The Newsletter of the Northern Virginia Sail and Power Squadron

# of TARS & TERNS

**Volume XLVIII Number 6** **July/August 2015**

## Mark Your Calendar

**NVSPS Meetings and Events**

### July 2015

**08** **General Membership Meeting**
1900 - 2100: BoatUS Headquarters; 880 South Pickett Street, Alexandria, VA

**22** **Executive Committee Meeting**
1930 - 2100: 4031 University Drive #200 Fairfax, VA 22030

### August 2015

**No General Membership Meeting**

### September 2015

**09** **NVSPS Wounded Warrior Cruise**
1030—1730: Patuxent Naval Air Station, West Basin Marina

**19** **General Membership Meeting**
1900 - 2100: BoatUS Headquarters; 880 South Pickett Street, Alexandria, VA

Live Musical Entertainment from Ms. Janie Meneely

**23** **Executive Committee Meeting**
1930 - 2100: 4031 University Drive #200 Fairfax, VA 22030

### October 2015

**10** **Oktoberfest—General Membership Meeting**
1100—1600 Fairfax Yacht Club
10721 Old Colchester Rd, Lorton, VA 22079

**21** **Executive Committee Meeting**
1930 - 2100: 4031 University Drive #200

A detailed Squadron calendar including all meetings and educational courses can be found on our web site www.nvsps.org

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

## Commander Sends….

CDR Rich Unis, JN

Once again the Squadron is sponsoring a Wounded Warrior Cruise (WWC) from Patuxent River Naval Air Station. This year's event will be held on September 19th. This is our big civic event of the year and I hope everyone in the Squadron will participate in some way if possible, either at the event or through donations and support. Our WWC Coordinator again this year is P/C Francis Williamson, AP. I would like to take this opportunity to thank Francis on behalf of the Squadron for his expert planning and coordination efforts to date. He has done a tremendous job in laying the groundwork for a successful event. Please support Francis in his efforts to make sure the event is rewarding for the deserving Wounded Warriors.

*Continued on Page 3*

## In this Issue:



## Did you Know?

**The State of Virginia provides a refund fuel sales tax.**

All recreational boaters can apply for a $0.175 per-gallon refund of the state sales tax on highway gasoline, and a $0.16 per-gallon refund on state tax on highway diesel fuel. To qualify, one must purchase at least 5 gallons of fuel per purchase. The refund is available to everyone who applies, not just VA residents.

Refund application forms can be found at any Department of Motor Vehicle (DMV) office in Virginia or online at www.dmv.state.va.us/webdoc/forms/index.asp. For more information, call (804) 367-1831 or (800) 823-8357.

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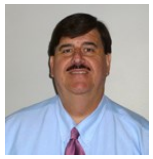

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| | |
|---|---|
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| P/C Keith Segerson, P | 703 542-8561 |
| P/Lt/C Cathleen Sheffield, AP | 703 370-4331 |
| P/C Francis Williamson, AP | 703 440-9074 |

### *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.

## Interesting Facts about the US Coast Guard…

The Coast Guard was established in 1790 as part of the Treasury Department. In 1871, the government formed the U.S. Life-Saving Service, which was operated by the Revenue Cutter Service. In 1878, the Life-Saving Service became an independent bureau of the Department of the Treasury. The Revenue Cutter and Life-Saving services were finally combined into what we now know as the United States Coast Guard in 1915. In 1967, they were transferred to the Department of Transportation. When the Homeland Security Department was established in 2002, the Coast Guard was an integral part of the original organization.

The US Coast Guard Academy's square rigged sailing ship CSC Eagle is a former German training ship originally commissioned as the "Horst Wessel." She was taken as a war prize from the Germans after World War II and commissioned into the Coast Guard on May 15, 1946. She has been training future Coast Guard officers ever since.

The Naval Academy is on the Severn river in Maryland, the Military Academy is on the Hudson River in New York, and the US Coast Guard Academy is located on the Thames river in Connecticut.


# Of Tars & Terns

The official publication of the
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www.nvsps.org

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

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## Commander Sends….

…. Continued from Page 1

CDR Rich Unis, JN

He is currently collecting money donations from Squadron members and businesses/organizations. As a reminder, your donations are tax deductible.

Hopefully by now if you have a boat (or even if you don't), you've found your way out on the water on your boat or someone else's boat. I just returned from a 3-day weekend of sailing. I had an opportunity to explore Reedville, VA and the Great Wicomico River by boat. The Great Wicomico River is just south of the mouth of the Potomac River. Other than the stinky fish plant there, it was a great time. We sailed up from Deltaville and docked Windspiration at the Reedville Marina and Crazy Crab Restaurant (they are one in the same) on Cockrell Creek (the first Creek to port as you enter the Great Wicomico River). The people were friendly and the food was good. Aside from an overnight thunderstorm rolling through, the weather was good. Our Simrad chart plotter's navigation screen kept locking up so I used my Garmin handheld GPS unit and my iPhone with the Navionics Boating app. I was simply amazed at how well the Navionics app worked. It was easy to set up the route and then follow it. The screen is very straightforward and easy to read. I'm looking forward to my next adventure to Yorktown and Cape Charles. There are so many great places to go on the Chesapeake Bay. Maybe I'll try out my NV Charts app and compare them. If you have a favorite app that you've used on the water, I encourage you to write an article and describe how it worked.

Send your oT&T articles to Jay Nelson. Articles are due by the 15th of the month for publication the following month. Please submit anything you think would be of interest to the Squadron. Mark your calendars - our next general membership meeting is on August 19th at HQ BoatUS. As a reminder, we will not hold a general membership meeting in August. Enjoy your summer!

Come get involved in the Squadron and share your boating knowledge!

***Cmdr. Rich Unis JN***
*NVSPS CDR*
*Skipperunis@gmail.com*

Fair winds and following seas

## Secretary

Lt/C MaryJane Hinkins

Here it is July already! Have you been boating yet! I hope so. With the new house we have not done as much as we would like. This has been a very rainy year, but we sure have been enjoying the water. We Had a great potluck/picnic house warming affair at our new place on the Creek. It was a bad traffic ay but many came and we thank them all. Next issue I will have article about the day. Thanks all who joined us!

