

NATIONAL OCEAN
SCIENCES BOWL®

20th Annual Chesapeake Bay Bowl

February 3, 2018

University of Delaware Hugh R. Sharp Campus
Lewes, DE



Welcome to the 20th Annual Chesapeake Bay Bowl at the University of Delaware Hugh R. Sharp Campus!

The Chesapeake Bay Bowl (CBB) is one of 25 regional competitions of the National Ocean Sciences Bowl (NOSB).

High school students from Maryland, Delaware, southeastern Pennsylvania, northern Virginia, and the District of Columbia are eligible to participate in the CBB. Teams of four participants and one alternate answer questions based on the marine sciences in a quick answer timed format along with more complex team challenge questions (TCQs).

Winners from today's competition will go on to compete in the national competition, which will be held in Boulder, Colorado, from April 19–22. The theme of this year's finals competition is *Our Ocean Shaping Weather*.

Good luck to all the teams in today's competition!

**Spectators are welcome in the competition rooms,
but *may not*:**

- Enter or leave a room during a match;
- Take pictures, notes, or audio recordings during competitions;
- Use mobile/texting devices, tablets, computers, etc. in competition rooms;
- Communicate with contestants during matches, after breaks;
- Talk, shout answers, make displays of approval or disapproval or gestures that may be construed as signaling;
- Talk in the halls outside competition rooms during matches

**Please respect the integrity of the competition and
the considerable effort made by ALL teams
and officials in preparing for this event.**

CBB Schedule of Events

Saturday, February 3

- 7:00–7:30 a.m. Officials check-in and breakfast
Harbor Room Lobby
- 7:35–8:00 a.m. Officials’ meeting and group photo
Schooner Room
- 7:45–8:15 a.m. Team registration, lodging check-out (if applicable)
and breakfast
Harbor Room Lobby
- 8:30 a.m. Competition day welcome and meeting
Mandatory for all competitors and coaches
Announcements, rules review
Pilot Room
- 9 a.m. Round robin competition begins
See match schedule and posted room assignments
- 11:15 a.m. Lunch
Officials & Volunteers—*Schooner Room*
Teams & *Supporters —*Pilot Room*
** Parents and friends wishing to purchase
a lunch ticket may do so at Bay Bowl Central.*
- 12 p.m. Single-elimination rounds begin
*Match schedule and room assignments will be posted
at Bay Bowl Central*
- 2 p.m. Trophy rounds begin
Harbor Room
- 3:15 p.m. Awards ceremony directly follows
the last competition round

