

NAPS News

Northumberland Association for Progressive Stewardship
"Northumberland is going to grow. Let's help it grow with order and beauty."

Summer 2015

Volume 24, Issue 3



Welcome to the Summer 2015 Issue of NAPS News.

Here's what's NAPS was up to this season:

Lee Allain Honored by NAPS. Lee has received the Distinguished Citizen Award in recognition of his contributions in education and community planning. > > >

Save the Date: Saturday, October 17 for the NAPS Fall Social and Distinguished Citizen Award Ceremony. The event will be held at the Bay Quarter Shores Club House again this year from 4 to 7 p.m. Please join the party.

Reservoirs: A Plan for Saving Water. Dr. Lynton Land describes the need to conserve water and outlines a plan to construct reservoirs in Northumberland County.

Two Organizations Opt for Eco-Tours. Responding to an offer of a free Bay Eco-Tour, two groups have taken the NAPS proposal for tours in September.

Creek Clean-up Set for Saturday, September 26. Want to help out? The base station will be at the Omega Protein pier at 610 Menhaden Road in Reedville. The project starts at 8:30 a.m.

Planting the Seeds of STEM. NAPS has done so with hands-on projects at the Northumberland schools, reports Vice President Lee Allain.

Second LEGO Program a Winner. Proof of what a hands-on project can produce was apparent at the Elementary School presentation honoring third, fourth, and fifth graders.

Highway Clean-up Scheduled for Saturday, October 24. Sign up with Janice Mahoney.

Check the NAPS Financial and Membership Reports. NAPS Treasurer Greg Haugan reports.

CCL Report. Citizens Climate Lobby worked on letters and meeting with Rep. Wittman's staff.

NAPS Calendar.

Memo from Bill. President Estell reviews the NAPS summer season.

Busy, Busy, Busy. NAPS is not resting this Fall. Volunteers are always welcome.

To keep up with NAPS on a regular basis, check out our web site:
www.napsva.org.

Jay Walker, Editor

NAPS AWARD

NAPS Taps Lee Allain for Distinguished Citizen Award

The Northumberland Association for Progressive Stewardship has chosen Lee Allain to receive the 2015 Distinguished Citizen Award in recognition of his continuing service in community planning and education.

Lee "retired" to Northumberland in 1998, and quickly started his volunteer work with NAPS, Northumberland's Economic Development Commission (EDC), the Lions Club, the Northern Neck Master Gardeners, and his church. Some of his first work with NAPS involved winning grants, three years in succession, from NOAA/Fish America for renovating natural marsh areas in local waterways.

With the EDC he was instrumental in providing "how to" information regarding oyster aquaculture to local watermen.

He led the Lions World Service effort by designing and setting a team in place to construct home entry ramps for more than a half dozen people confined to wheelchairs. At his church, he led the Long Range Planning Committee, which resulted in construction of the Fellowship Hall that NAPS uses today for its Annual Meetings.

During composition of the County Comprehensive Plan, he formed "Vision 2048" – a group of people dedicated to providing input to the county plan within the NAPS definition of appropriate land use.

Today Lee is involved with Science, Technology, Engineering, and Math (STEM) within the local school system with the goal of increasing student science and math participation. He has assisted high school students as they constructed a solar array starting with raw solar cells. Under his guidance, students converted the array for use as a cell phone charging station.

(Continued on page 2...)



Lee Allain

ECOLOGY

Reservoirs: A Plan for Saving Water

By Dr. Lynton Land

The Virginia coastal plain faces a looming water crisis. Artesian water is being consumed at an unsustainable rate, and the water quality in both artesian supplies is locally problematic.

This hydrograph, or plot of water level with time in a monitored well at Montross, shows an average decrease in water level of slightly more than one foot per year since measurements began in 1967.

About a quarter of our citizens use shallow wells that tap the shallow, or water-table aquifer. Although the water is commonly acid and can contain iron, properly constructed and maintained wells can provide a safe and sustainable supply of potable domestic water for scattered homes forever. If the well is close to agricultural land, the water can contain levels of nitrate high enough to be dangerous to infants.

Water levels in the principal artesian aquifer, typically at depths greater than about 600 feet in Northumberland County, are declining more than a foot each year and are now about 50 feet below sea level. A half-century ago, water levels were about 30 feet above sea level and people still alive today remember wells along the coast discharging water continuously. When water levels fall to so-called “management level” or about 80% of the depth to the top of the aquifer, the well should no longer be used. As we withdraw potable (fresh) water, we increase the likelihood that saline water will begin to enter the well. It is very difficult to predict accurately when either of these scenarios will begin to affect local wells. I will not be surprised if saline intrusion is detected in wells in the Windmill Point area in the very near future. Other wells may provide sufficient water for at least a century, although many will need to be re-drilled and the pumps set at greater depths as water levels fall.

