave me, and, more importantly, my parents, the confidence I needed to operate a vessel, and in handling life's future endeavors.

As I grew older and my time on the water was spent less with my parents and more with friends, I grew to appreciate the need to learn more about the water and the fragile craft we use to traverse them. Like most of us, I have my book of hours full of stories from these formative years. During the occasional storm I knew I could not outrun, I added my voice to the prayers of the sailors asking God to ensure a safe return to port.

Of course, I also grew to appreciate what my friends and instructors had learned about the other "social" applications of boating. My fondest memories of my misspent youth are of boat dates, beach parties and raucous cruises out of the watchful eyes of the adults at Pass Christian and New Orleans.

I am now older and hopefully wiser. I have moved on to larger boats. My focus is more on fish than girls. Now I find myself as an instructor – can you believe. My hair, well it's still there and my eyesight requires an assist from the optometrist occasionally. Times have truly changed as have the boats and equipment. At home, I, not my father, am the person whose arrival is anxiously anticipated. Even so, I still see myself as that teenager waiting for my father to hurry home so we could go and experience the joy of the water, or for Captain Turner to ask me to take the helm.

As we enter this boating season take the time to give a child the joys of boating. Be it your own children, grandchildren, nieces, and nephews, or the kids next door, take time this season to pass along this gift we all enjoy. Who knows, maybe we can all be teenagers again!

Join the fun, share the knowledge!





EDUCATION OFFICER'S REPORT

By Lt/C G. Jay Nelson, AP



© USPS 1996

For a long time now the membership has been asking for additional for Advanced Grade courses that are more in line with the needs of today's recreational boaters. Many of us have equipped our boats with sophisticated navigational electronics that are much easier and far more accurate than establishing position with traditional techniques. The counter argument to teaching the use of navigational electronics is that should they fail, the boater could potentially be left in a precarious position without any practical knowledge of the basics. There is obviously merit in both arguments.

While the debate raged on, National adopted a hybrid approach by announcing at the Fall Governing Board in Reno that new USPS courses will be based on the use of electronics as the primary means of navigation, with traditional methods as a backup navigation. Whatever your position is on this topic, the fact remains that many of our members want to understand the safe and proper operation of their craft in the environment they will be using it and not pragmatic theory that is used to get there. This approach will be extended across all USPS courses to include *The Squadron Boating Course* and *Junior Navigation Course* and will be complemented by the upcoming *GPS Course* and *Marine Electronics Course*.

From an educational standpoint, teaching electronic navigation is a paradigm shift in the way our course material is presented. For example, plotting a course on a paper chart, and marking out waypoints on an electronic chart, are the same yet different. Establishing an estimated position from a bearing with a compass, and establishing a fix from the same navigational aid with radar, are essentially the same, yet the electronic position (bearing and distance off) is more accurate. These subtle differences make it impossible to simply modify the existing course material. Moreover, the current courses had to be re-built from the ground up. To facilitate this change, a special project team was created to develop the new *Plotting* and *Advanced Piloting* courses.

So what changed? The most notable change is the incorporation of electronic charts into the USPS training materials. National has established a relationship with Maptech Chart Navigation Inc., to develop custom USPS software and electronic charts. This software will be used with new *The Squadron Boating Course* and the *Piloting* and *Advanced Piloting* courses. This is significant in that the students will now be required to have access to a computer to take these courses. Once installed, the software will allow the student to establish

waypoints, construct routes, access tide and current tables, and make annotations of course details. The Maptech software will include several charts for training purposes to include new digitized USPS *Bowditch Bay* and *1210TR* charts. A significant benefit to this USPS relationship with Maptech is that US members will be allowed to purchase Maptech products at dealer prices.

The new courses will be *The Piloting Course* now consists of one module, ten sessions long, with a single open book examination at the end of the course. The course will focus around extensive exercises based on the use of the Maptech software and a detailed Student Guide. The course material will also be supplemented by commercial text. The course will incorporate the use of GPS, electronic charting and radar; however, the students will learn that onboard electronics, especially GPS, are useless without charts. As such, traditional charting methods will be taught to verify electronic results.

The *Advanced Piloting Course* will consist of two modules, one six sessions and the other four sessions in length, and two examinations. The first examination will be closed book and the second will be the open book exam. The *Advanced Piloting Course* will expand into the use of other electronics such as radar, computers, electronic charting, sonar, autopilot, and more. The tabular methods of plotting tides and currents have been removed and only the rule of twelfths will remain.

In all, the changes are exciting. The presentation material is professional and supplemented with highly recognized commercial publications. At our next Squadron meeting on June 2004, we will be offering a preview of these courses. I hope all of you will be able to attend.