In September NVSPS will be having our International Pot luck. We usually have this at Fairfax Yacht Club, but if you have a club house, marina, other party location, we would be open to going to new places. Same is true for our Winter Party. Your Bridge would love to hear from you with new ideas and new locations. Most of all do not be shy if you would know of a new location, we are open to all possibilities.

We are also planning on changing the venue for our Winter party and more on that will be coming. It should be more exciting and sounds quite YUMMY!

***Lt/C MaryJane Hinkins***
*NVSPS Secretary*
*mjhinkins@msn.com*

## Guest Speaker

**09 Sep 15**
**General Membership Meeting**

***COME FOR AN EVENING OF LIVE MUSICAL ENTERTAINMENT***

Janie Meneely grew up sailing on the Bay and has spent most of her adult life chasing down stories about people, places and history of her "big backyard" She's managed over the years to encrypt many of those stories in songs and performed on stages around the country, including Mystic Seaport's prestigious Sea Music Festival and the Chicago Maritime Festival. When she's not busy editing Chesapeake Bay Magazine, she's working on new musical material and sailing her little Tartan 27

## Past Commander

## NVSPS 2015 Wounded Warrior Cruise

Saturday, 19 September 2015 is the date of our annual Wounded Warrior Cruise. However, on that same date the Thunderbirds, the Air Force Flight Demonstration Squadron, will be performing at Joint Base Andrews (formerly Andrews Air Force Base) which is located just outside I-95/495 (the Beltway) between Maryland Rte. 4 (Pennsylvania Ave.) and Maryland Rte. 5 (Branch Ave.) Therefore, one would anticipate that traffic in that area will be very heavy, especially before and after the performance, so one would do well to consider alternate routes to Lexington Park and Naval Air Station Patuxent River.

For those coming from Northern Virginia, a good alternate is to take MD Route 210 (Indian Head Highway) south from the Beltway to MD Route 228, which will take you to Waldorf. When you cross US Route 301 in Waldorf, 228 becomes MD Route 5. After 16 to 18 miles, Rte. 5 bears off to the right. Continue directly ahead on Rte. 235 to Lexington Park. This route is four lanes all the way.

For those coming from Prince William County and further south, another alternative is to take VA Route. 3 east from Fredericksburg to US Rte. 301 and then north just a few miles beyond the Harry Nice (Rte. 301) Bridge. The toll on the Route 301 bridge is only collected from southbound traffic. Turn right on MD Rte. 234. Follow MD Rte. 234 and MD Rte. 5 to Great Mills. Turn left on MD Rte. 246 which will take you to the air station. This route does involve some two lane roads but I have traveled it many times without difficulty.

Respectfully submitted,
P/C Alan R. Hart, AP

### Virginia Safety Stats

**January to July**

| 2014 | | 2015 |
|---|---|---|
| 37 | **Incidents** | 45 |
| 29 | **Injuries** | 18 |
| 8 | **Fatalities** | 5 |

## US Power Squadrons® Seminars

Seminars are a great way to learn about a specific topic concentrated into a manageable, two-hour commitment. These focused sessions help you round out your understanding and knowledge of a variety of boating topics.

**Boat Handling**

| | | |
|---|---|---|
| Boat Handling Under Power | Advanced Powerboat Handling | |
| Anchoring | Sail Trim and Rig Tuning | Boating on Rivers. Locks, and Lakes |

**Navigation**

| | | |
|---|---|---|
| Using GPS | How to Use a Chart | Basic Coastal Navigation |
| Mariner's Compass | Mastering the Rules of the Road | Marine Radar |

**Facing the Environment**

| | | |
|---|---|---|
| Hurricanes and Boats | Tides and Currents | Basic Weather and Forecasting |

**Safety**

| | | |
|---|---|---|
| Emergencies on Board | Fuel and Boating | Partner in Command |
| Man Overboard | Using VHF & VHF/DSC Marine Radio | |

**Techniques**

| | | |
|---|---|---|
| Paddle Smart | Trailering Your Boat | Knots, Bends, and Hitches |

**Cruising**

Crossing Borders

**Hands On Skills**

Practical on the Water Training

# U.S. boating deaths second-lowest on record

610 people died in recreational boating accidents in 2014, according to data released Wednesday by the U.S. Coast Guard. This marks the second lowest number of yearly boating fatalities on record.

The lowest number of yearly boating fatalities was 560 in 2013. The greatest number of boating deaths was recorded in 1973 when there were 1,754 fatalities.

“There are three basic things a boater can do to be safer on the water,” said Eleanor Mariani, president of the National Association of State Boating Law Administrators.

“First, take a boating safety course,” Mariani said. Where instruction was known, only 12 percent of deaths occurred on vessels where the operator had earned a nationally approved boating safety education certificate.

“Second, wear a life jacket,” she said. Where cause of death was known, 78 percent of fatal boating accident victims had drowned. Of those drowning victims with reported life jacket usage, 84 percent were not wearing a life jacket.

“Third, don’t consume alcohol before or while boating. When you add alcohol to boating, your senses and judgment can be seriously affected. Your reflexes, balance, coordination and alertness will deteriorate, along with your ability to deal with speed, other boats and threatening weather. You are setting yourself up for a boating accident,” Mariani said. Alcohol use is the leading known contributing factor in fatal boating accidents; where the primary cause was known, it was listed as the leading factor in nearly one-fourth of deaths.