According to the 2010 Regional Water Supply Plan produced by the Northern Neck Planning District Commission “Recent accounting of total ground water withdrawal from the Northern Neck was approximately 4.4 million gallons per day (mgd). In comparison, total ground water withdrawals from the Middle Peninsula [mostly by the West Point paper mill] and Southern Maryland were 27 and 43 mgd, respectively.” The paper mills use most of the annually withdrawn water from the Principal Artesian Aquifer.

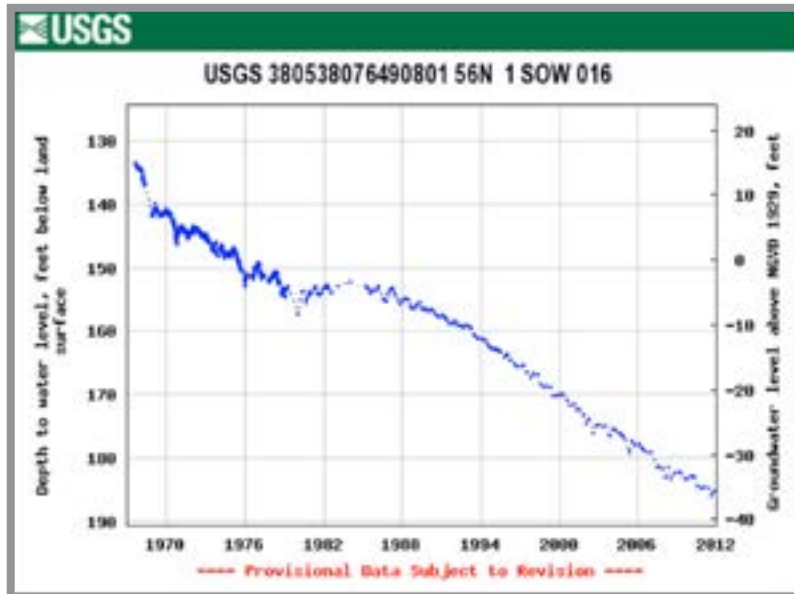
The Virginia DEQ proposed to address the problem of unsustainable withdrawal and chronic overdraft and “ensure that the maximum possible safe supply of groundwater will be preserved and protected for all other beneficial purposes” by reducing permitted withdrawal limits of the largest groundwater users, especially the paper mills. But the 2015 General Assembly passed two bills (SB1341 & HB1924) that require postponement of new withdrawal limits until advisory panels report their findings to the State Water

Commission and DEQ no later than 11-1-2017. It remains to be seen if the advisory panel, certainly “stacked” to achieve State goals concludes that jobs today associated with the West Point mill trump the longer term availability of potable water for citizens of the coastal plain.

Fortunately, we have a simple solution to this problem, namely to set aside “can-yons” for reservoirs. Sites for reservoirs were identified throughout the Northern Neck in an engineering study conducted in 1969. Multiple reservoirs will be needed, at least four in Northumberland

County – Lodge Creek, Crabbe Mill Stream, Sydnors Millpond and Mill Creek. The best reservoir sites are located along the spine of the Northern Neck, but the population growth is in the “Coastal Fringe” especially along the Bay, necessitating that the reservoirs will need to be interconnected.

Callao now has a sewage treatment *(Continued on page 3...)*

**Distinguished Citizen Award** *(from page 1)*

He has also won two grants from River Counties Community Foundation for STEM Boost, a project at both the elementary and middle schools, to start students thinking and planning in three dimensions as they construct LEGO buildings and bridges – like engineers. In addition, he has arranged and chaperoned eco-tours of area waterways with local certified watermen/captains for a number of Northumberland students and Boy Scouts.

Lee is active on the County Economic Development Commission and attends most Planning Commission and Board of Supervisor meetings. He also sits on Rep. Rob Wittman’s Environmental Advisory Council to provide his insights while representing Northumberland. He remains active as a good steward of the County.

Lee’s other interests are many. He grew up in Maine as a lobster fisherman, gardening and building houses with his parents. Today he enjoys fishing the Bay, gardening, and traveling with his wife.

