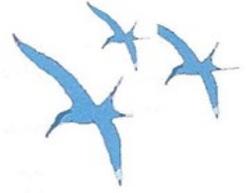




# of TARS & TERNS



Volume XLVII Number 6

July/August 2014



## Mark Your Calendar

NVSPS Meetings and Events

### July 2014

- 09 General Membership Meeting**  
1900 - 2100: BoatUS Headquarters; 880 South Pickett Street, Alexandria, VA  
*Speaker:* to be announced
- 19-20 Potomac River Cruise**  
Details to be announced
- 23 Executive Committee Meeting**  
1930 - 2100: 4031 University Drive #200 Fairfax, VA 22030

### August 2014

No General Membership Meeting

- 8-10 Chesapeake Bay Rendezvous**  
Harrington Harbour South

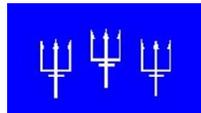
### September 2014

- 10 General Membership Meeting**  
1900 - 2100: BoatUS Headquarters; 880 South Pickett Street, Alexandria, VA  
*Speaker:* to be announced
- 13 Wounded Warrior Cruise**  
Patuxent Naval Air Station, West Basin Marina
- 23 Executive Committee Meeting**  
1930 - 2100: 4031 University Drive #200 Fairfax, VA 22030

A detailed Squadron calendar including all meetings and educational courses can be found on our web site [www.nvsp.org](http://www.nvsp.org)



Northern Virginia Sail and Power Squadron  
A unit of the  
United States Power Squadrons®



## Commander Sends...

Cdr. Rich Unis, JN

Summer is in full swing and that means it's time for the District 5 Summer Council Meeting in Crisfield, MD. It will be held at Somers Cove Marina from August 1-3. I appointed L/C Ed Phillips, AP (our SEO) as our NVSPS representative at the Summer Council Meeting. He will attend in my place as I will be participating in a Sea Scout award ceremony in Solomons, MD on Saturday, August 2. Our sponsored Ship 1942 is being presented with the National Flagship Award, recognizing them as the very best Sea Scout Ship in the nation! The National Director of Sea Scouting, Keith Christopher, is flying in from Irving, Texas to present them with the BoatUS sponsored Flagship Trophy.

*Continued on Page 3*

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- Wounded Warrior Cruise Page 9

## USPS Captain in a Box Series

Interested in obtaining your USGC Captain's License? USPS offers six versions of "Captain in a Box" training packages that are designed to provide you with everything you need to know to pass your US Coast Guard license for the Six-Pack license, or the 256/50/100 Ton Master's Captain License. There are also packages to upgrade a Six-Pack license to a Masters license, renewing your license, and obtaining Assistance Towing and Auxiliary Sailing endorsements. These courses are a fun and easy way to obtain your USGC license. For more information, visit <http://www.shopusps.org/page33.html>





## Bridge Officers

### COMMANDER

Lt/C Richard Unis, JN  
703 777-8378  
commander@nvsp.org



### EXECUTIVE OFFICER

Vacant

*(Contact the Commander if you would like to help)*



### EDUCATION OFFICER

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703 771-7096  
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### ADMINISTRATIVE OFFICER

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703 436-7931  
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Lt/C David Hinkins, S  
703 436-7931



### Scheduled Meetings:

Unless otherwise noted, the General Membership Meetings will be held at the BoatUS™ Headquarters facility at 1900. on the second Wednesday of each month except for the months of August and December. 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, 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.