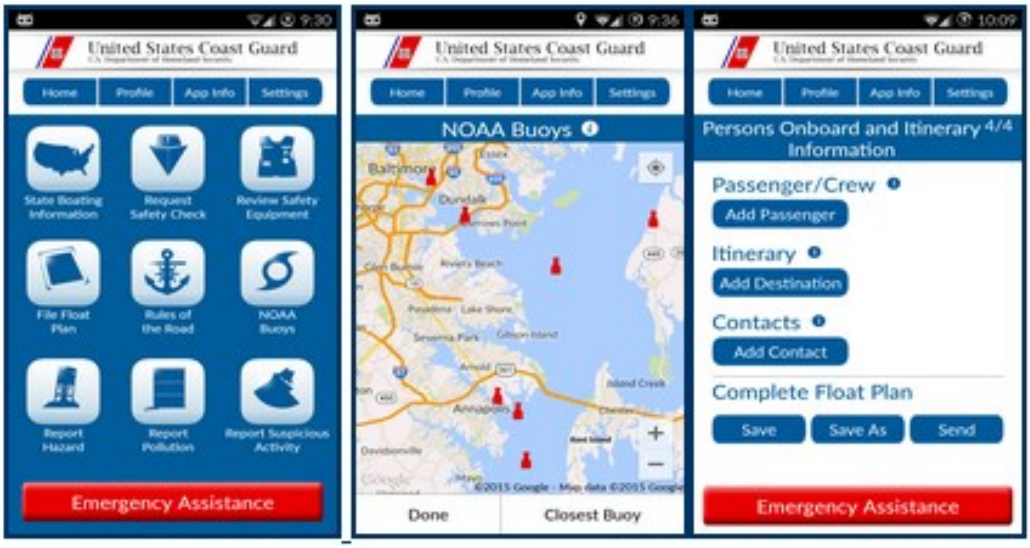
*National Association of State Boating Law Administrators*

# The U.S. Coast Guard released its first boating safety app

As the nation's recreational boating safety coordinator, the Coast Guard works to minimize loss of life, personal injury, property damage, and environmental harm. Our boating safety program involves public education programs, regulation of boat design and construction, approval of boating safety equipment, and vessel safety checks for compliance with federal and state safety requirements. The Coast Guard Mobile App supports these missions by providing the essential services and information most commonly requested by boaters.

Features of the app include: state boating information; a safety equipment checklist; free boating safety check requests; navigation rules; float plans; and calling features to report pollution or suspicious activity. When location services are enabled, users can receive the latest weather reports from the closest National Oceanic and Atmospheric Administration weather buoys as well as report the location of a hazard on the water.

The app also features an Emergency Assistance button which, with locations services enabled, will call the closest Coast Guard command center.




The Boating Safety Mobile app was not designed to replace a boater's marine VHF radio, which the Coast Guard strongly recommends all boaters have aboard their vessels. The app was mainly designed to provide additional boating safety resources for mobile device users.

The app is self-contained, so personal information is stored on the phone and is not sent to the Coast Guard unless the user chooses to send it. The Coast Guard does not track a user's location, and the app does not track a user's location unless the app is being used.

*See related article on page 9*

*United States Coast Guard press release*

## Boaters Beware – E15 Fuels are coming

Those who have spent any time around me know that for a variety of reasons I am a vocal opponent of ethanol-blended fuels. I will acknowledge at the onset that this article is likely reflect a bit of my bias, but my intent is to be as objective as possible about the introduction of E15 gasoline to the general marketplace and its potential hazards to boaters.

For a decade now E10 fuels (a blend of 90% gasoline and 10% ethanol) have been mandated by the EPA for general use. Ethanol is basically a highly refined grain alcohol (approximately 200-proof) that is added to gasoline to increase gasoline volume (i.e., to reduce dependency on foreign oil sources) and act as an oxygenator to help reduce hydrocarbon emissions that cause air pollution. However, without government subsidies, a gallon of ethanol costs more to produce than a gallon of gasoline, and the use of corn to make ethanol has a detrimental impact on food prices. As a fuel, ethanol-blended fuels produce less energy per gallon than gasoline, which reduces engine performance (miles per gallon) resulting in higher fuel consumption.

If the disadvantages stopped there, I would probably be more passive about ethanol-blended fuels. But the additional cost to the public from government ethanol subsidies and increased fuel consumption does not address the billions of dollars in repair/replacement costs to engines and fuel systems not designed for ethanol-blended fuels. Although E10 gasolines have caused relatively minor problems in automobiles and light trucks, its use as marine fuel has caused quite a few problems for boat owners. There are several reasons for this, primarily, cars have a closed fuel system (i.e., non-vented) and carry smaller quantities of fuel which is consumed quickly. Boat fuel systems are vented and fuel is stored in larger quantities for much longer periods of time.

Groups like the National Marine Manufacturers Association and Outdoor Power Equipment Institute have issued strong warnings to consumers to pay attention to their fuels or risk severe engine damage. They recommend the use of a fuel stabilizer if the engine will sit for more than a few weeks, specifically to reduce the ethanol/water separation and potential gumming problems.

Ethanol is uniformly dissolved in the gasoline in the manufacturing process and, assuming the fuel distribution system is not contaminated, E10 fuel presents no problems for marine four-stroke engines. Any moisture in the fuel in concentrations of less than 0.5% remains suspended in the fuel mix and is simply burned in the engine with the fuel. But the hygroscopic (i.e., readily taking up and retaining moisture) qualities of ethanol attract and attach to any water in the tank. When stored over a period of time, temperature changes caused by hot days and cool evenings allow condensation to build in vented fuel tanks. Gasoline expands when warm and contracts when cold. This action forces air in and out of the tank through the vent over the course of the day. Warm summertime air suspends a lot of moisture that is drawn into the tank, and as it cools in the evening condensation forms on the walls of the tank as moisture is expressed into the fuel. An almost-empty tank leaves more space on tank walls for condensation to occur, and lower gasoline levels in the tank means there will be less ethanol to absorb the condensation. Keep in mind that if the delivery tanks (i.e., the fueling station, marina, etc.) are above ground, this same action occurs before the fuel is even pumped into your boat. It is for this reason alone that I recommend keeping your tanks full as much as possible, including over the winter.

When the water in ethanol-blended fuel exceeds 0.5% phase separation occurs and the various components of the fuel are no longer a homogeneous mixture. At this point the water and ethanol drop out of the mixture and settle into the bottom of the tank, forming a highly corrosive ethanol/water mixture that will remain in the tank even after fresh fuel is added. The gasoline that remains on top of the ethanol/water mix will also have a significant reduction in octane due to this separation. When the fuel pick-up at the bottom of the tank picks up this watery/ethanol mix and passes it through the fuel system to the engine, water separators and fuel filters along the way become saturated causing the engine to run poorly or not at all.