***Immediately following the end of the awards ceremony,
official photos will be taken of the winning teams.***

TEAM INFORMATION

Liberty High School **A**

Eldersburg, MD

Coach: Beth Schap

Team: Jake Filomena
Josh Kelly
Ryan Burrows
Kaya Holmes
Kyle Sheetz

Montgomery Blair High School **A**

Silver Spring, MD

Coach: Tran Pham

Team: Noah Singer
David Wu
Anish Senapati
Elliot Kienzle
Laura Cui

State College Area High School **A**

State College, PA

Coach: Sheila Abruzzo

Team: Connor Cai
Evelyn Kuo
Emily Wang
Jasmine Cao

Liberty High School **B**

Eldersburg, MD

Coach: Deb Mathias

Team: Zach Morris
August Barquin
Julia Wroblewski
Brett Keely
Sallyanne Howard

Montgomery Blair High School **B**

Silver Spring, MD

Coach: Angelique Bosse

Team: Alice Varughese
Sophia Weng
Christopher Tong
Katherine Lei
Eli Qian

State College Area High School **B**

State College, PA

Coach: Susan Braun

Team: Wayne Zhao
Roshni Raj
Max Katsouros
Rose Hudson
Soomin Park

Loudon Academy of Science

Sterling, VA

Coach: Linda Gantz

Assist. Coach: Gina Craun

Team: Sonia Chandra
Sophie Wong
Faduma Khalif
Matthew Armstrong
Caroline Chen

Newark Charter School **A**

Newark, DE

Coach: Tami Lunsford

Team: Emily Dorrell
Max Roberts
Sloan Healy
Nawel Hamroun

Thomas Jefferson High School for Science & Technology **A**

Alexandria, VA

Coach: Lisa Wu

Team: Katherine Barbano
Richard Pan
Madeline Old
Mark Putnam
Jainam Modh

Lower Dauphin High School

Hummelstown, PA

Coach: Ron Yerger

Assist. Coach: Sherri Coonelly

Team: Owen Coonelly
James Rodgers
Emily Scholfield
Michelle Yohe
Kelly Barr

Newark Charter School **B**

Newark, DE

Coach: Holly Ariff

Team: Tomas Yarovoy
Sabine Lowe
Mary Bilinsky
Alyssa Perrin
Benjamin Dix

Thomas Jefferson High School for Science & Technology **B**

Alexandria, VA

Coach: Shawn Stickler

Team: Chris Kan
Timothy Lou
Zachary Pracher
Aarushi Tripathy
Atharva Haldankar

VOLUNTEERS

2018 CBB Coordinator

Christopher Petrone

Delaware Sea Grant Marine Advisory Service / University of Delaware

University of Delaware

Molly Ashur
Andrew Aufdemberge
Dr. Jennifer Biddle
Melanie Brennan
Michelle Burt
Dr. Jonathan Cohen
Stephanie Dohner
Lisa Dorey
Paul Ernst
Dr. Emily Estes
Kristen Fellows
Joe Gradone
Chris Grasso
Dr. Michael Graw
John Hanson
Cassandra Harris
Katherine Hudson
Lane Johnston
Mark Jolly-Van
Bodegraven
Jennifer Joseph
Jack Pallace
Dr. Keeley Powell
Kyle Runion
Danielle Swallow
Dr. Dana Veron
Maoli Vizcaino
Dr. Andrew Wozniak
Talene Yeghissian
Kristin Yoshimura

American Association for the Advancement of Science

Jennifer Salerno

Beebe Healthcare

Jill Petrone

Chesapeake Research Consortium/ Chesapeake Bay Program

Rachel Dixon

Delaware Dept. of Natural Resources & Environmental Control

Dr. Christopher Main

Devils Backbone Brewery

Susan Wozniak

Education Achievement Consultants

Brenda Dorrell

Environmental Consultant and Personal Development Coach

Benjamin Baron-Taltre

HP Environmental, Inc.

Dr. Bill Kilpatrick

Johns Hopkins University

Joseph Federico
Afareen Jaleel

Johns Hopkins University / Applied Physics Lab

Dr. Wayne Sternberger

Maryland Dept. of Natural Resources

Becky Thur

Mid-Atlantic Renewable Energy Coalition

Heather Thomson

National Park Service

Ursula Lemanski

NOAA

Susan Holmes
Topher Holmes
Linden Wolf

Penn State University

Janine Mistrick

The Nature Conservancy

Katharine Leigh

U.S. Global Change Research Program

Laura Satkowski

USFWS

Samantha Brooke

Competition Rules Overview

The Chesapeake Bay Bowl follows the official rules of the National Ocean Sciences Bowl (www.nosb.org). The following overview should help spectators follow the competition, but not all rules are presented here.

Officials' Roles

- **Moderator:** Asks the questions
- **Science Judge:** Answer acceptability
- **Timekeeper:** Keeps the match clock
- **Scorekeeper:** Tallies team scores
- **Rules Judge:** In charge of procedure
- **Team Challenge Judge:** Grades TCQs

Players

Each team consists of four or five students: one captain, three players, and one alternate (optional). At the end of each segment, the team's alternate player may rotate in.

Types of Questions

There are two "buzzer question" segments per match. In the buzzer segment there are:

- **Toss-up Questions:** Must buzz in to answer. No consultation among players.
- **Bonus Questions:** Given after a correct toss-up. Teams may consult on bonus questions, but only the team captain may give the answer.
- **Team Challenge Questions (TCQs):** Written, short essay questions presented between buzzer segments. There will be two TCQs at the segment. Consultation allowed.

Answers

Responses to multiple-choice questions can be the letter (W, X, Y, Z) or the word answer, exactly as specified. Anything else is unacceptable. The first answer stated is the one that counts.

If a player buzzes in before the moderator has completely read the question:

The moderator recognizes the player and the player answers the question. If the answer is unacceptable, the team loses four points and the question is read to the opposing team. If the answer is acceptable, the team gets four points and the chance to answer a bonus question. If a player “blurts” an answer without being recognized, their team loses its turn; no points are awarded or deducted.

Timing

- After toss-up question is read: Five seconds to buzz in
- From being recognized to answer: Three seconds
- After bonus question is read to answer: 20 seconds
- For TCQs: Two to five minutes

Points

- Toss-up question: Four points
- Bonus question: Six points
- Interrupt, recognized, but answer not acceptable: Four points are deducted
- Blurt unrecognized: Zero points and team loses their chance to answer
- TCQs: Zero to 20 points (partial credit possible)

Challenges to Rules or Scientific Answers

Players (not audience members, alternate players or coaches) may challenge a ruling on toss-up or bonus questions, but only before the moderator begins reading the next question. The timekeeper stops the clock, officials may confer and the appropriate judge makes a ruling. Officials’ rulings are final. There are no challenges on TCQs.