## USCG 2013 Boating Safety Statistics

- 11,993,067 registered boats, a 0.9% decrease from 2012
- 4,062 accidents; 560 deaths; 2,2620 injuries
- Fatality rate was 4.7 deaths per 100,000 registered vessels, which was a 13% decrease from 2012 (5.4 per 100,000)
- 77% of deaths were from drowning, 84% with no PFD
- Only 13% of fatalities occurred where the operator had taken a NASBLA-certified course, and 20% with other instruction
- 80% of drowning occurred aboard vessels less than 21 feet
- 84% of accidents: operator inattention, improper lookout, operator inexperience, speed and machinery failure
- Alcohol use was the leading factor in fatalities
- Most common vessels involved in accidents: open motor-boats (46%), personal watercraft (18%), and cabin motor-boats (17%)



## Boat Smart Boat Safe



### Of Tars & Terns

The official publication of the  
**Northern Virginia Sail and Power Squadron**  
www.nvsp.org



**Articles, opinions and advertisements do not necessarily reflect USPS® policy or endorsement unless so designated**

Of Tars & Terns is published ten months of the year—July/August and January/February issues are combined - Jan/Feb, May, Aug and Nov issues are printed and mailed to NVSPS members, all other issues are published online at NVSPS.org

**Volume XLVII; Number 6: July/August 2014**

#### EDITOR

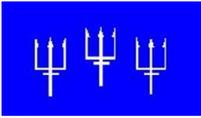
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## Commander Sends...

.... Continued from Page 1

Cdr. Rich Unis, JN

P/C Francis Williamson, AP is still collecting donations for the Wounded Warrior Cruise, which is rapidly approaching. It's not too late to donate money to the event, which will be held on September 13 at Pax River Naval Air Station. All squadron members are welcome and encouraged to participate in the Wounded Warrior Cruise. At least consider driving down to help with the picnic after the Cruise. It is very uplifting to meet the Wounded Warriors and converse with them. They are always very appreciative of our support. I will never forget the experience I had personally last year while sailing with a Wounded Warrior and her family. We will be holding an EXCOM meeting on Wednesday, August 27 to discuss final plans for the Cruise.

Our next General Membership meeting will be held on September 10 – right before the Wounded Warrior Cruise. You won't want to miss this meeting! Our guest speaker will be Beth Leonard from BoatUS. She and her husband have circumnavigated the globe on their sailboat and she has written an outstanding guide for bluewater cruisers. It's called "The Voyager's Handbook" (and yes, I have my very own autographed copy). Beth will be sharing stories of her adventures with us. I'm sure she has some very incredible stories to tell.

My previous articles have mentioned a Bay Rendezvous event that I have been trying to organize at Herrington Harbour South. I was targeting August 8-10 but have still not been able to secure transient slips. The marina has assured me that September and October are pretty wide open so I'm working on nailing down the details. I had no idea this marina was so popular!

Now it's time for me to head out on the water. So far this season I have sailed (or rather motored...ugh) a pathetic total of 3 days. One of those days had no wind. The other two days had wind blowing straight down the bay one day and then straight up the bay the next day. Talk about a wind shift. Of course I was head to wind both days!

Be safe on the water and have a great time building lasting memories.

Contact Cdr Rich Unis at 703-777-8378 or at skipperunis@gmail.com.

**Lt/C Rich Unis JN**  
NVSPS Commander  
Skipperunis@gmail.com

Fair winds and following seas



## Secretary

Lt/C MaryJane Hinkins, P

Greetings from landlocked Colorado, during prime boating weather we had to travel back home. Discussions had to be made, discussions had to insure. We love boating, we love the water and well the time has come to give up the Colorado house. Nowhere except perhaps the Caribbean do you get sky's so blue and the sun so bright and in the high country far from the city lights where can you see the stars so bright. (Okay you win one, yes Wyoming you can see the stars so bright but the wind blows day and night) So we are here packing up 18 years of life together for a new life on coast or on the boat. The kids are none too happy but alias perhaps we will be back someday. I love it here but love the water love the boat. We hope to do that for a while then come back and enjoy life in the dry, blue, Colorado. Perhaps the kids will win the lottery and be able to visits us. Lol.

For some reason, is it the Marijuana laws, one can only wonder, the real estate market is hot here? After 8 years of a downward trend houses are sought after and folks are in bidding wars so we traded in the oars, we traded in the rocking, we traded in the peaceful calls of the blue herring, and the smell of the water for Colorado for a time for a month or so. We traded them in for brushes and sponges and movers and carpet people so much to do and so little time. What to do with the teddy bears, the pictures the handmade candy bowls, paper pictures for toddlers growing so old. We will miss them once again, but just a phone call, just a text message, for a little rockin on the water. So we hope Virginia or North Carolina will be good to us as good as Colorado has been. Now I must close for a tear has forced my eyes to close.