Last month we introduced a new feature to the Education Page where we asked three questions to test your knowledge. The response from the members is that they enjoyed the new feature. As a result, we are going to make it a regular feature in the oT&T to be called the *Captain's Corner*.

Lt/C Jay Nelson





The Administrative Officer's Report

By Lt/C Glenn Fahey, S

Having just returned from the NVSPS Spring Family Picnic at the Fairfax Yacht Club, I can tell you that we had good weather, good food, and most importantly, good company. About 45-50 people came to the event, and as always, hearty appetites were not in short supply. Among the picnic attendees were the leader of Sea Scout Ship 1942, Tom Ballew, and 8 of the Sea Scouts. Throughout the day, Vessel Examiners and Lineins were able to perform several Vessel Safety Checks. A big "thank you" goes out to those who help keep boaters safer, and keep our waters safer. Also, a big thanks to all who helped with the picnic.

Our next social event is the Rendezvous at Spring Cove Marina in Solomons, MD on Saturday, June 19, 2004 at 1800. This Rendezvous coincides with the beginning of the NVSPS Cruise, which will be from June 19-24, 2004. All are welcome to the Rendezvous, even if you are not participating in the cruise. You are more than welcome to attend by car. For the Rendezvous, we are requesting that you bring a potluck dish of any hors d'oeuvres. The Squadron will provide various beverages, such as soda, beer, and wine. For those who want overnight accommodations on land, Spring Cove Marina is located next to the Holiday Inn and Comfort Inn in Solomons, MD. See the Rendezvous flyer elsewhere in this issue of "of Tars & Terns".

We currently have a few squadron officer positions open. They are: Membership Involvement; Entertainment Committee; and Editor of the newsletter, "of Tars & Terns". For the Editor position, a couple of people have expressed potential interest in filling that position. If you are interested in the Membership Involvement position or the Entertainment Committee, or if you are interested in helping out in any way getting more involved with Squadron activities, please contact me or any other Bridge member.

Boat Safely.

Glenn



Photo's from the Family Picnic 2004



Parking for the General Meetings

We have been asked by the BoatUS folks not to park in front of the BoatUS/West Marine store. When they sold the store they sold the rights to the parking space.

We can park in the rear parking lot. It is lighted and has much more space. You access the building through the rear entry conveniently.

Rules on Board?

The issue dated 7/01 of the Federal Requirements and safety Tips for Recreational Boats has on P. 28 an X in the column for vessels 26<40 ft. However, the words in the requirement column state "The operator of a vessel 39.4' (12 meters) or greater must have on board a copy of the rules." This is repeated in detail on P. 38 of this pamphlet.

Shrink Wrap Recycling

Be kind to the Bay – recycle your shrink-wrap! Approximately 17 tons of shrink wrap material were collected in Maryland in 2002. The recycled material will be used to make plastic bags, vinyl banners, and other useful products. Zippers, doors, springs, ropes and vents should be removed prior to drop-off. It is recommended that individuals call ahead to confirm hours of operation and availability. For more information, call one of the shrink-wrap recycling facilities.

Local Notice to Mariners

Effective April 1, 2004, the Local Notice to Mariners (LNM) will no longer be available free printed form by mail as it has been for many years. From now on LNM can be accessed through your computer

<http://www.gpoaccess.gov/fr/index.html>. The electronic versions of LNM will appear on the U.S. Coast Guard Navigation Center's website <http://www.navcen.uscg.gov/lnm/default.htm> <http://www.navcen.uscg.gov/lnm/d5> for USCG 5th district.

You may register for List Server notification on the Navigation Center's website so when LNM are posted for the district(s) in which you are interested you will receive automatic notification of their availability.





Cooperative Charting

For those of you I have not had the pleasure of meeting yet, I have been a member of the Squadron since September of 2002. I have a West Wight Cutter 19 that I keep on the West River in Shady Side, MD. I am definitely a ragman and a paper chart fanatic.



I have accepted the Squadron Chairmanship of the Cooperative Charting Program. What is the Cooperative Charting Program you ask? For starters, it is another way to become involved in Squadron activities. The purpose of the program is to assist NOAA in their mission of keeping marine and aeronautical charts and publications, accurate and current.

As a squadron, we can assist in several ways. One is the "adopt a Chart" program where we take responsibility to update a chart or a portion of a chart. There are seven other activities we can take an active role in as we are enjoying our local waters.

Nautical Chart Items -- Observing and reporting differences between charted information and that which is currently observable.

Small Craft Facilities -- Observing and reporting the characteristics of marinas, boat yards, and other marine facilities that service small nautical craft.

Tidal Currents -- Measuring and reporting tidal current strength at locations specified by NOS using NOS equipment.

