From the Captains Quarters

Dear MAMEA Members,

I’d like to wish you a warm and happy Spring! As the trees bud, the frogs sing, and the days get longer, we look forward to new opportunities to share our aquatic message with our students, visitors, communities, and with each other. I would like to encourage you to take this time of renewal to reacquaint yourself with the many opportunities that come with being a MAMEA member. In this issue, you will see an announcement for MAMEA grants, which are a great way to fund your upcoming projects, and to gain experience in the art of grant writing. In the next few months, you will also see a request for Award Applications. These honors serve to recognize excellence in your colleagues and highlight the many talents of our fellow members. And don’t forget the opportunities presented by state min-conferences, and communications through MAMEA’s social media, Masthead, and email list. There are so many ways that MAMEA is here to support you, and I encourage you to take advantage of them all.

Happy Spring everyone!

Andy Gould, MAMEA President
Upcoming Conferences

Registration is open for NMEA 2016, being held in Orlando, FL.

For more information, visit:
http://www.marine-ed.org/

We will be sending out information about MAMEA Members who are attending and presenting so that we can support one another during the conference.

We hope to see you there!

SAVE THE DATE!

2016 MAMEA Conference at the Delaware Beaches!
November 4-6
#mamea16

www.mamea.org
Exploring Coastal Virginia

Saturday, April 30, 2016 @ 9:30 am — 4 pm

Virginia Institute of Marine Science - Eastern Shore Laboratory
40 Atlantic Ave.
Wachapreague, VA 23480

Educators are invited to spend a day on the Eastern Shore exploring the habitats and species of coastal Virginia. VIMS boat captains will take participants to habitats including mud flats and barrier islands. Participants will also have the opportunity to observe marine organisms through a bottom grab and a benthic trawl while onboard the boat. Teachers are encouraged to bring cameras, binoculars, and field guides to aid them in their identifications throughout the day. Participants should wear closed feet shoes (ie tennis shoes or boot) during the event, participants may not wear sandals like keens. Participants are also encouraged to wear comfortable clothing appropriate for the weather. Participants should bring a lunch, however snacks and drinks will be provided. Housing is available for Saturday night in the dorms at VIMS for those interested in staying. Those choosing to stay at VIMS are encouraged to have dinner together on the Eastern Shore!

Registration

- Registration is limited to 15 people — ONLY 3 SPACES LEFT!
- Mini-conference Only: $15/person for current MAMEA members, non-members or those wishing to renew membership (all will receive a one-year MAMEA membership)
- Mini-conference & Lodging: $30/person (includes the $15 fee above) and Saturday night housing in the dorm

Cancellation

Cancellation deadline is April 23, 2016. Cancellations by this date will receive a full refund less $5 for administrative fees. Cancellations after April 23rd will not receive a refund.

Visit [http://www.mamea.org/vamini.html](http://www.mamea.org/vamini.html) to register.

More Info

For additional information, please contact Jaclyn Beck at jnm8661@gmail.com or (330) 464–7350. To register and pay online with PayPal (no account required), complete the form below. Closer to the date more information regarding what to bring an details of the day as well as directions will be emailed out.
MAMEA members from across the region gathered for our annual conference on Nov 6-8, 2015 in Wilmington, North Carolina. A total of 54 educators from 5 states attended the conference. The event included presentations from formal and informal educators on topics ranging from plankton to ROV’s, several aquatic focused curricula, and hands on activities centered on climate change. Also highlighted were several presentations about youth, and how to encourage and enable them to take leadership roles in conservation education. Participants were treated to two excellent guest speakers: Andy Wood from the Coastal Plain Conservation Group presented *Ecosystem Collapse or Habitat Shift: Climate Change, Snails, and Unanticipated Consequences*; and Bonnie Menteleone from the Plastic Oceans Project, who presented about her work in studying and teaching about marine plastics around the world.

During the conference, MAMEA presented our two annual awards. Tami Lunsford of Newark, Delaware received the Outstanding Classroom Educator of the Year award, and Dr. Roseanne Fortner of Oak Island, North Carolina received the Outstanding Informal Marine Educator Award. It was a pleasure to have a chance to honor both of these talented and dedicated educators.

The conference concluded with attendees venturing out to three locations for field trips. Several members were treated to a guided tour of the wildlife and natural treasures of Bald Head Island. Other members got up close to some recuperating sea turtles during a tour of the brand new Karen Beasley Sea Turtle Rescue and Rehabilitation facility. Still more educators gathered to further their marine education knowledge with a NOAA workshop at the NC Aquarium at Fort Fisher.