**Lt/C Mary Jane Hinkins**

NVSPS Secretary  
mjhinkins@msn.com



## *Education Officer*

Lt/C Ed Phillips, AP

Last month, I discussed the advanced grades, specifically the first class which is Seamanship. This month I would like to talk about the first class of the coastal navigation group which is Piloting. So often, we can be lulled in to a false sense of security with the reliable electronic instruments we have today. Similar to a digital watch, we no longer have to do any calculation or thought to what time it is or where we are. Unless... The fateful happens. The battery goes dead in the watch (no, you can't wind it!) or a problem develops in your instruments. If your instruments go blank, the problem is clear – the information is gone. Consider for a few moments that your instruments appear to be operating normally. Your compass is pointing in the right direction, but nothing looks right. You think to yourself, those markers and that dolphin aren't on the West River. Using your skills of familiarity, you realize those southerly breezes blew you north and you are on the South River, not the West River as expected.

In this situation, your skills of familiarity kept you safe. But what if you are in an unfamiliar harbor? In a new location you're exploring for the first time? Will you be able to detect a small insidious error on your electronic equipment that may place you in a dangerous situation? Have you been plotting your Estimated Position (EP) and taking bearings along the way? Do the GPS coordinates and your EP make sense? These are all important considerations. The USPS Piloting Course provides current knowledge on these topics. The Piloting course contains traditional dead reckoning skills, but also applies them to modern GPS techniques.

Have a look at the USPS Piloting Course webpage (<http://www.usps.org/eddept/p/main.htm>) for more details. The USPS Education Department webpage is a great resource for information on each course the USPS offers. Here is the course description from the Piloting webpage, "Piloting is the first course in the sequence of USPS courses on navigation, covering the basics of coastal and inland navigation. This course focuses on navigation as it is done on recreational boats today and embraces GPS as a primary navigation tool while covering enough of traditional techniques so the student will be able to find his/her way even if their GPS fails. The course includes many in-class exercises, developing the student's skills through hands-on practice and learning. Ten classes of two hours each normally are scheduled for presentation of this course. In addition the students have seven days to complete the open book exam. Topics covered include:

- Charts and their interpretation
- Navigation aids and how they point to safe water
- Plotting courses and determining direction and distance
- The mariner's compass and converting between True and Magnetic
- Use of GPS – typical GPS displays and information they provide, setting up waypoints and routes, staying on a GPS route.
- Pre-planning safe courses and entering them into the GPS
- Monitoring progress and determining position by both GPS and traditional techniques such as bearings and dead reckoning"
- The "Seaman's Eye" – simple skills for checking that one is on course."

For those who have taken Piloting before, now would be a good time to consider taking the updated navigation courses for two reasons; 1) to learn more about the modern navigation techniques and equipment that is currently available, 2) to get a refresher on the tried and true traditional methods of dead reckoning. And oh yes, reason #3, to have a good time with your fellow intrepid seafarers. If you are interested in improving your navigation skills considering coming out to one of District 5's navigation contests. Expand your skills and you horizons!

A few people have asked me about Junior Navigator (JN) and (N) Navigator classes. I know there are a few of us out there who need to complete the JN and N courses. We will start with JN in the fall, if you are interested, please let me know. We also looking for instructors for the America's Boating Course-3 (ABC3) and other courses coming up. If you have already taken the Instructor Development Class and would like to get back into teaching, please let me know. Also, if you have an interest in teaching boating topics, maybe even an expertise in a specific area, please let me know that as well. I look forward to seeing each of you at the next general membership meeting on September 10th.

**Lt/C Ed Phillips, AP**

*NVSPS Squadron Education Officer*

*seo@nvsp.org*

## *Do you have a compass on your boat?*

Good boaters should always expect failures—usually at the worst possible time. Wires break, fuses blow, connectors corrode, antennas snap, batteries fail, alternators stop working—the list goes on.