Lee received his MS in Electrical Engineering from Villanova University, and his BS in Physics from the University of Maine. His career, which began in the aftermath of Russia’s first-in-space satellite, Sputnik, was primarily involved with development of advanced US satellite electronic control and communications systems.

“We are pleased to honor this significant community contributor as NAPS Distinguished Citizen of 2015,” said NAPS President Bill Estell. “Please join us as we make this award official at our annual NAPS Social - Saturday, October 17, at Bay Quarter Shores.”

Reservoirs (from page 2)

system, so we can use Callao as an example of how a village could be supplied with a sustainable water supply from a reservoir. A dam creating the Lodge Creek Reservoir could be seen from US Rte. 360 just east of Callao, and would be about 45 feet high. The water level in the reservoir, brim full, would be at about 40 feet above sea level. No homes are present at that elevation, and the nearest home is at an elevation of about 60 feet. No useful or developed property would be flooded, only the steep unbuildable canyon. The reservoir would have an area of about 118 acres and it could supply at least one million gallons per day safely, enough for at least 10,000 people. In 1969, land acquisition and construction, not including water treatment and distribution facilities, would have cost about \$200,000. Today the cost exceeds \$1,000,000.

Aside from providing a sustainable water supply, the reservoir would be an economic engine to create waterfront property and provide for recreation. Waterfront property would need to adhere to strict Chesapeake Bay Act-like restrictions in order to protect the public water supply. A "Resource Protection Area" several hundred feet wide and extending from the high water level should consist of mature trees with an overlapping leaf canopy and associated ground cover. Fertilized lawns should be banned, as should impermeable cover like asphalt. Pruning would be allowed between buildings and the water as long as a complete leaf canopy (and complete root mass) was maintained so the roots could intercept the groundwater. Power boating would be limited to electric or low horsepower 4-cycle gasoline engines. Commercial lodges, restaurants and fishing camps would be encouraged and, of course, the reservoir would be stocked with fish. Timbering rather than agriculture would be encouraged in the watershed, and agriculture would need to operate under strict Best Management Practices and realistic Nutrient Management Plans to protect water quality. A source of reliable irrigation water might encourage new kinds of agriculture.

ECOLOGY

Two Organizations Opt for Eco-Tours

By Lee Allain

"Wow, did you hear that? Yes, that big bird is a Great Blue Heron who thinks he owns my dock. Listen to him grumble even as he flies away. This is probably only one of some 20 or so creatures of the Bay that you will meet on our tour today. Birds, fish, crabs, oysters, otters, and more; all call it home." (This quote could be the opener for either of the true Northumberland "Watermen" who are scheduled to conduct NAPS Fall Eco-Tours.)

Our "NAPS News" spring issue offered a "Free Bay Eco-Tour to the first organization that applies for a student group tour." NAPS has stretched a point and will support two Eco-Tours; both now planned for September – while crabs are still running.

A group of home-schooled students led by Jan Bates of the Northumberland Library

plan to venture onto the Coan River with Captain David Rowe on his deadrise boat, the *Bay Quest*. Captain Rowe, on previous tours, has tonged for oysters, caught a few crabs, and even ran a trawl for bottom fish. (Anybody for a raw oyster?) Typically, he spots some 20 species of creatures from the water while on the tour.

A little later in the month, a group of 7th- and 8th-grade students from the middle school, led by Pam Hagi, will launch their voyage at Purcell's Seafood on the *Kitt II* with Captain Danny Crabbe. After a short orientation on oyster aquaculture at Purcell's, Danny will rendezvous with Dave Geeson of Virginia Shellfish Sanitation to take water samples and talk about water quality. Captain Crabbe will also do a little oystering and crabbing. If time permits, this tour will also feature a ship tour at Omega.

NAPS Calendar

NAPS Board Meetings are held on the second Wednesday of each month, starting at 9 a.m. at the Union First Market Bank on Rt. 360 in Burgess, unless otherwise changed.

Sep. 26, Sat. NAPS Creek Clean-up
 Oct. 14, Wed. NAPS Board Meeting
 Oct. 17, Sat. NAPS Social and Distinguished Citizen Award
 Nov. 11, Wed. NAPS Board Meeting
 Dec. 9, Wed. NAPS Board Meeting
 Jan. 13, Wed. NAPS Board Meeting
 Feb. 10, Wed. NAPS Board Meeting

Both Lancaster and Northumberland Counties face the same problem of declining water levels in the deep artesian aquifer caused primarily by water usage outside the Northern Neck. The two counties should work together on this issue because of potential cost savings. Lancaster County has a special incentive because the water quality in the deep artesian aquifer in southeast Lancaster County is the worst in the Northern Neck, and because Lancaster County needs the Mill Creek Reservoir south of Wicomico Church.