A special thanks goes to the many Board Members, MAMEA Members, and Volunteers who helped make the conference a success. There were so many people who helped organize and run the conference, and all of your efforts were greatly appreciated!
May 20-22, 2016

Green Eggs and Sand
Where: Delaware Aquatic Resources Education Center
Smyrna, Delaware
What’s included: An innovative workshop experience and set of curriculum modules designed to explore the Atlantic Coast horseshoe crab/shorebird phenomenon and management controversy.

For more information, visit www.dnrec.delaware.gov/coastal/DNERR/Pages/DNERRTeacherDevelopment.aspx, or contact Gary Kreamer (Gary.Kreamer@state.de.us).

July 11-13, July 26-27, and August 9-10, 2016 (all sessions required)

Bay to Bay: A multidisciplinary watershed investigation across the Delmarva Peninsula
Where: A transect across Delmarva – Tilghman Island, MD to Cape Henlopen, DE
What’s included: Six days of intensive field work, activities, and watershed, ecosystem, and social science content; all meals; overnight lodging in Easton, MD and Lewes, DE; 40 clock hours; and classroom resources
Primary audience: Delaware and Maryland Eastern Shore 7th and 8th grade science teachers, but other grade levels are encouraged to apply
Cost: Free!
Max. 16 participants

For more information, visit www.deseagrant.org/baytobay, or contact Chris Petrone (petrone@udel.edu).

July 13-15, 2016

Teachers on the Estuary (TOTE): Coastal Ecosystems
Where: St. Jones Reserve, Dover, DE
Join the Delaware National Estuarine Research Reserve for an exciting, hands-on, in the field, 3-day workshop focused on the mid-Atlantic's coastal ecosystems including: freshwater and saltwater wetlands, shallow bays, and barrier islands. Field studies, classroom activities and scientific presentations will make this a workshop you won't want to miss! Space is limited! Workshop runs from 8:30 AM to 4:00 PM each day.

Participants will:
• increase their confidence with habitat-based science content
• increase their knowledge of the ecological issues facing our mid-Atlantic coastal ecosystems
• increase their confidence in teaching about coastal ecosystems using local real world science and research
discover a variety of resources for use in their classrooms
Audience: Formal and Informal Educators

For more information, visit http://www.dnrec.delaware.gov/coastal/DNERR/Pages/DNERRTeacherDevelopment.aspx, or contact Maggie Pletta (Margaret.Pletta@state.de.us).

**July 18-21, August 3**

**MADE CLEAR K-12 Climate Change Academy**

Where: Chesapeake College, Wye Mills, MD

What’s included: Since July 2013, over 80 classroom teachers and informal educators have participated in our Climate Change Academies. The Academies provide up-to-date science content, model lessons and activities, and practical experience while diving into the complex topic of climate change and preparing educators to introduce it to students. Meals, lodging, and resources will be provided.

Cost: Free. Stipend included.

For more information, visit www.madeclear.org/academy, or contact Melissa Rogers (mrogers@ca.umces.edu).

**Friday, July 29, 2016**

**Sunny and Windy: A forecast for greener energy education**

Where: University of Delaware Hugh R. Sharp Campus, Lewes, DE

What’s included: Content, resources, and hands-on learning about alternative energy, in the shadow of UD’s 2-megawatt wind turbine. Participants will learn from alternative energy scientists, build model wind turbines, explore solar arrays, and experiment with DIY solar ovens. Clock hours will be awarded.

Primary audience: Delaware and Maryland teachers and informal educators

Cost: Free!

Max. 15 participants

For more information, visit www.deseagrant.org/education-opportunities, or contact Chris Petrone (petrone@udel.edu).

**August 11, 2016**

**MADE CLEAR Climate Change Field Activities Workshop**

Where: North Point State Park, Edgemere, MD

What’s included: Participants will actively participate in four climate science-based field activities. Topics include marsh migration, species observation and migration, and school-based alternative energies.

Primary audience: Delaware and Maryland teachers and informal educators

Cost: Free. Stipend available.

For more information, or contact Chris Petrone (petrone@udel.edu).
Come join the fun! National Aquarium Teacher Workshops
Submitted by Maria Madero

The National Aquarium, Baltimore, offers several professional
development opportunities for educators, including day-long teacher
workshops! These workshops are fun and engaging and you will leave
with plenty of activities for your classes!

Dates and times for these opportunities are listed at the link below:

http://www.aqua.org/learn/teacher-programs/teacher-workshops

FREE National Aquarium Tickets with the Read to Reef Book Club
Submitted by Maria Madero

Underwater worlds are waiting. Dive into a book today. Read five aquatic books, and receive four tickets to
the National Aquarium. Read to Reef is from Feb. 1 to April 30, 2016!!