When you lose your electronics at sea, a compass can get you home safely. But with the arrival of affordable, user-friendly electronics, the lowly, but reliable, compass is no longer the first-choice navigational accessory on a recreational vessel.

If you don't have a compass installed in your navigation station, you might want to reconsider. Although it isn't the most expensive navigational instrument, a reliable compass can be counted on when all else fails.

The compass provides the mariner with a quick directional orientation and a fairly accurate course to navigate. The compass allows for quick and accurate readings of range and bearing, and it allows you to determine a course without waiting for an electronic device to reboot or recalculate. Most people can read a compass with little training and should be able to follow a general heading toward a safe harbor.

Just a reminder: A compass does need basic maintenance and should be calibrated with your electronics. It should be installed where it won't be affected by electric or magnetic fields. Try putting your fish knife or a screwdriver next to the compass to see how it affects the reading. Also, create a compass deviation chart on a nice sunny day, so it will be ready when you need it

*G. Jay Nelson*

## *Fresh Water System Odor and Bad Taste?*

It is not uncommon for recreational boaters to declare the freshwater aboard their boats as unfit for consumption and resign to carry bottled water aboard for drinking. This is caused by the water system not being used for an extended period of time which allows bacteria, molds, mildew and fungi to grow in the water tank and plumbing lines. This process is accelerated in dark, damp environments, which is the essence of marine freshwater systems. While these bacteria are not a health threat, the taste and odor they produce can be very unpleasant. The fact is, left unused and untreated, all marine freshwater systems will develop this problem in time.

While there are several commercial products that are designed to clean freshwater systems, they are all generally chlorine-based; the very same unscented chlorine bleach you can buy at any grocery store (5% sodium Hypochlorite solution, e.g., Clorox or Purex). You will want to mix a solution of two ounces of bleach for each gallon of water, for the entire tank. For example, a 60 gallon tank will require 120 ounces of bleach (slightly less than a gallon of bleach).

- Turn your hot water heater breaker off, and make sure your ice maker is turned on.
- Pour the 120 ounces of bleach into the freshwater tank and then fill the tank with fresh water.
- Run the hot and cold water in all sink faucets, showers (including the transom shower) until you can smell the chlorine.
- Leave the freshwater pump on to keep the system pressurized
- Let the solution stand in the system for at least four hours, but not more than 24 hours.
- Open all faucets and showers and completely drain the system
- Refill the freshwater tank with clean fresh water
- Turn the freshwater pump off and clean the intake strainer. Also remove the faucet diffusion screens and clean them (debris will shake loose during this process and clog them).
- Turn the freshwater pump back on and drain the entire tank again.
- Fill the system with fresh water and discard the first two buckets of ice from the ice maker.

If the system was badly contaminated the process above might have to be repeated. If a chlorine taste remains, or there is some residual odor, pour one quart of white vinegar for each five gallons of water into the freshwater tank and fill with fresh water. Run all of the faucets again and allow this solution to sit in the system for one week. Then drain the system and add fresh water again.

To maintain the system you should use the fresh water supply on your boat. This requires the system be replenished frequently, which inhibits bacterial growth. You can also maintain the system using bleach as a disinfectant. For each 20 gallons of water, add  $\frac{1}{4}$  of a teaspoon of bleach to the tank. For example, a 60 gallon tank will require  $2\frac{1}{4}$  teaspoons of bleach for the entire tank of fresh water. This is the same ratio used by the Fairfax County Water Authority for drinking water.

*G. Jay Nelson*



## Northern Virginia Sail and Power Squadron Upcoming Event

### ***A tour of the 81 foot research vessel the Rachel Carson***

In 2008 the University of Maryland Center for Environmental Science (UMCES) christened the research vessel Rachel Carson. Named in honor of the world renowned marine biologist and nature writer, the Rachel Carson is specifically designed to conduct research in the Chesapeake Bay.