Depth Surveys -- Measuring and reporting depths

Coast Pilot Publications -- Reviewing the Coast Pilot publications and reporting updates to the text and illustrations.

Geodetic Mark Recovery -- Locating and reporting the condition of geodetic marks.

Aeronautical Chart Items -- Observing and reporting differences between charted information and what is currently observable.

The Cooperative Charting Program website is <http://www.usps.org/national/coch/> on the USPS National home page. Check it out; there is a wealth of information here.

I am planning on starting with adopting a chart and I will be discussing it with the Squadron Bridge in the near future. I have much to learn about the Cooperative Charting Program and I look forward to growing it into another productive Squadron activity.

Ed Phillips, AP
3-771-7096
ed339@earthlink.net



**Welcome
Aboard !!**

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Mary A. Shupack
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Dunn Loring, Virginia 22051
703-283-2120

Patricia S. Kimmel
Richard Freeman
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3307 Martha Custis, Drive
Alexandria, Virginia 22302
703-578-8945

Kimber H. Boyer, Jr.
7402 Lanham Rd.
Falls Church, Virginia 22043
703-645-4026

Submitted by
Lt. Martha Jane Dodd, P
Membership Chairman, NVSPS

One of our newest members!



Captain's Corner

You pull up to a fuel dock with your bow into the current. The dockhand offers you a mooring line with an eye splice on it. You secure this line to the;

- a. on the stern cleat
- b. on the bow cleat
- c. on a midship cleat
- d. to line-handler aboard your boat

What is Flemishing?

- a. The act of stemming the current by applying port/starboard full rudder.
- b. Coiling excess docking line in concentric circles.
- c. Suspending docking lines from piling hooks.
- d. Reversing the throttles to break forward momentum.

You decide to go into town after spending the night on your boat. Before leaving you should always

- a. Unplug the shore power cable
- b. Disconnect the dockside water supply
- c. Notify the marina you will be gone for a while
- d. All of the above

Answers are provided on page 11



NVSPS



Rendezvous

Where: Spring Cove Marina
455 Lore Rd.
Solomons, MD
(between Holiday Inn and Comfort Inn)

Date: June 19, 2004
Time: 1800

Pot Luck

Beverages will be provided, including soda, beer, and wine.
Please bring heavy hors d'oeuvres to share.

Land Accommodations

For those who are attending the Rendezvous by car, there are nearby hotels in Solomons for overnight accommodations:

Holiday Inn 800-356-2009 or 410-326-6303
Comfort Inn 410-326-6303

Questions: Glenn Fahey at
GandJFahey@aol.com
or call 703-421-0662.



yes I want to help in the FolkLife Festival on 27 June 2004

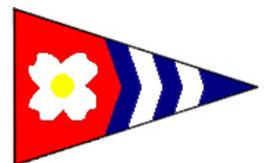
Name _____

Number in party _____ Time(s) available to help: _____

Telephone number (_____) _____ e-mail: _____

Please mail to, or contact:

Cdr. Keith Segerson, P
Telephone number: (H) (703) 670-2270, (O) (703) 277-7730, (FAX) (703) 277-7730
E-mail: segerson@gmu.edu
Mail: 5357 Wade Lane, Woodbridge, Va 22192-6018





The Sailor's Night Sky, Enjoying The Stars

RADIATION - ELECTROMAGNETIC

Asimov in one of his 400 some books gave an excellent deep view of the electromagnetic spectrum EMS. 1 He used the octave in music as a metaphor in explaining the scope of the spectrum. 2 From the longest of measurable wavelengths 30,000,000 kilometers to the shortest gamma rays 0.0001 angstrom units, there are 81 doublings of frequency 81 octaves. 3 The portion of this radiation spectrum we are most familiar with, light (7600 to 3800 angstroms), represents only 1 octave. That is right, we are only familiar with about 1/81 of the complete electromagnetic spectrum and I am guessing not all that familiar. 4

Asimov simplified our understanding of the range of EMS by classifying common types into octaves; this is how he did it:

Type	Octaves
micropulsations	6 1/2
radio waves	30
microwaves	6 1/2
infrared rays	12
visible light rays	1
ultraviolet rays	5
X-rays	10
gamma rays	10

varying amounts, all these types of the EMS are emitted by stars. Stars also emit other types of radiation to be explained in another article.