To celebrate our local roots and to give back to the community that has given us so much, the Aquarium is
proud to host a number of programs that allow locals to visit their Aquarium for less. Beginning in January
2016, the National Aquarium is partnering with the Enoch Pratt Free Library system to distribute 10,000 free
Aquarium passes to families at library branches in Baltimore City.

By connecting our city youth’s love of reading to the aquatic world, we hope to drive awareness of our blue
planet and the critical responsibility each of us has to protect it. We have the opportunity to raise an
environmentally conscious generation that will respect and preserve the ocean that gives us life. Knowledge
is a critical tool in achieving that goal—and what better place to find it than in a book?

Children up to fifth grade with an Enoch Pratt Free Library card can read five aquatic- or conservation-themed
books appropriate for their age levels. Once complete, they will receive a voucher for themselves and up to
three additional family members or friends to visit the Aquarium. Children may receive one voucher per
program season.

Age levels included in the Read to Reef program:
• Under age 5
• Kindergarten to first grade
• Second grade to third grade
• Fourth grade to fifth grade

For more information please see the link below:

http://www.aqua.org/learn/student-programs/read-to-reef
**Virginia State Representative Report—Jaclyn Beck**

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**Discovery Lab**

The monthly Discovery Lab series provides fun, family-friendly experiences and lifelong learning. Each lab focuses on a specific topic through a series of stations that provide hands-on activities for kids and adults. Participants look through microscopes, observe live animals, partake in crafts and games, and view research posters. Both VIMS faculty and students participate as speakers, sharing their research with the general public in an intimate setting. Upcoming topics include Bivalves (April 19) and Plant Adaptations (June 21).

Virginia Institute of Marine Science, Gloucester Point, VA


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**Teachers on the Estuary (TOTE) workshop: Water Quality and Climate**

Join educators from CBNERR for two exciting days exploring water quality and climate change through the use of NERRS and NOAA data and curriculum, field activities, and classroom materials. Teachers will be able to lead students in learning activities that improve the students’ abilities to become stewards of the environment after participating in this workshop. Teachers will be provided with all materials necessary to return to the classroom and effectively teach the curriculum presented. This free workshop is targeted towards secondary science teachers in Virginia who are interested in incorporating climate science, real-time data, and data visualizations into the classroom.

June 2-3

Virginia Institute of Marine Science, Gloucester Point, VA

For more information and to RSVP, email Sarah Nuss at mcguire@vims.edu.

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**Open Farm at The Nature Conservancy’s Brownsville Preserve**

The staff of The Nature Conservancy’s Virginia Coast Reserve invites one and all to attend our Open Farm event on Saturday, April 16th from 9:00 am to 4:00 pm! Our William B. Cummings Birding & Wildlife trail will be open, as always, but this will also be a chance to explore parts of the property not usually open to the public. At this all ages event, we’ll have guided nature tours scheduled, as well as children’s activities staged throughout the property. Of course, anyone is welcome to grab a trail map and set out to explore on their own. For folks who prefer to tour the farm from their seats, we’ll have wagon rides throughout the day. We’ll even have hot dogs on the grill out back of historic Brownsville House at lunch time! Brownsville Preserve is located at 11332 Brownsville Rd, Nassawadox, VA. For questions, please call (757) 442-3049 or email Outreach & Education Coordinator, Margaret Van Clief at mvanclief@tnc.org.
North Carolina State Representative Report—Pat Curley

Teacher Programs

The Science House at CMAST is holding several teacher programs for the Spring and Summer:

May 21- Students Discover-Citizen Science 101-
Teachers are invited to attend the day long session with NCSU, NC Museum on Natural Sciences and the Keenan Fellows on how to bring Citizen Science into their classrooms.

July 12-14 Elementary GLOBE- A special three day training program for Elementary School Teachers. See http://www.globe.gov/web/elementary-globe

Contact pwcurley@ncsu.edu for details or visit http://sciencehouse.ncsu.edu

Summer Science School

The Rachael Carson Reserve partners with the NC Maritime Museum, located in Beaufort, to offer Summer Science School for children. The goal of the program is to offer students the opportunity to learn about the natural and maritime history of coastal North Carolina through creative, hands-on experiences.

See http://www.nccoastalreserve.net/web/crp/summer-science-school for details.