In addition to her shallow draft, the Rachel Carson is specifically designed to provide a solid foundation for decades of service to UMCES scientists. She is powered by twin 1,200 horsepower diesel engines paired with jet outdrives that allow her to move at a speedy 24 knots.

A state-of-the-art dynamic positioning system allows the vessel to "hover" motionless over one spot regardless of wind and current. A trio of powerful winches allows scientists to launch and retrieve multiple buoys and sampling devices over the side or stern.

Built-in electronic sensors will continuously measure the Bay's water quality, biology and currents whether underway or on station.

The *Carson* has been used to collect water quality samples; to tow plankton nets; to conduct box coring operations; to deploy a data buoy; to ground truth aircraft deployed instruments and as a platform to teach undergraduate and graduate students estuarine sampling techniques.

All NVSPS members are invited to tour the Rachel Carson docked in Solomons, MD on Friday, 03 October 2014. The free tour will be conducted by Michael Hulme, Director of Marine Operations, Center for Environmental Science, University of Maryland. See <http://www.umces.edu> for more information about the vessel. After the tour, everyone is invited to have lunch together at a Solomons Island restaurant (separate bills).

If you think you might be interested in participating, please email P/C Dick Durgin at [rjdurgin@aol.com](mailto:rjdurgin@aol.com) now so that we can make plans based on the number of potential participants.



### **Join Us for a Fascinating Tour of this Remarkable Vessel**

**Friday, 03 October 2014**

**Additional Details (time, car pools, restaurants, etc.) will be announce in upcoming 'O Tars and Terns**

Contact: P/C Gale Alls      [galeandev@aol.com](mailto:galeandev@aol.com)

P/C Dick Durgin      [rjdurgin@aol.com](mailto:rjdurgin@aol.com)

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### ***Did you know... Interesting facts about sharks***

Sharks bite roughly 70 people each year worldwide, with perhaps 6-10 fatalities. Although shark bites get a lot of attention, this is far less than the number of people injured each year by elephants, bees, crocodiles, lightning or many other natural dangers. On the other side of the ledger, we kill somewhere between 20-100 million sharks every year through fishing activities.

Of the more than 500 or so shark species, about 80% grow to less than 1.6 m and are unable to hurt people or rarely encounter people. Only 32 species have been documented in biting humans, and an additional 36 species are considered potentially dangerous.

Almost any shark 1.8 m or longer is a potential danger, but three species have been identified repeatedly in fatal bites: great whites, tigers, and bull sharks. All three are found worldwide, reach large sizes and eat large prey such as marine mammals or sea turtles. 80% of all shark bites probably occur in the tropics and subtropics, where other shark species dominate and great white sharks are relatively rare.

## *NVSPS Competes in Practice Navigation Contest*

On Saturday July 12th, I had the privilege of participating in the practice navigation contest hosted by the Dundalk Squadron. The contest was based out of Pleasure Cove Marina on Bodkin Creek in Pasadena, MD. Prior to the contest, a briefing was given by the Dundalk Squadron Cdr John Hall on how the navigation contest was to be conducted. The briefing was very helpful to me since I never participated in a navigation contest before. I have always been interested in participating, but shied away since I had no experience. The closest I came was many years ago when P/C Al Sheetz invited me to participate on his boat. I had a pesky conflict (or probably lack of confidence) and I wasn't able to go. That was the closest I came to participating in a navigation contest - until now. I had heard talk of the practice contest and saw write ups in the Mark 5. It piqued my interest, so off I went wondering what the day would have in store for me.

When I arrived at Pleasure Cove Marina I saw some familiar faces and some new ones and I was welcomed as always. There were thirteen squadrons represented in the navigation contest. After the briefing, the contest orders were distributed to each boat skipper. There were five powerboats and one sailboat competing. I was assigned as observer on "Jenny Lynn Too" skippered and navigated by Steve Dalgarno of the Dundalk Squadron, the helmsman was Al Ponzio of the Annapolis Squadron. Also on board were Steve's wife Jennifer (Photographer Extraordinaire!) and Maryanne Fletcher Lacey. As I boarded Jenny Lynn Too, these were unfamiliar folks to me, but no longer. I was welcomed with awesome hospitality.