There is no practical additive that can prevent phase separation from occurring. The only practical solution is to keep water from accumulating in the tank. And there are no additives or techniques to restore fuel once it has separated. The only way to remedy the problem is to completely drain the tank. Even on modest boats this in an expensive process as the contaminated fuel must be removed and disposed of in accordance with EPA regulations.

Just leaving ethanol-blended fuel sitting in the tank for more than 90 days presents problems. The fuel can develop sticky brown goo that gums up fuel systems. Why this occurs is a matter of debate, but it is believed this goo is caused by water mixing with one or more of the 108 approved additives that can be used in gasoline. These additives vary among suppliers, so one solution is to change to a different brand of gasoline. Another is to use carburetor cleaner, which has sometimes remedied the problem.

Ethanol is a corrosive solvent that loosens the varnish, sludge and dirt that has built up in the bottom of the tank and in fuel lines over the years. This results in varnish, dirt, rust and other particles breaking loose and becoming suspended in the fuel, which clogs fuel filters and injectors. Worse, ethanol tends to degrade the rubber and plastic parts in fuel systems that were never designed to withstand ethanol-bearing fuel. This can damage fuel pump diaphragms, fuel seals and fittings, and cause potentially hazardous fuel leaks.

*Continued on Page 8…*

## NVSPS 2015 Wounded Warrior Cruise

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

**1000 to 1730 - 19 September 2015**

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 is extending an invitation to our seventh annual Wounded Warrior Cruise on Saturday 19 September 2015 from the Patuxent Naval Air Station West Basin Marina, Lexington Park, Maryland.

Guests can choose to ride on one of 10 sail or powerboats from 27 to 50 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. Each guest will be provided a box lunch to enjoy aboard the boat consisting of assorted cold cut sandwiches (turkey, ham or vegetarian) on Kaiser Rolls, potato chips, whole fruit, brownie, and plenty of refreshments.

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

Bus transportation is arranged to and from the Walter Reed National Military Medical Center (WRNMMC) in Maryland and the Fort Belvoir Warrior Transition Battalion (WTB) 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.

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

*Guidelines: Wear wx suitable clothing, hat, sunglasses, sun tan lotion and rubber soled shoes/sandals.*

## E15 Gasoline *(Continued from Page 6)*

Highly tuned two-stroke engines run leaner (and consequently hotter) on the lower BTU per gallon gasoline/ethanol mix, potentially leading to piston and valve damage and scuffed cylinder walls.

Many fiberglass fuel tanks in older boats are made with orthopthalic resin that dissolves in ethanol blended gasoline, resulting in a sludge build up can cause significant performance issues that can ultimately ruin an engine.

In short, ethanol in boat fuel is a bad idea. Having said that, even I will admit that E10 fuel today is not the malevolent foe I initially envisioned. For the first several years ethanol caused very significant problems for boaters as we went through the transition to E10 fuels. Older fuel systems went through a difficult cleaning-out and upgrading period, and older fiberglass fuel tanks had to be replaced at significant expense to their owners. But, except for phase separation problems, you do not hear of these issues being prevalent today. Ironically, the marine industry may have exacerbated the transition period as most marinas desperately tried to provide non-blended fuel to their customers; to this day, many marinas still provide ethanol-free fuels. But ethanol-blended fuels are predominant throughout the country today and many marinas have switched to E10 gasolines. In addition, over the past decade marine fuel systems and engines have been designed/modified to withstand the effects of ethanol to a moderate degree. According to Mercury Marine, E10 fuel may actually be a superior marine fuel, as it tends to keep low levels of water moving through the fuel system, keeping the system "dry". However, there is a mindset that has yet to be fully embraced, especially with long-time boaters, that all fuels should be treated with a stabilizer if they are not going to be used within a few weeks.

So if we have learned to live with E10 gasoline, what is the issue? The EPA has proposed an increase in the percentage of ethanol in gasoline from 10% to up to 15% (E15). The National Marine Manufacturer's Association, virtually every boat engine manufacture and many boating service organizations (such as BoatUS) have all expressed significant concerns with the introduction of E15 gasoline to the marine industry. These organizations and manufactures are unanimous in their position that an increase in the percentage of ethanol blended in gasoline could prove to be far more damaging to boats than E10 for both new and old boats. Moreover, the use of E15 voids all current engine manufacturers' warranties. Mercury Marine's position on E15 is: "Fuel containing higher proportions of ethanol is not compatible with many fuel system and engine components and, if mistakenly used, will cause irreversible damage to these components that will lead to engine failure and potential safety risks." The bottom line is that E15 gasoline is not simply a slight expansion of issues we have already addressed with E10 gasoline; the difference between 10% and 15% ethanol in gasoline is very significant, and has the potential to cause substantial damage to your boat.

The EPA ruled in early 2010 that if E15 were introduced into gasoline the sale of it would be "limited to on-road vehicles" and only apply to vehicles 2007 and newer, but the marine industry is concerned boats are still at risk. While E15 may not be offered at your local fuel dock, at least initially, the vast majority of trailered boats and fuel for two-stroke engines is purchased on land at a standard gasoline stations. Also, the marketing of E15 as a lower cost fuel may be attractive boat owners that are not informed about the potential impact on their boat engine.

To address the issue of vehicles older than 2007, the EPA is considering fuel delivery systems at gas stations that dispense both E10 and E15, or have blender pumps that dispense mid-level ethanol fuels for Flex-Fuel automobiles. This is all still being resolved, and how and when E15 will be offered for sale, or if it will ever be sold in your local marina, is still a matter of debate. However, boaters need to be aware of the presence of E15 gasoline and the potential risks it represents to your engine and fuel systems.