Volunteer Opportunities

The North Carolina Coastal Federation has lots of volunteer opportunities and summer programs for students. Check out their events page: http://www.nccoast.org/events/
2014/15 MAMEA Grantee Reports

The MAMEA Grants Committee awarded two educational project grants for last year’s 2014/15 award cycle. The grant for classroom teacher went to Maureen Barrett, a 7th grade STEM teacher at Harrington Middle School in Mt. Laurel, New Jersey, and the informal education grant to Christina Romano, Education and Outreach Specialist at the Towson University’s SciTech Department. The Committee is pleased to feature their project reports in this issue of the Masthead. You will also find them on the MAMEA website at: www.mamea.org/awardwinners.html.

Building ROVs in the Classroom

By Maureen Barrett, Harrington Middle School, Mt. Laurel, NJ

I am extremely thankful to MAMEA for funding my ROV (Remotely Operated Vehicle) project. The money helped me purchase additional ROV supplies for the classroom, including color PVC for the ROV frames. The previous year, my students painted their frames. This ended up being both a hassle and a mess because the students were continually modifying their frame designs (as good engineers would do) and more paint had to be applied to the modified areas. Also the painting skills of the average 7th grader were not always top notch, especially on ½” PVC pipes. So we used the grant funds to purchase blue and yellow PVC to alleviate this problem. Not only did the students feel the colored PVC was easier to see in the water during our competitions, the ROVs matched our school colors!

I have to admit that I “saved” the color PVC for my after-school SeaPerch and MATE ROV teams. This made the students in my classes a bit jealous! Now, all of my students will have the luxury of using the blue and yellow PVC. There is plenty to go around. And since we do not glue our PVC frames together, all the cut PVC pieces can be used over and over again.

Throughout the 2014-15 school year, we built over 120 ROVs. Working in teams of four, the teams completed assessment worksheets that required both reflection and assessment of the teamwork’s communication and collaboration skills. The students were required to post findings and complete assignments on a class collaboration website (Google Classroom). Each ROV team created a video journal using iMovie to document the steps of the Engineering Design Process throughout the ROV build: identify problem/challenge → research → brainstorm → design sketch → build → test/evaluate → redesign → share solution.

(Top) Students from Harrington Middle School take careful measures as they work out their ROV designs. (Middle) ROVs are taken through their paces at a competition. (Bottom) A successful team from Harrington Middle School shows off their colorful ROV made with PVC parts funded by MAMEA.
Students took their ROV experience beyond the classroom:

*Several teams of students from this year competed in the New Jersey SeaPerch Challenge (two teams in the Middle School Category and three teams in the Open Category). Our two middle school teams won 1\textsuperscript{st} and 2\textsuperscript{nd} and advanced to the National SeaPerch Competition at UMass Dartmouth. Out of 71 teams, we placed 5\textsuperscript{th} and 7\textsuperscript{th}.

*Two ROV teams competed in the MATE PA Regional Competition (one team in the Scout Category and one in the Ranger Category). Our Scout Team won 1\textsuperscript{st} Place overall, winning awards for the technical report, poster presentation, marketing display, and pool missions. Our MATE team won 1\textsuperscript{st} place for their pool work.

*Students volunteered at the Mt. Laurel Fall Festival to teach community members about our ROV program and teach them how to pilot ROVs.

*The MATE Team members volunteered at the Barnes & Noble Mini Maker Faire to bring awareness to STEM and building underwater robots in the classroom.

*SeaPerch Team members volunteered to work with the upcoming 7\textsuperscript{th} grade students at the 6\textsuperscript{th} grade end-of-year pool party. The team members brought ROVs and pool props so the 6\textsuperscript{th} grade students would get an introduction to our middle school STEM ROV program.

This is my fifth year teaching an ocean exploration STEM class to 7\textsuperscript{th} grade students. I teach six 40-minute classes per day, and we meet five days a week for approximately 45 days. My program reaches almost 500 students per year. The students learn why we explore our oceans and how we explore them, and then they work in teams of four to design and build ROVs. I use both the MATE and SeaPerch ROV programs in my class. I would like to share some resources that I have found to be extremely valuable to my ROV STEM program. Hopefully you will find my top ten sites helpful too.