I had much to learn that day even with a briefing. Steve and Al's instructions were invaluable throughout the contest. When I was assigned as observer on Jenny Lynn Too, I told Walt Neese (one of the contest committee members), "but I have never done this before". Walt reassuring said, "No problem, all you have to do is write something down". And that I did; I simply kept track of significant times along the route. At the end of the day, I saw that was truly the best assignment for me to have. I wasn't responsible for any calculations, but only to watch and keep track of what was going on. Steve and Al always answered my questions.

I know you are asking, how is this contest run? Well, I still have much to learn, but this is what I know and have literally observed. The contest orders are distributed to each skipper. The contest orders contain the route to be plotted. In the practice contest, there were six legs to be run. The fifth leg was run by compass, clock and tachometer only; the GPS was covered up. Depth sounders were allowed for safety purposes. The sixth leg (the longest one) was not given and also run as a dead reckoning leg. It had to be plotted along the way toward the finish line. One course correction was permitted when the finish line was in sight. Each contest order contained a different route to maintain the separation of each boat as they are running their routes.

The winner of the contest is the boat who comes in the closest to the predicted time of crossing the finish line. After the contest committee reviewed each boat's calculations, Jenny Lynn Too came in third. I can't say that I had any contribution toward the win, but it is great to see how a winning team works. While the contest committee was evaluating the paperwork of each boat, I socialized with crews on others boats. I participated in the dockside cocktail hour and awards presentation, and then I shared dinner with all the participants. A great day was had by all! The Dundalk squadron has posted pictures of the contest and other activities of the day on their Facebook page.

The next navigation contest will be held on Saturday August 2 during the D/5 summer council. I am planning on competing again. Some NVSPS members have told me that navigation contests were very popular in years past. Members used to compete for the honor of representing the NVSPS at district competitions. Interest in navigation contests seems to have declined with the rise of GPS navigation techniques. Can navigation contests become popular again? Only time will tell. Competitions are still held at the district level, they are worth exploring.

If you would like to learn more about navigation contests, the USPS has a guide entitled "Predicted Log Guide ([http://www.usps.org/e\\_stuff/supp/pred\\_log.html](http://www.usps.org/e_stuff/supp/pred_log.html)) available from the USPS bookstore. Walt Neese was also generous to provide me a copy of the Power-Point presentation used in the practice navigation contest briefing. I will share it with anyone who is genuinely interested in predictive log contests.

Fair winds and smooth sailing!

**Lt/C Ed Phillips, AP, NVSPS, SEO**



Observer Ed Phillips follows the navigation contest course while skipper Steve Dalgarno check the progress along the contest course of Jenny Lynn Too.



Victory! 3rd place team on Jenny Lynn Too, (L to R) Jennifer Dalgarno, Marianne Flechter Lacey, Helmsman Al Ponzio, (R) Observer Ed Phillips, Skipper and Navigator Steve Dalgarno.

## 25 Merit Marks = Free USPS Membership

USPS recognizes the contributions of its members' time and talents and says "thank you" by awarding each one merit mark annually. Members who have received 25 merit marks do not have to pay local, district or national membership dues.

Each fall squadron leaders submit the names of those members who have performed substantial service during the calendar year to the Merit Mark Chair who compiles a report to USPS. A national officer reviews and approves the recommendations. For more information on merit marks, consult your USPS Operations Manual.

### Officers and Committee Chairs:

Please submit the names of members who have performed substantial service to NVSPS during calendar year 2014 to Merit Mark Chair Jean Durgin at [rjdurgin@aol.com](mailto:rjdurgin@aol.com) by 15 October 2014. Include a brief but specific description of the service performed (e.g., number of class sessions taught, vessel inspections performed, newsletter articles written, etc.).

### All Members:

Our goal is recognize everyone's contributions to NVSPS. Feel free to submit a brief description of your service directly to Jean Durgin ([rjdurgin@aol.com](mailto:rjdurgin@aol.com)) by 15 October 2014.