Reservoirs cannot economically supply water to all citizens, but rather only to those citizens on public water supplies in villages and along major highway corridors. Large developments might also be provided as the economics of pipe installation dictate. As citizen stewards we should all conserve as much artesian water as possible, which will lengthen the life of the aquifer for those unable to connect to a public supply from a reservoir. Water conservation in the home also increases the efficiency of septic systems.

It is inevitable that reservoirs will eventually be needed, and the sooner we think through all the issues involved and reach consensus, the less it will ultimately cost and the more benefits will accrue to all citizens of both counties.



After personal introduction to the beauty and life of the Bay and its tributaries, it is hoped that students will be instilled with a sense of personal ownership of this, our precious legacy.

Although after October it will be getting late for a tour, NAPS will extend its offer to adult groups by underwriting the first \$300 of the cost for the boat charter. This is a fun and educational trip – a very real "reality show." Put together a group of 20 and give me a call at 804-529-5491.

ENVIRONMENT

NAPS 2015 Creek Clean-Up Getting Ready

Volunteers Are Needed for Saturday, September 26. Here are the details:

Venue: Omega Protein pier at 610 Menhaden Road, Reedville.

Monty Deihl is lining up Captains (see notice on right). Omega Protein is providing the lunch and the dumpster.

The Northumberland High School Beta Club, the Boy Scout Troop, and other volunteers have been assembled to crew the boats. T-Shirts are in the works.

Now we need your help to set up, sort trash, serve lunch, and clean up.

And it's fun! So, please show up for this important NAPS project!

EDUCATION

Planting the Seeds of STEM

By Lee Allain

How do we best encourage students to consider getting involved with today's technology as a possible career? NAPS has worked, over the last few years, at introducing "hands on" project efforts to stimulate student interest from elementary through high school. With LEGO construction projects, student construction of solar arrays and student flight of QuadCopter drones, we have attempted to communicate the importance of technology in our lives. The recent win of a "STEM Boost 2" River Counties Community Foundation grant with the middle school continues that effort.

Still, how do we turn-on student interest in foundational school math and science courses in preparation for life, as well as careers as scientists and engineers? Repeating from our spring NAPS News:

"NAPS is fully aware that all of the other elements of education are also important. A balanced education for our students is what we all strive for. Still, where there is latent technology ability, we need to nurture that capability, and turn back the antipathy toward science and math that has developed across the country. Engineering and scientific career paths are both stimulating and provide excellent economic rewards. NAPS' goal is to assist students who have a natural interest gain

an appreciation of 'how spaceship earth works.' It is only through an understanding of science and appreciation of our finite earth resources that mankind's future can be sustained."

What are the technologies that will build today's students into tomorrow's citizens? Remembering that the internet was not even conceived at the time most of us came out of high school, it is clearly impossible to predict the future accurately. Still, energy, transportation, health care, communications, and entertainment will all probably go through major transformations in the coming generation.

Robotics, 3D printing, self-driving vehicles, and virtual reality all come to mind, and are considered as possible future involvement areas for NAPS. In fact, the drone that NAPS donated to the high school is considered to be a semi-autonomous airborne robot, since it can hover and return home on its own. But what is next? Is the Google self-driving auto or the Ocular Rift VR system on your Christmas list?

Shortly we will be meeting with the middle school to define the plan for "STEM Boost 2." Here we will be exposing both "at risk" and "high potential" students to LEGO construction challenges to help them plan 3D structures in their minds – like engineers. NAPS will be searching for mentors to assist with this program.



Member Report	2015
Business	4
Family	53
Individual	34
Patron	4
Sustaining	25
Student	1
Total	121

NAPS MEMBERSHIP REPORT AUGUST 20, 2015

The table presents the current paid-up membership status. We have heard from 83% of our 2014 membership. We need the other 17% to enable us to continue our work to support Northumberland County in "growing in order and beauty" without running a deficit for the year. We recently sent letters to 34 of our 2014 members who had not paid up this year, yet.

HELP WANTED

CAPTAINS NEEDED FOR NAPS CREEK CLEAN-UP

On Saturday, September 26, we need boats to take high school students and Boy Scouts along Cockrell Creek to pick up and haul trash to a staging landing for dumping.

The project runs from about 9 a.m. until noon, followed by lunch for all.