**To keep your engine and fuel system safe:**

- Do not put any fuel containing more than 10% ethanol (E10) in your boat's fuel tank or outboard motor as it could cause extensive engine and fuel system damage.
- Check the pump to be sure that it is dispensing E10 (the pump should be labeled, but if not, ask). Some gas pumps at local gas stations may only dispense E15 fuel because it is likely to be less expensive
- Don not let ethanol gasoline sit in fuel tanks. Use fuel within 90 days and refuel often to prevent problems.
- Keep up with maintenance. Change fuel filters and maintain a clean carburetor/injectors to limit sludge build-up caused by ethanol in your boat engine.
- Address issues quickly. When performance problems persist consider taking the proactive measure of draining a fuel tank and refueling. Such action may save you from bigger issues like a destroyed boat engine.
- Choose ethanol-free fuel. You may have options for avoiding ethanol gasoline altogether. There are many marinas that now offer ethanol-free fuel or fuel with additives that may reduce the impact of ethanol in gasoline.
- Fuel your boat at marinas. Don't risk fueling your boat with a higher level of ethanol if E15 becomes available at gasoline stations on land. Fueling your boat at a marina will be safer because E15 will not be approved for sale at a marina.

*G. Jay Nelson*

# *Why the US Coast Guard has a new boating safety app*

By Lisa Suhay, Correspondent

The father of a murdered US Coast Guard auxiliarist is honoring his son by funding the Coast Guard's first-ever public boater safety and emergency call app.

The Coast Guard is well known for its rescues, but this is the first time the organization has attempted to navigate virtual waters and create a community-based app for preventive boater safety.

"This is still kind of the wild west for us as we navigate personal privacy protections and app development," says Lt. Anastacia Visneski, who developed the app, says in an interview. "It's a very costly and time consuming undertaking for us. Fortunately we had Mr. Luis Romero funding this project."

Lieutenant Visnesk explains that the story behind the app's origin is a sad one.

"Mr. Louis Romero out of Puerto Rico, drove this app. His son was an auxiliarist (Julian Romero, 20) who died and in order to honor his memory he reached out to the Coast Guard to create this app," says Visneski.

Julian Romero had completed a year at the Massachusetts Maritime Academy with the hope of one day becoming an active duty Coast Guardsman,

However, homesick for his native Puerto Rico, Mr. Romero transferred to study at InterAmerican University, and planned to join the active duty Coast Guard while trying to become a lawyer.

On April 18, 2011, the family celebrated their son's 20th birthday at their home in the Old San Juan area of Puerto Rico. Afterward he and his girlfriend went for a walk and were robbed of his cellphone at knifepoint. He died of a punctured lung while attempting to defend his girlfriend from assault during the robbery, according to a USCG release.

"Mr. Romero then developed the app "Basta ya" – Spanish for 'Stop it,'" Visneski explains.

The app allows civilians to report crime. "Since its release, the app has been downloaded more than 47,000 times and has been used to send 6,800 tips, including anonymously," the release states.

"Because he wanted to take it a step further because his son had been so passionate about the Coast Guard and our mission he reached out to us and asked about building off the Basta Ya base focusing on boating safety because his son was in auxiliary and did a lot of boating safety work," Visneski says.

"In the Coast Guard, Julian found a great family," said Luis. "That same family was very good to us. When our son died they came to our help, and we came together to get through it as a family."

The free app was released during Safe Boating Week (May 16-22) and quickly rose to the top 10 safety downloads on the Google Play website, with over 22,000 downloads, according to Visneski.

While there are other boating apps, this new USCG app takes a Swiss-Army knife approach, including a variety of individual features found on other apps, including Float Plan sharing, NOAA buoy weather data, and boat safety gear.

The USCG mobile app users can also become a part of the community by reporting: a hazard, pollution or suspicious activity and e-mail in images to the USCG and other reporting agencies.

"We've had some amazing success with the reporting feature, particularly hazard reporting," Visneski says. "In one case a person saw a submerged vessel that was blocking their way and sent the report and they sent in a picture, their latitude, longitude of where they were and a photo. That kind of reporting is very valuable. For our teams going out that's awesome."

App users are also able to File a float plan, a habit the USCG is hoping this app will encourage more boaters and fishermen to get into the habit of doing. A float plan details the planned route with ETA, describes the boat, gives a passenger list, and a checklist of what safety gear, food and water are aboard. These details assist the Coast Guard in risk assessment and location of a boater in trouble.

The app then gives the user the option of sending the plan, not to the Coast Guard, but to trusted friends or relatives who will then have all the information necessary to help the USCG locate those in danger should the situation arise.

The app also allows boaters to find the latest safety regulations, request a vessel safety check, check safety equipment, learn Navigation Rules, Find the nearest NOAA buoy and request emergency assistance which is aided by the user's phone GPS tracking system, much like an EPIRB.

The app is available in iOS in the iTunes and for Android via the Google Play Store as a free download.

## Navigation Questions? Call the NAVCEN !

Northern Virginia Sail & Power Squadron members toured the U.S. Coast Guard's Navigation Center (NAVCEN), the nation's premier civil-focused maritime information center in Alexandria, VA. They were impressed with its missions which include the Global Positioning System (GPS), the Nationwide Differential GPS (NDGPS), the Nationwide Automatic Identification System (NAIS) and much more. Through its web site (www.navcen.uscg.gov), all boaters can easily find up-to-date navigational information, U.S. Light Lists and Local Notice to Mariners.

The Navigation Center is a valuable resource for squadron members. It will answer any maritime-related inquiries and invites all GPS users to report disruptions, degradations, or other incidents or anomalies. Its 24-hour phone number is 703-313-5900 and email is tis-pf-nisws@uscg.mil.

**NVSPS Tour of the US Coast Guard's Navigation Center (NAVCEN)**

## Vessel Safety Checks – Moving On

After six years as a Vessel Examiner (VE), and five years as the NVSPS Vessel Safety Chair, I and Ann are moving from Virginia to Florida. It has been a pleasure and a terrific education performing and coordinating the VSCs as a member of NVSPS! I received the VE designation in 2009. We have had a great team of VEs in the squadron and have performed hundreds of vessel safety checks during this period. I am sure that this has contributed to boating safety on the water. I encourage you to seriously consider becoming a VE. Yes, you have to take an examination and it does require a little of your time, sometimes on a Saturday, to drive to a marina, look in boat engine compartments, and try to see if the sail boat mast white light is really on – while looking into bright sunlight. But there is also a great deal of satisfaction knowing that you have performed a service; particularly when you are thanked by the boat skipper for having taken the time to check his vessel.