## Handy Boating Formulas

- **Hull speed (knots)** =  $1.34 \times \text{square root of waterline length (in feet)}$
- **Distance to Horizon (nm)** =  $1.17 \times \text{square root of height of eye (in feet above sea level)}$  deck at about 5' above water on Creative Touch, assume 5' eye (10' total height of eye), then 3.7 nm to horizon
- **Range a light can be seen in distance** (combination of two distances to horizon)  
=  $(1.17 \times \text{square root of height of eye}) + (1.17 \times \text{square root of height of light})$   
compare this distance with nominal luminescence range of light
- **Tide rises or falls these fractions of its range during these hours:**

1/12	-	first hour	3/12	-	4th hour
2/12	-	2nd hour	2/12	-	5th hour
3/12	-	3rd hour	1/12	-	6th hour
- **Tide will have risen or fallen these fractions of its range after these successive hours:**

1/12	-	after 1st hour	9/12 (3/4)	-	after 4th hour
3/12 (1/4)	-	after 2nd hour	11/12	-	after 5th hour
6/12 (1/2)	-	after 3rd hour	12/12	-	after 6th hour
- **Change in height of Tide: =  $h/2 \times (1 - \cos(180 \times \text{time ratio}))$**   
h is total change in tide hgt between high and low. The time ratio is time elapsed from the previous tide divided by the time difference between the two tides. (Similar to rule of 12 above)
- **Flow rate of leak in boat:  $Q = 3,600 (A) (H)$**   
Q = gallons per minute of water coming in  
A = area of hole in square feet  
H = height of water over hole in feet, to bottom of the opening
- **Patch or cover thickness to withstand water pressure (patch over hole):**  
T = square root of:  $\frac{48 (H) (L^2)}{1000}$   
T = thickness of wood or plywood patch in inches  
H = height of water above bottom of hole, in feet  
L = length of patch, longest distance between supports,



*Northern Virginia Sail and Power Squadron  
Upcoming Event*

## **NVSPS 2014 Wounded Warrior Cruise**

# *Join us for an day on the Patuxent River and Chesapeake Bay*

**1000 to 1730 - 13 September 2014**

Patuxent Naval Air Station, West Basin Marina

In recognition of the service and sacrifice made by our wounded warriors, the Northern Virginia Sail and Power Squadron extends an invitation to our sixth annual Wounded Warrior Cruise 2014 on Saturday 13 September 2014 from the Patuxent Naval Air Station West Basin Marina Lexington Park, Maryland.



Guests can choose to cruise on one of 10 sail or power boats from 27 to 45 feet. Each boat has an experienced captain and first mate to ensure the safety of our guests, and all vessels have passed US Coast Guard Vessel Safety Examinations.

The day will consist of a five hour boat ride on the Patuxent River and Chesapeake Bay. The captains will select their individual courses on the river and the bay based upon the interests of the guests. Guests and crews will be provided a box lunch consisting of assorted cold cut sandwiches (turkey, ham or vegetarian) on Kaiser Rolls, potato chips, whole fruit, brownie, and plenty of refreshments.

*Come join us for a wonderful day  
on the water and picnic afterward.*



After the cruise we will host a barbeque at the West Basin Marina Pavilion picnic grounds. The barbeque includes hot dogs, hamburgers, chicken breasts in a barbeque sauce, baked beans, potato salad, coleslaw, assorted cookies and beverages.

Bus transportation arranged to and from the Walter Reed National Military Medical Center (WRNMMC) in Maryland and the Fort Belvoir Warrior Transition Unit (WTU) in Virginia to the West Basin Marina. Busses will leave the WRNMMC and WTU facilities in time to arrive at NAS West Basin Marina by 1000, and pick up guests for the return trip at 1730. Guests must be ambulatory. You are welcome to bring any friends and family members over ten years old.

Please make donations to:

P/C Francis Williamson at:  
7710 Bertito Lane, Springfield, VA 22153  
301-775-5120 (M)      willyjhu@verizon.net