Why are there different types of the EMS, what causes them to occur, why are photons discrete amounts of energy? Photons are emitted (or absorbed) by changes in the energy level of the electron of an atom. Electrons can only exist at certain energy levels around the nucleus of the atom. When an electron goes to a higher level, a photon is absorbed; when an electron goes to a lower level, a photon is emitted; this is called transition. These energies, from infrared to visible, are the ones responsible for chemical reactions. The outer electrons of an atom are not bound tightly and can resonate or rotate with other electrons within a molecule; this is how infrared radiation is produced. When electrons close to the nucleus are disturbed, shorter wavelengths such as UV and X-rays, are produced. (A very short and simple description of one of three processes that propagate photons); two others are synchrotron and bremsstrahlung. 6

Physical laws that the EMS obey: (this is true for photons)

- Propagated in discrete bundles of energy called photons
- composed of electric and magnetic fields which oscillate at right angles to direction of motion
- Travels at a velocity of 186,000,000 miles an hour
- Travels in a straight line (Photons always take the path of least time. Derived from the same equations as index of refraction)
- Refraction when entering a different medium
- Diffraction by interference
- Absorbed or reflected (colors) (angle of incidence = angle of reflection)
- High energy photons (short wavelengths) easily scattered
- Polarization

A more serious note: A photon has no rest mass but it has momentum mass. A photon is both a wave function and a particle; (the wave - particle duality of quantum mechanics they are interchangeable). 7 By convention lower energies are usually referred to as a wave, higher energies as a particle. When two electrically charged particles interact the force is transmitted by the photon. It is this electromagnetic force that binds the electrons to the nuclei essentially canceling out the positive charge of the nuclei that makes the atom neutral. There is a small amount of charge however that can be felt very near the atom and it is this small amount of charge that determines most of the characteristics we experience such as taste, smell, color and enable phenomenon like rainbows, TV and rain. The human eye is a quantum detector; it is able to detect a threshold of just a few photons

Where do all the photons come from? - the Sun. When electromagnetic radiation from the Sun reaches our atmosphere many different and strange phenomenon occur; the subject of the next article on *radiation*.

1 *Asimov On Physics*, 1965, Doubleday & Co. (Some knowledge of physics must be assumed otherwise these articles become a textbook.)

2 An octave is a doubling of wavelength; a wave either twice or half as long constitutes an octave. Electromagnetic radiation can have any wavelength theoretically as a charged particle can oscillate at any frequency.

3 The longest wavelengths reach 3/4 the way from Earth to Venus; one oscillation takes 100 seconds. The shortest gamma rays border on units usually given as energies

The Sailor's Night Sky Cont'd

are generally described as particles. (For your computation, 1 kilometer = 10,000,000,000,000 angstroms.)

4 Here is a stab at familiarity. Electromagnetic radiation, though described as a wave, is also described as a discrete bundle of energy called a photon or quanta (remember the quantum leap). This quanta is directly proportional to its frequency; these wavelengths or photons, travel through empty space by definition, at the velocity of light, 186,000 miles a second.

5 When star light (any of the EMS from outer space) enters earth's atmosphere it is bent downward making the star appear to be higher than it is until it is directly overhead. Light through a prism separates the wavelengths into what we know as color; violet light is refracted more than red light.

6 Synchrotron - a fast moving electron in a magnetic field constantly changes direction (accelerates) emitting a photon. Bremsstrahlung - deceleration of a free electron near an ion, usually by collision, emits a photon. Photons (gamma rays) are propagated in weak and strong nuclear reactions but that is a story for a rainy day.

7 Werner Heisenberg, 1901-1976, was the father of the "uncertainty principle." The principal states that simultaneous measurement of the position and momentum of an electron is limited in accuracy; the more accurate the position the less accurate the momentum; in determining the electron's position its velocity is changed. As Azimov says on this subject: "uncertainty arises out of the graininess of the universe."

D/Lt Charles H. Olin, AP



Do you or one of your friends
need your vessel checked?

Or want to become an examiner yourself?

If so contact Lt Elaine Colen, S

Answers to The Captain's Corner:

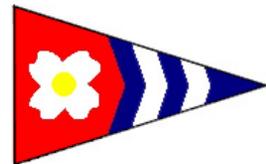
C – Secured to your midship cleat, the boat will lie back on the current and against the dock. The bow cleat can also be used but it will typically allow the midship to drift away from the dock to some degree and make boarding more awkward. Securing the line to the stern allows the current to act on the bow to turn it out from the dock and spin the boat around.

B - Coiling excess docking line in concentric circles flat on the dock. The flat coil mitigates a tripping hazard.

B – Although 'all of the above' would be overly prudent, generally the marina doesn't care and your shore power is protected by circuit breakers (you can also shut off the main breaker without disconnecting the shore power cable). However, if a water fitting breaks inside the boat while you are away, the dockside water line will fill your boat with water.



SHIP'S STORE



Need a new burgee for your
boat? How about a tote bag
or sports shirt?

Contact P/C Paula Bailey, AP
at 703.444.5169

Where: Spring Cove Marina
Date: June 19, 2004

Rendezvous

NVSPS



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