### Top 10 ROV Websites for the Classroom

1. **MATE (Marine Advanced Technology Education)**
   [http://www.marinetech.org/](http://www.marinetech.org/) Discover a great deal of ROV resources, ROV kits to purchase, competition information, curriculum, videos, internships, and information about teacher professional development

2. **SeaPerch (Sponsored by the ONR and Managed by The AUVSI Foundation)**
   [http://www.seaperch.org/index](http://www.seaperch.org/index) Find information about how to get started with SeaPerch ROVs, including how to build videos, grant information, and resources

3. **SeaPerch (MIT Sea Grant Program)**
   [http://seaperch.mit.edu/](http://seaperch.mit.edu/) Search links to help build ROVs, teach ROV topics, learn about ROVs, and explore careers

4. **NOAA’s Okeanos Explorer website**
   [http://oceanexplorer.noaa.gov/okeanos/edu/welcome.html](http://oceanexplorer.noaa.gov/okeanos/edu/welcome.html) Includes a collection of educational materials, expedition modules, multimedia, and live ROV footage when the Okeanos Explorer is exploring with its ROV Deep Discoverer

5. **Dr. Robert Ballard’s EV Nautilus**
   [http://www.nautilislive.org/](http://www.nautilislive.org/) Find expedition information, photos and videos, including live footage when the ROV Hercules is exploring

6. **University of Rhode Island’s Inner Space Center**
   [http://www.innerspacecenter.org/](http://www.innerspacecenter.org/) [http://www.innerspacecenter.org/galleries/the-unknown-ocean](http://www.innerspacecenter.org/galleries/the-unknown-ocean) Utilizes telepresence technology to view underwater footage from both the Okeanos and the Nautilus, in addition to news, camp information, and videos, including five great ROV video clips titled Creatures, Telepresence, ROV, Archaeology, and Why do we explore?

7. **Woods Hole Oceanographic Institute: Dive and Discover**
   [http://www.divediscover.whoi.edu/index.html](http://www.divediscover.whoi.edu/index.html) [http://www.divediscover.whoi.edu/robotics/index.html](http://www.divediscover.whoi.edu/robotics/index.html) Find out about WHOI expeditions and get information, lessons, and fantastic graphics on a wide variety of ocean topics and compare and contrast the three basic types of exploration vehicles: ROVs, HOVs, and AUVs

8. **MBARI (Monterey Bay Aquarium Research Institute)**
   [http://www.mbari.org/](http://www.mbari.org/) [https://www.youtube.com/user/MBARIVideo](https://www.youtube.com/user/MBARIVideo) Find out what MBARI is using their ROV Ventana and ROV Doc Ricketts for and explore their YouTube channel for great videos

9. **The Smithsonian’s Ocean Portal: Find Your Blue!**
   [http://ocean.si.edu/](http://ocean.si.edu/) [http://ocean.si.edu/ocean-videos/scientists-discuss-their-submersible-experience](http://ocean.si.edu/ocean-videos/scientists-discuss-their-submersible-experience) Find a great deal of information, videos, and educator resources on dozens of ocean topics

10. **Harrington Middle School STEM Program**
    [http://hms.mlaurelschools.org/subsites/Maureen-Barrett/index.html](http://hms.mlaurelschools.org/subsites/Maureen-Barrett/index.html) Visit my website to provide you with some information about my ROV STEM program. Feel free to contact me if you have any questions. mbarrett@mlaurelschools.org.
How one good grant idea can evolve into another: From Ice Core Detectives to It’s a Gassy World!

MAMEA grantees are determined and creative people! Christina Romano, Education and Outreach Specialist at Townson University SciTech Department, proposed a 2014/15 grant project titled Ice Core Detectives that won the support of MAMEA’s Grant Committee. But, the best laid plans of mice, men and even educators can go astray.

Christina’s intent was to develop and test a new lab for use in the SciTech program. Her Ice Core Detectives activity was designed to help high school students understand how scientists use ice cores to estimate historical climate change data. They would use replica ice cores, collect data and draw conclusions about past changes in Earth’s climate. Tablet technology was planned as a key element of the lab, allowing students to analyze data, create graphs and present evidence using the same technological tools that many scientists use. The MAMEA grant funds were invested in the tablets.

After starting her project in 2014, Christina encountered some challenges that might have derailed less determined individuals. After recovering from the loss of key project personnel, Christina and her team found that the materials intended for use in the ice cores models weren’t reliable. Did they give up? Not at all! With climate change at the heart of the lesson, they tackled another approach. Christina and Dr. Mary Stapleton, Townson University’s Director of Bioscience Education and Outreach, came up with another innovative idea for an inquiry-based activity -- this one focused on the role of CO2 as a greenhouse gas. The new lab, titled It’s A Gassy World! allows middle school students to learn about climate science concepts, design their own investigations, and use the tablet technology purchased with MAMEA grant funds. After successful testing, the lab is now being offered as both an onsite SciTech lab and a Maryland Loaner Lab kit for middle school students. Preliminary data shows an increase in student knowledge about climate change. Teachers attending the Climate Literacy Workshop got to test the lab and reported:

“I love all the hard work you put into making things realistic and relevant with hands-on activities that replicate what scientists do in the real world.”