For more information and to join the Creek Armada, contact Lynton Land at (804) 453-6605 or jandl@nnwifi.com

Also we plan this fall to have a STEM brochure for the Gateway to STEM room at the high school that emphasizes the importance and opportunities of STEM and offers a way for students and parents to connect with local scientists and engineers.

If you have an interest as a mentor or have ideas regarding how best to interest and encourage students in STEM, contact Lee at leeallain7@gmail.com.

EDUCATION

Second LEGO Program a Winner

By Jay Walker

This year at the Northumberland Elementary School, the second STEM Boost education project sponsored by NAPS concluded with an awards ceremony for the LEGO constructions completed by the third, fourth, and fifth graders. Like the first LEGO program, the kids planned and built a village, guided by NAPS volunteers and teachers.

When the village was completed the students voted on the Most Creative Structure and the Best Structure. Winners in the first category were Amaria Ashton (fifth grade) for fire department, Khanya Thomas (fourth grade) for hospital, and Bonnie Nguyen (third grade) for church. Best Structure awards went to Jaydn Hill (fifth grade) for church, Kaleb Wells (fourth grade) for house with garden, pool etc..., and Quarte Martin (third grade) for skyscraper. (See photos)

NAPS STEM mentors included Lee Allain, Rita Johnson, Mike Harwood, Nannette Smith, Joe Thompson, Kathy Pitts, and Garfield Parker. The LEGOS were purchased last year with a grant from the River Counties Community Foundation (RCCF) acquired by Vice President Lee Allain.

At the awards event in July, School Principal Theresa Larsen noted that about 60 kids participated in the project and thanked NAPS for supporting the STEM program.



Winners for the LEGO Structures received LEGO set prizes to take home.

ENVIRONMENT

Highway Clean-up Set for October 24

The NAPS Adopt-a-Highway clean-up is scheduled for Saturday, October 24. As usual volunteers will meet at the church parking lot in Wicomico Church at 10:30 a.m. and volunteers are needed. To join the team, contact Janice Mahoney at: vervaville@me.com. She needs your help.

CCL REPORT

Letters, Meeting with Rep. Wittman's Aide

By Dr. Greg Haugan, Group Leader

The Citizens Climate Lobby group has been active this summer. They had nine letters to the editor (LTE) published in June, twelve in July and nine as of Aug. 21. This is part of the education program to have the Northern Neck population brought aware of the science, impacts and mitigation options of climate change.

We also met with Congressman Wittman's Legislative Director, Brent Robinson, on July 22 in DC and discussed mitigation and carbon fee and dividend. In addition he was given copies of the 25 LTE and articles that had been written by CCL members and supporters and published in papers in Congressional District 1 since June. He was also given 15 personal letters that had been written to the Congressman about taking action on the climate. Also, he was handed two copies of Steven Nash's book Virginia Climate Fever that discusses the impacts of climate change on our State.

Currently CCL is planning on having a booth at the Northern Neck Land Conservancy Boots and Barbecue event on September 13, and we have been invited to have a booth at the Urbanna Oyster Festival on November 6th and 7th and to participate in the special Kids Education Day on November 5th. Please stop by and say hello. For the past few weeks, Bob Lindsey has been circulating a petition directed to our Congressman to take action on climate change and he has set up outside the Callao Market and Tri-Star getting signatures. We also had a booth at the July Farmers Market where we solicited signatures. Bob has been very good at this and deserves our thanks and support. The petitions, with over 200 signatures, are to be presented to Congressman Wittman in mid-September at a scheduled meeting in Tappahannock.

We meet the first Tuesday of the month at 7:00 p.m. in the Northumberland Public Library. All are welcome.



NAPS FINANCIAL REPORT - SEPT. 1, 2015

The total NAPS annual working budget is approximately \$6,000. Of that amount, \$2,000 was budgeted and subsequently provided for four \$500 scholarships for deserving Northumberland High School graduating seniors. The remainder of the budget goes to other worthwhile activities such as eco-tours, creek clean-up; supporting STEM activities at the public schools, our Earth Day festival and our mailings. To the right is a simple table of where we currently stand regarding the 2015 financial activities. As we can see from the Revenue line, we are running behind our expenses. We also are running behind on our membership renewals which impact our revenues, of course. We have been fortunate in past years that Omega Protein has supported many of our activities, and responsible financial management has enabled us to have a positive financial carryover as shown in the starting balance. Omega has indicated they will pick up the tab for the food costs at our Creek Clean-up scheduled for September 26. NAPS will provide the T-Shirts for the volunteers.