There were some humorous moments also. I am sure all of the examiners can relate stories. I will mention one that is both humorous and has a teaching point. I was checking a boat in Alexandria. The skipper had it on a trailer, launched it a nearby boat ramp and brought it over to the dock for the check. Part way through the check list we noticed that the bilge pump was working constantly. Upon opening the deck hatch you could see a lot of water in the bilge. We found the water was coming in through the drain plug hole – the skipper forgot to put the drain plug in prior to launching the boat! Teaching point? Having a check list for launching and retrieving the boat is helpful. Yes, we did manage to stuff a temporary plug in and stop the water flow.

Thanks to all the VEs for their dedication and effort over the years: P/C Gale Alls; P/C George Degnon; Dave Hinkins; Norbert Hymel; Robin Roberts; P/C John Shivik; P/C Francis Williamson. A big thank you also to Ann, my wife, who frequently managed the sign-up and information table at our organized events.

Ann and I are moving to Bradenton, FL, (on the Manatee River) which is on the Gulf coast half way between Ft. Myers and Tampa. There is a Squadron in Bradenton that Ann and I plan to join; hope you will give us a call if you are down that way.

P/C George Nartsissov, AP, IN
Vessel Safety Chair


*Photo courtesy o of Kim-Kwok Chu*

## *Anchoring Basics*

Proper anchoring can be a challenge for some captains. It can be because of not knowing techniques for anchoring in crowded conditions, inability to achieve proper scope, the wind or currents not cooperating, the wrong anchor for the type of seabed, under-sized ground tackle for the boat and conditions, inexperience or any combination of the above. Even an experienced boater has difficulty getting a good anchoring on occasion.

But I have seen many captains at popular weekend anchorages who seem to believe that just dropping the anchor is sufficient safely anchor the boat. We have all seen it, a boat pulls into a crowded anchorage and the captain or mate tosses the anchor, chain and rode over the bow in a knotted mess, and then settles back for a day on the water. Then the afternoon breeze picks up and our casual captain finds him/herself sliding through a myriad of anchored boats headed for the shallows or other hazards completely befuddled, blaming everything but his/her own anchoring techniques. But anchoring is not difficult if you understand the basic principles of how anchors work and the techniques to deploy them to achieve their maximum efficiency.

**Selecting an anchorage** – your primary consideration should be the type of seabed and depth of the water at high/low tide. You want to make certain that your anchor is appropriate for the type of bottom you will encounter, and that the mean-low-low-water depth exceeds your draft.

But the selection of an anchorage does not end with these two factors. You also need to consider your unobstructed swing radius – that is, the distance from your anchor point to the stern of your boat in a 360 degree circle (this is a function of anchor scope, addressed below). All boats will set on their anchor to the wind and current. This simply means that your boat will always point to the combined effects of the wind and current.

Wind will have a greater effect on boats with high freeboard and a shallow draft, whereas full-displacement vessels with a deeper draft will be more affected by the current. You need to be mindful that other boats in the area will have varying swing radiuses all based upon the distance to their anchor points, and you want to assure that wind/current changes will not cause your vessel to swing into their radius. .

A second stern anchor will significantly limit your swing circle, but there are things to consider in using a stern anchor. Most important, never use a stern anchor in heavy weather. High wind and waves to your stern can cause water to come over the transom. Stern anchors are lighter than the primary anchor, so their holding power will be less. When using a stern anchor. Make certain that you do not lock your position in such a manner as to have other boats without a stern anchor swing into your boat.

**Anchoring technique** – slow is best. Be mindful of other boats in the area. If you approach an anchorage at high speed you are going to bring a large wake into the area with you. This is simply inconsiderate of the boats already at anchor, and your wake knocking over drinks is not going to make for friendly neighbors.

After you have selected the area you want to drop your anchor, approach it slowly against the wind/current. When you get to your selected anchor spot, come to a dead stop. As you back slowly (idle speed) lower the anchor slowly by paying out the rode at the speed the boat is moving. Continuously look behind you to make certain you are clear of any obstructions. Your objective is to drop the anchor flat on the seabed and lay the chain/rode out along the seabed in a straight line. When the proper scope is reached, stop the boat by shifting into forward gear for a couple of seconds. Then cleat the anchor rode off. Once cleated, put the boat in reverse and tug on the anchor line. This will set the anchor deep into the seabed. If properly set, the anchor line will go tight and be a straight line into the water. If the anchor line vibrates and the boat continues to move backward, the anchor did not set and the anchor must be recovered and the process repeated.

**Proper anchor scope** – understanding how anchors work highlights the value of anchor scope. With the exception of grapnel anchors, all anchors are designed to dig into the seabed when pulled laterally (horizontally) along the bottom. Conversely, they are designed to break free of the seabed when pull perpendicularly (vertically) to the seabed. To ensure the anchor continues to dig into the seabed, it is necessary to have sufficient distance from the anchor point to the boat so the load on the anchor is a lateral force. The distance to achieve this lateral force is obviously a function of the boat's height above the anchor, or the depth of the water plus the height above the water to the boat's pulpit. Scope is a ratio of the length of rode to the boat's vertical height above the anchor. Typical scope for overnight anchoring under normal conditions is 7:1. So if you were anchored in 10 feet of water (high tide) and the boat's pulpit is 4 feet above the water, the vertical height above the anchor would be 14 feet, times 7, would mean the proper scope would require 98 feet of rode. For casual daytime anchoring the scope can be reduced to 5:1, and for storm conditions the scope should be increased to 10:1.

### *Did you Know….*

The Coast Guard is smaller than the New York City Police Department, and the number of Coast Guard personnel in 2014 is the same as it was in 1967.

## *Coastal Sea Breeze*

Wind, the oldest voice in the world, is the flow of air masses. Near the earth surface, wind blows from high pressure air masses to low pressure air masses. In coastal region, the small-scale winds occur as a result of localized differences in pressure or temperature. It will reverse its direction daily. We call this the daily Sea-Land breeze. (See Figure 1).