“My students were able to do their own investigations and felt like real scientists.”

In teacher evaluations of the lab, 100% of participants replied that they agreed or strongly agreed that they learned new information about climate change, could use the content to teach others, and learned where to find more resources.

Christina shared the new lab with MAMEA members at the 2015 Conference in North Carolina. Her presentation, It’s A Gassy World! A hands-on climate change lab, demonstrated how educators could incorporate climate change into middle school curriculum and introduced how SciTech’s new activity that had students designing their own experiments to investigate the role of CO2, rising ocean temperatures, and climate change.

A grant that keeps on giving... A selling point for Christina’s original proposal to MAMEA was her plan for continued use of the tablet technology beyond the term of the grant. And, she reports: “We continue to use the tablets with both middle and high school students for the following labs: It’s A Gassy World!, Crucial Concentration, and Looking into Lactase. We are also developing new climate change labs where we will be using the tablets as well. The tablets will be maintained by the Education and Outreach Specialists.” Despite the twists and turns of her project, Christina followed through on her intention to continue using the tablet technology in SciTech’s programs. MAMEA Grant Committee members are always interested in projects whose outcomes continue to pay dividends for students, teachers and the Mid-Atlantic marine education community.

(Left) Eight grade students use tablets to create their graphs for the It’s A Gassy World! lab.

(Right) Eleventh grade students create a line-of-best-fits graph on the tablets for the Crucial Concentration lab.
MAMEA Grants Report

MAMEA’s 2015/16 Educational Project Grants Awarded

The MAMEA Grants Committee is pleased to announce two Educational Project Grants for 2015/16, one for a classroom teacher and one for an informal educator.

Beth Schap, Science Teacher, Liberty High School

The 2015/16 Education Project Grant for a Classroom Teacher was awarded to Beth Schap from Liberty High School in Eldersburg, Maryland. Ms. Schap serves as a coach for her school’s regional NOSB teams. With her project, titled “Enriching field studies to promote interest in Marine Science at Liberty High School, Beth plans to enrich the field studies she can offer, providing students with more exposure to marine science and opportunities to practice the methods and skills used by marine scientists.

The project will benefit motivated students, many of whom are recruited to participate in Liberty High School’s teams at the Chesapeake Bay Bowl, the regional NOSB competition serving Delaware, Maryland, DC, northern Virginia, and parts of Pennsylvannia. In addition to regular meetings, Beth is planning additional activities throughout the year, helping to enrich her core of students and recruiting new youngsters to the group. Beth hopes to inspire more youngsters at her school, building their understanding of marine science, biodiversity, and human interactions with the ocean. And, she hopes the additional knowledge, marine science and teamwork skills will benefit students competing in NOSB.

Science teacher Beth Schap (far left) coaches a NOSB team at Liberty High School. The aim of her project is to spark interest in marine sciences at her school and provide more opportunities for students to conduct science in the field.

Kristen Sharpe, Marine Education Support Specialist at the Chesapeake Bay National Estuarine Research Reserve in Virginia

The 2015/16 Informal Educator receiving a MAMEA Grant is Kristen Sharpe, Marine Education Support Specialist at the Chesapeake Bay National Estuarine Research Reserve in Virginia (CBNERR-VA). CBNERR-VA is headquartered on the VIMS campus in Gloucester Point, VA.

Kristen’s project was proposed in response to new objectives outlined the 2014 Chesapeake Bay Agreement. Virginia schools are now encouraged to offer Meaningful Watershed Educational Experiences (MWEEs) at the elementary school level, as well as in the secondary grades. Gloucester County is being pro-active about incorporating MWEEs into the elementary school experience, targeting all fourth grade students. These teachers, however, have had limited preparation for designing and implementing these kinds of outdoor science activities. But, that’s a strength of CBNERR’s education staff.
MAMEA Grants Report

In her project, titled *Testing MWEE Implementation for 4th Graders in Gloucester County: A Pilot Program*, Kristen will test a potential model for conducting MWEEs for this age group. Working in a partnership with a local school, CBNERR educators will design and evaluate a MWEE structure appropriate for primary students. If successful, the school will adopt the model and, hopefully, it will spread, providing a way for other elementary schools in the county to offer their students a field science experience.

*Kristen Sharpe (2nd from right) is a Marine Education Support Specialist at the Chesapeake Bay National Estuarine Research Reserve in Virginia (CBNERR-VA). Her project will test a structure for Meaningful Watershed Educational Experiences (MWEEs) to suit elementary school students.*

MAMEA is looking for great educational projects to fund in 2016/17! Have you got one?