We have funds set aside for matching endowment donations. The value of the endowment is approximately \$11,000 which includes the starting amount of \$10,000 plus donations and matching amounts and the net changes in value of the investment account with Wells Fargo.

8/20/2015	
Starting Balance	\$5,944.06
Revenues	\$6,042.30
Expenses	\$6,257.88
Current Year Net	-\$215.58
Operating Funds	\$5,728.48
<i>Submitted by: Gregory T. Haugan, Treasurer; Sept. 1, 2015</i>	



Northumberland
Association for
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Memo from Bill

Hard to believe we are planning already for the NAPS Annual Creek Clean-Up but the time is rapidly approaching. The site will be Cockrell Creek and the staging area will be at the Omega Protein dock. Monty Deihl is rounding up boat captains and if you haven't been contacted and would like

to help, give him a call. Volunteers are needed for trash recycling and lunch setup. We are planning on the Beta Club at Northumberland High School to provide the main picker-uppers of trash but everyone is encouraged to come out on Saturday 26 September at 0830 and volunteer for this important environmental project. We will have lunch and the annual NAPS T-Shirts for all helpers.

Not too early to "Save the date" on 17 October 2015 for the NAPS Fall Social. We are returning to the Bay Quarter Shores Clubhouse from 4 to 7 p.m.. Come and enjoy a delightful evening with the NAPS family and friends to honor, with the Distinguished

Citizen Award for 2015, our own Lee Allain. Invitations will be sent out in mid-September with all the details and requests for your delicious side dishes to share. Please join us and spread the word to prospective NAPS members. This is a good way to introduce newcomers.

In our continuing effort to make our young people aware of the wonderful water environment surrounding our county, NAPS is sponsoring two Ecology Tours. The first is with Jan Bates's Library Home School students on the Coan River with Captain Rowe on September 14th. The second is for Northumberland 7 and 8th grade students with Pam Hagy on Captain Danny Crabbe's boat out of the Little Wicomico River on 22 September.

Lee Allain was again successful in obtaining a STEM Boost 2 grant of \$3000.00 from River Counties Community Foundation for the purchase of LEGOs for the Northumberland Middle School.

This will follow on the second year successful LEGO/STEM project completed at the elementary school this summer. In addition, Joe Thompson and Nannette Smith conducted a separate Shiloh Baptist Church STEM/LEGO event for their Shiloh Summer Program. As Lee stated with the elementary school, the middle school, the library and Shiloh Church now all involved, we are getting good community traction toward encouraging student "imagineering."

The NAPS "Too Good to Throw Away Shed" under the tutelage of Sandy Henbest has a new roof by local roofer Glen Pinn. This is a major upgrade from the first effort and will keep the shed in good repair for some time. Still a favorite at the Horsehead Recycling Center, the public has maintained a constant flow in and out of the shed, treasures come and go.

To keep NAPS contributing and viable in Northumberland we need your help and support (read "dues"). As a non-profit, we depend on your contributions to carry out our many projects. Look forward to seeing you at the Creek Clean-Up and Fall Social.

Best to you and yours.

Sincerely,
Bill Estell, President

NAPS Officers & Board Members

NAPS Officers

President.....Bill Estell.....580-6609billestell62@gmail.com
Vice President...Lee Allain.....529-5491Leeallain7@gmail.com
Secretary.....Ida Hall804-761-2342ida@northernneck.com
Treasurer.....Greg Haugan.....580-2166greghaugan@gmail.com

NAPS Board of Directors

John Lunsford ... (Term Expires 2/2016)580-2085jlunsford1024@gmail.com
Monty Deihl (Term Expires 2/2016)453-4493mdeihl@omegaproteininc.com
Bill Estell (Term Expires 2/2016)580-6609billestell62@gmail.com
Lee Allain (Term Expires 2/2017)529-5491Leeallain7@gmail.com
Ida Hall (Term Expires 2/2017) ... 804-761-2342ida@northernneck.com
Lynton Land (Term Expires 2/2017)453-6605jandl@nnwifi.com
Greg Haugan (Term Expires 2/2018)580-2166greghaugan@gmail.com
Myrtle Phillips (Term Expires 2/2018)580-8097myrloophil@gmail.com
Jay Walker (Term Expires 2/2018)529-9362jay722ksr@gmail.com

News Editor.....Jay Walker.....529-9362jay722ksr@gmail.com

WebmasterMike Ahart580-9289mikeahart@kaballero.com