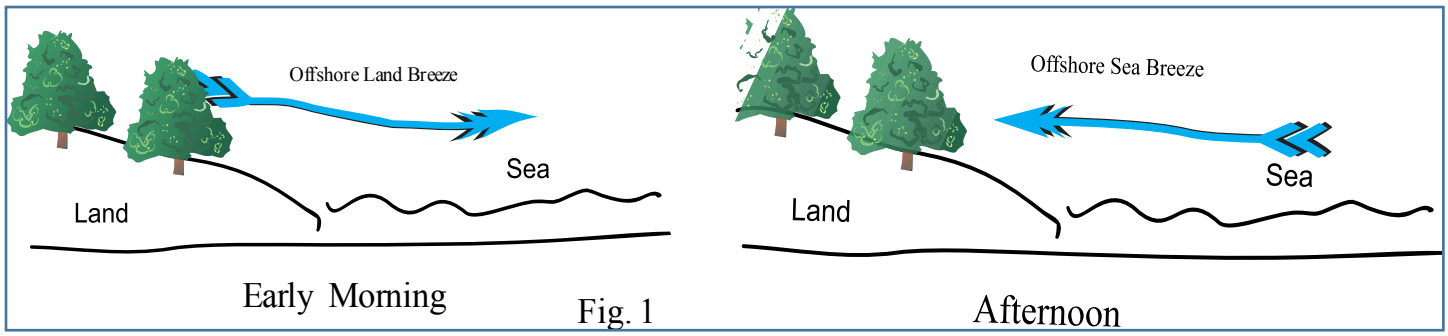


Fig. 1

This wind cycle only develops on clear, sunny day. During daylight hours, the land is heated up by the sun faster than does the water because water tends to moderate temperature swings. Since rising air has smaller pressure then sinking air, the warm air over the land rises and is replaced by the cooler air from the sea (Figure 2).

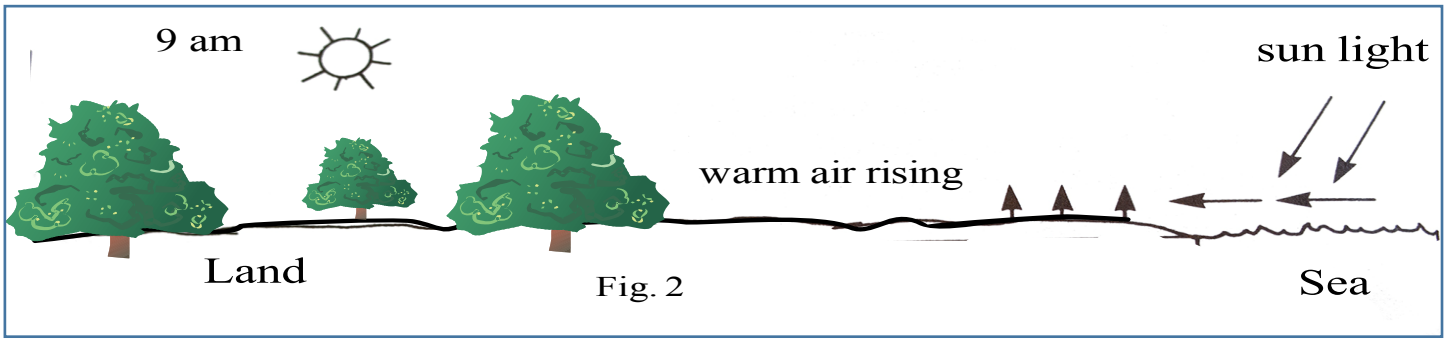


Fig. 2

As the land gets warmer at noon, it transfers more heat to the air above it. The air then expands and its pressure decreases forming a localized thermal low. The air becomes lighter and rises. As it rises, it is replaced by cooler air that moves in from sea, producing the daytime sea breeze (Figure 3).

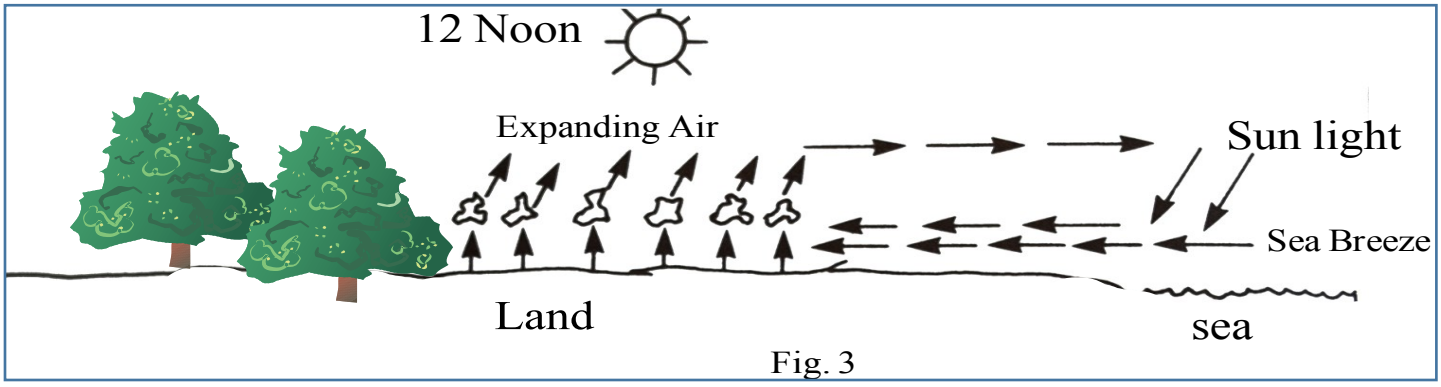


Fig. 3

Exposed to stronger sunlight than the morning sun, the air temperature over land might vary as much as 20 to 40 degree F during the day in coastal regions, while the moister air over water changes 5 degrees or less. As the land heats to maximum during the afternoon sun, air pressure drops relative to that over the water. Air flows from high to low pressure, creating what's called the sea breeze, if the air over land is reasonably hot, it's usually unstable, and this influx of moisture during the day creates the typical cumulus cloud cover and eventual thunderstorms that are common to places like Florida (Figure 4).