MAMEA is looking for great ideas to support in its 2016/17 grant cycle. So put your thinking caps on. You can get your next educational project off the drawing board and into reality, engaging students or fellow educators. Be ready for the next round of MAMEA Educational Project grants - start working on your proposal now!

Two grants for up to $1,000 are available annually: One for formal educators (classrooms, K-16); and one for informal educators (museum, aquarium, zoo, science center, government agency staff). Projects must focus on marine or aquatic topics.

To be eligible, applicants must be current MAMEA members with at least one year’s membership. To be competitive, projects should meet the program structure described on the MAMEA Grants page at [www.mamea.org/minigrant.html](http://www.mamea.org/minigrant.html). To read about projects that have received MAMEA support in the past, see [www.mamea.org/pastgrants.html](http://www.mamea.org/pastgrants.html).

Visit the Grants page on the MAMEA website for the grant application form, as well as important details about the application process and grantee responsibilities. Or, contact the Grants Committee Chair, Carol Hopper Brill at [chopper@vims.edu](mailto:chopper@vims.edu). Proposals are accepted throughout the year, but the deadline for the 2016/17 cycle is September 15, 2016. Grant awards will be announced at the MAMEA conference in November 2016, and the funding period is 12 months, from November 2016 to October 2017, with no extensions.
More than 200 marine science students participated in the Mid-Atlantic’s three regional competitions of the 19th annual National Ocean Sciences Bowl (NOSB®) in February. Guided by their teacher coaches, teams spent weeks building content knowledge in diverse marine sciences. NOSB offers teachers an opportunity to incorporate more marine science into their curricula, and allows them to demonstrate the integrated nature of marine sciences. Students explore ocean subjects and demonstrate their command of wide-ranging subjects in head-to-head competition with other teens.

Congratulations to our Mid-Atlantic Competitors!

- The Chesapeake Bay Bowl was held on February 6, hosted by George Mason University. Held at GMU’s Arlington Campus, the contest drew twelve teams from schools in Maryland, the DC metropolitan area, as well as selected cities in nearby Pennsylvania and Northern Virginia. This year, the First Place team was from Montgomery Blair High School’s Blair Magnet Program in Silver Spring, MD, coached by Tran Pham. For more details on the CBB 2016 competition, contact Regional Coordinator Athena Kalyvas at akalyvas@masonlive.gmu.edu, visit the website at www.chesapeakebaybowl.org/ and check out the Chesapeake Bay Bowl’s Facebook page at www.facebook.com/ChesapeakeBayBowl.

- Virginia’s Blue Crab Bowl is co-coordinated by Old Dominion University’s Department of Ocean, Earth & Atmosphere and the Marine Advisory Services at the Virginia Institute of Marine Science. Thanks to major support from a private foundation, the 2016 contest was held on February 5 and 6 at Old Dominion University’s campus in Norfolk, Virginia. The field of 16 teams represented 10 Virginia high schools. For an unprecedented ninth year in a row, the team from Bishop Sullivan Catholic High School in Virginia Beach, VA, dominated first place, coached by science teachers Bill Dunn and Carol Stapanowich. In second place was a team from Chesapeake Bay Governor’s School-Warsaw Campus, and Broadwater Academy’s A and B teams swept third and fourth. For a description of the competition and announcement of this year’s winners, visit the Blue Crab Bowl website at: http://web.vims.edu/adv/bcb/index.html. The BCB Regional Coordinators are: Carol Hopper Brill at chopper@vims.edu, phone 804-684-7735; and Victoria Hill at vhill@odu.edu, phone 757-683-4911.

- This year, North Carolina’s Blue Heron Bowl was hosted by the Marine Science Department at University of North Carolina-Chapel Hill and the Institute of Marine Sciences in Morehead City. The NC event also took place February 6, on the campus of Carteret Community College in Morehead City, NC. Twenty teams from across NC participated in the tough competition; and emerging as the First Place team was Walter Williams High School, coached by Erica Bower in her first NOSB competition. In second place was Chapel Hill High School and Swansboro High placed third. For additional information on the competition: contact Regional Coordinator Janelle Fleming at janelle.fleming@gmail.com, visit the Blue Heron Bowl website at https://sites.google.com/site/blueheronbowl/ and find photos of the 2016 teams at the Blue Heron Bowl Facebook page: https://www.facebook.com/pages/Blue-Heron-Bowl/142146289175250.

The Blue Crab Bowl’s First Place team was Bishop Sullivan Catholic High School, coached by Bill Dunn (far right) and Carol Stapanowich (far left). Team members include (left to right): Gerry Fernandez; Ignatius Liberto; Jake Leporte; Team Captain Patrick West; and Dominic Gentlesk. Photo by Zoe Jakovenko, Virginia Sea Grant Photo Intern.
2016 Mid-Atlantic National Ocean Science Bowl Teams

Capturing First Place at Blue Heron Bowl was Coach Erica Bower (far left) and her winning team, including (left to right): Riley Nelson, Team Captain Jos Boswell, Carimar Melendez, Hanna Tawasha, co-coach Alicia Curtis, and Misbah Chhotani (seated). Photo courtesy of Dr. Janelle Fleming.

Chesapeake Bay Bowl’s First Place team was from Montgomery Blair High School’s Blair Magnet Program, coached by Tran Pham. Winning team members include (left to right): Alex Miao, Arnold Mong, co-coach Angelique Bosse, Coach Tran Pham, Lara Shonkwiler, Emma Jin, and James Winson. Photo courtesy of NOSB.

MAMEA Recognizes New Coaches and Top Coaches of Mid-Atlantic NOSB Competitions

MAMEA is pleased to recognize the coaches who prepare students for participation in the Mid-Atlantic regional NOSB competitions. To acknowledge the effort of teachers new to the competition, MAMEA awards a one-year membership which helps link these teachers to MAMEA’s active community of marine and aquatic educators. To recognize the accomplishments of the Bowls’ winning coaches, the MAMEA Top Coach awards provide complementary registration to MAMEA’s Fall Conference.

Please welcome these 2016 NOSB Mid-Atlantic New Coaches as MAMEA members:

Blue Crab Bowl
Sandra Bennett, Culpeper County High School, Culpeper, VA
Dara Dodson, Culpeper County High School, Culpeper, VA
Tricia Kellogg, Seton School, Manassas
Hank Konstanty, Seton School, Manassas

Blue Heron Bowl
Erica Bower, Walter M. Williams High School, Burlington, NC
Leslie Brinson, NC School of Science and Math, Durham, NC
Kelli Havner, Lincoln Charter High School-Denver Campus, Denver, NC
Adam Kracuik, Millbrook High School, Raleigh, NC

Chesapeake Bay Bowl
Christian Bonnaffon, Lake Braddock Secondary School, Burke, VA
Curt Dorman, Yorktown High School, Arlington, VA
Jo-El Nelson, Shenandoah Valley Governor’s School, Fishersville, VA
And, congratulations to the Top Coaches from our three Mid-Atlantic Bowls. We look forward to seeing them at the 2016 MAMEA Fall Conference, this year in Lewes, DE.

- Blue Crab Bowl: Bill Dunn, Bishop Sullivan Catholic High School, Virginia Beach, VA
- Blue Heron Bowl: Erica Bower, Walter M. Williams High School, Burlington, NC
- Chesapeake Bay Bowl: Tran Pham, Montgomery Blair High School, Blair Magnet Program, Silver Spring, MD.

For more information about the National Ocean Sciences Bowl, as well as great up-to-the-minute news about marine research and policy issues, visit the NOSB website at www.nosb.org or the NOSB Facebook page at www.facebook.com/nosb.org.

2015 MAMEA Educator Awards

Congratulations to our 2015 MAMEA Educator awardees. See the full report on the MAMEA website for more information on each of our awardees (http://www.mamea.org/docs/MAMEA_AwardWinnerProfiles.pdf).

(Left) MAMEA President Andy Gould presented the 2015 MAMEA Informal Educator Award to Dr. Rosanne Fortner, recognizing her many accomplishments in marine and environmental education – both in the Great Lakes and Mid-Atlantic regions. Photo courtesy of A.Gould.

(Right) Tami Lunsford received the MAMEA honor in her classroom - following the 2015 MAMEA Conference - when Delaware colleague Chris Petrone made a surprise presentation. Photo by Sharon Dorr.

2016-17 MAMEA Board Nominees

MAMEA elections are coming up! The following candidates have been nominated to serve on Board positions for the 2016-17 term: President-Elect - Lauren Albright; Treasurer - Jackie Takacs; DC Rep - Allie Toomey; DE Rep - TBD; VA Rep - Rachel Riesback and Kristen Sharpe. As soon as we have profiles prepared for all nominees, we will post those on the MAMEA website and alert you, so you can get to know the candidates. On-line voting will be conducted in May. You will receive an e-mail with and electronic ballot and information on how to vote. Any questions, please contact the MAMEA Secretary, Carol Hopper Brill at chopper@vims.edu.