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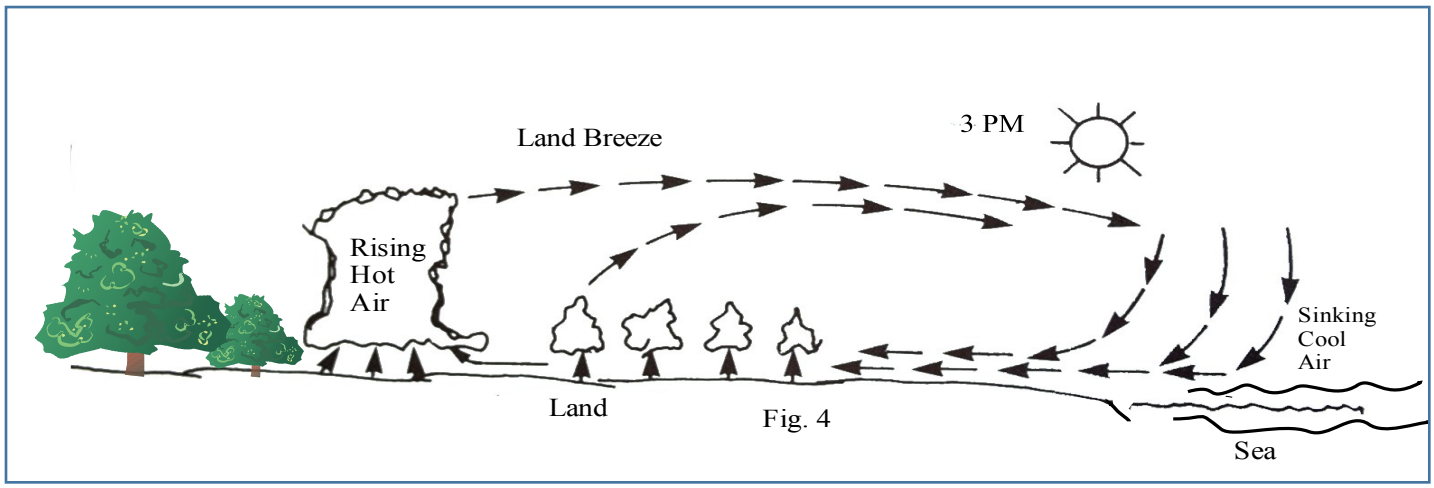

Fig. 4

At night, the process is reversed. Radiational cooling begins. The land cools rapidly after sundown, cooling a low layer of air directly above it. The sea transfers heat to the air above it which rises to be replaced by cool air from the land, producing the familiar night land breeze. In addition, the land breeze can breaks down coastal thunderstorms (Figure 5).

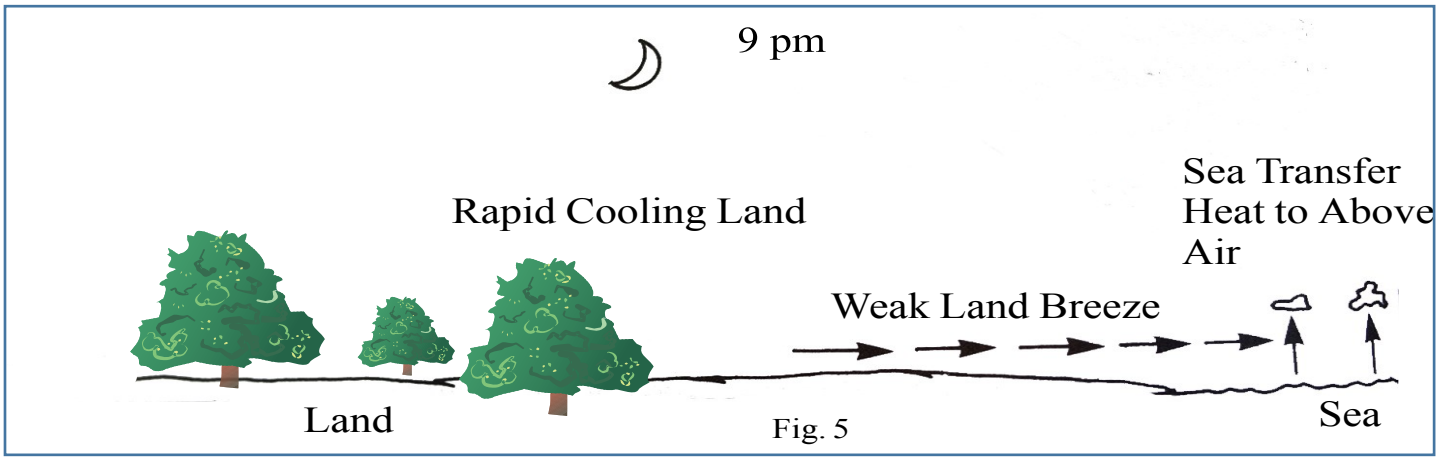

Fig. 5

Very often, on a hot humid summer afternoon, we travel to a seashore and encounter thunderstorms about twenty miles from the ocean. The thunderstorms only last for a few minutes. And by the time we arrive at the beach, skies are clear and air temperature are much lower because of cool ocean breeze. If we return home in the afternoon after the beach vacation, the thunderstorms/shower happens at just the same location as before.

This mysterious thunderstorms/showers are a good example of the above local wind system—the sea breeze. As cooler ocean air pours inland, it forces the warmer unstable humid air to rise and condense, producing clouds and rain shower along a line where the air of contrasting temperature meet.

***Lt/C Kim-Kwok Chu***
*NVSPS Administrative Officer*
admin@nvsps.org

## *Contribute to the Of Tars and Terns newsletter*

Have knowledge on a particular boating subject? Have boating tips and techniques you would like to share? Have an interesting boating story you would like to share with our membership? We are always looking for interesting content for the Of Tars and Terns newsletter. Send your article to P/C G. Jay Nelson at jnelson26@csc.com and become a newsletter contributor.

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