***A complete set of rules is available at
Bay Bowl Central.***

Team Divisions

Atlantic Division

T1: Montgomery Blair **A**
T2: Liberty **A**
T3: Thomas Jefferson **B**
T4: Newark Charter **B**

Pacific Division

T5: Thomas Jefferson **A**
T6: Lower Dauphin
T7: Liberty **B**
T8: State College **B**

Arctic Division

T9: State College **A**
T10: Newark Charter **A**
T11: Loudon Academy
T12: Montgomery Blair **B**

Round Robin Scoring

Win = 2 points

Tie = 1 point

Loss = 0 points

Competition Structure

After three Round Robin rounds (before lunch), scores will be tallied to determine the seeding for the Single-Elimination Rounds (after lunch). The top team from each division will be seeded #1–3, depending on their total Win/Loss points, and then Total Points Scored. The fourth seed will be a Wild Card team who has the fourth highest Win/Loss points, then Total Points Scored. The top four teams will be given a bye directly to the Quarterfinal Round. Seeds #5–12 will play-in to the Quarterfinal Rounds.

Round-by-round scores, seeding information and tournament bracket will be posted at Bay Bowl Central in the Harbor Room lobby.

The awards ceremony will follow the final game and will be held in the Harbor Room. Teams MUST ATTEND the awards ceremony to receive prizes and awards.

Match Guide

- **Round Robin:** Rounds 1, 2 & 3; Matches 1–18
- **Pigtail/Play-in:** Round 4; Matches 19–22
- **Quarterfinals:** Round 5; Matches 23–26
- **Semi-final:** Round 6; Matches 27–28
- **Consolation** (determines 3rd & 4th place): Round 7; Match 29
- **Championship** (determines 1st & 2nd place): Round 8; Match 30

Match Time, Room and Assignments for Teams and Officials

| Round Robin | Harbor 1 | Pilot | Schooner | Lighthouse | Harbor 2 | Windjammer | Teams Eliminated |
|--|--|--------------------------------------|--|--|---|--|---------------------------------|
| 9:00 AM Round 1 Matches 1-6 | 1 Mont Blair A Liberty A | 2 TJ B Newark B | 3 TJ A L. Dauphin | 4 Liberty B State Coll B | 5 State Coll A Newark A | 6 Loudon Acad Mont Blair B | None |
| 9:45 AM Round 2 Matches 7-12 | 7 Newark A Mont Blair B | 8 TJ A Liberty B | 9 Mont Blair A TJ B | 10 Liberty A Newark B | 11 State Coll A Loudon Acad | 12 L. Dauphin State Coll B | None |
| 10:30 AM Round 3 Matches 13-18 | 13 TJ A State Coll B | 14 L. Dauphin Liberty B | 15 State Coll A Mont Blair B | 16 Newark A Loudon Acad | 17 Liberty A TJ B | 18 Mont Blair A Newark B | None |
| 11:15 AM LUNCH | Teams: Lunch in Pilot Room; Officials: Lunch in Schooner Room; Seeding for Elimination Rounds: CBB Central | | | | | | |
| Elimination Rounds | Harbor 1 (undivided) | Pilot | Schooner | Lighthouse | Harbor 2 | Windjammer | Teams Eliminated |
| 12:00 PM Round 4 Matches 19-22 | 19 #9 v #8 | 20 #12 v #5 | 21 #10 v #7 | 22 #11 v #6 | | | L19, L20, L21, L22 |
| 12:35 PM Round 5 Matches 23-26 | 23 #1 v W19 | 24 #2 v W21 | 25 #3 v W22 | 26 #4 v W20 | | | L23, L24, L25, L26 |
| 1:10 PM Round 6 Matches 27-28 | 27 W23 v W26 | 28 W24 v W25 | | | | | All teams move to trophys |
| 1:45 PM | Break | | | | | | |
| Trophy Rounds — begin at ~2:00 PM in the Harbor Room | | | | | | | |
| All competitors are asked to attend all rounds and the Awards Ceremony | | | | | | | |
| 2:00 PM Round 7 | Match 29 (Consolation): L27 v L28 Winner = 3rd Place & Loser = 4th Place | | | | | | |
| 2:35 PM Round 8 | Match 30 (Championship): W27 v W28 Winner = 1st Place & Loser = 2nd Place | | | | | | |

Track Your Team

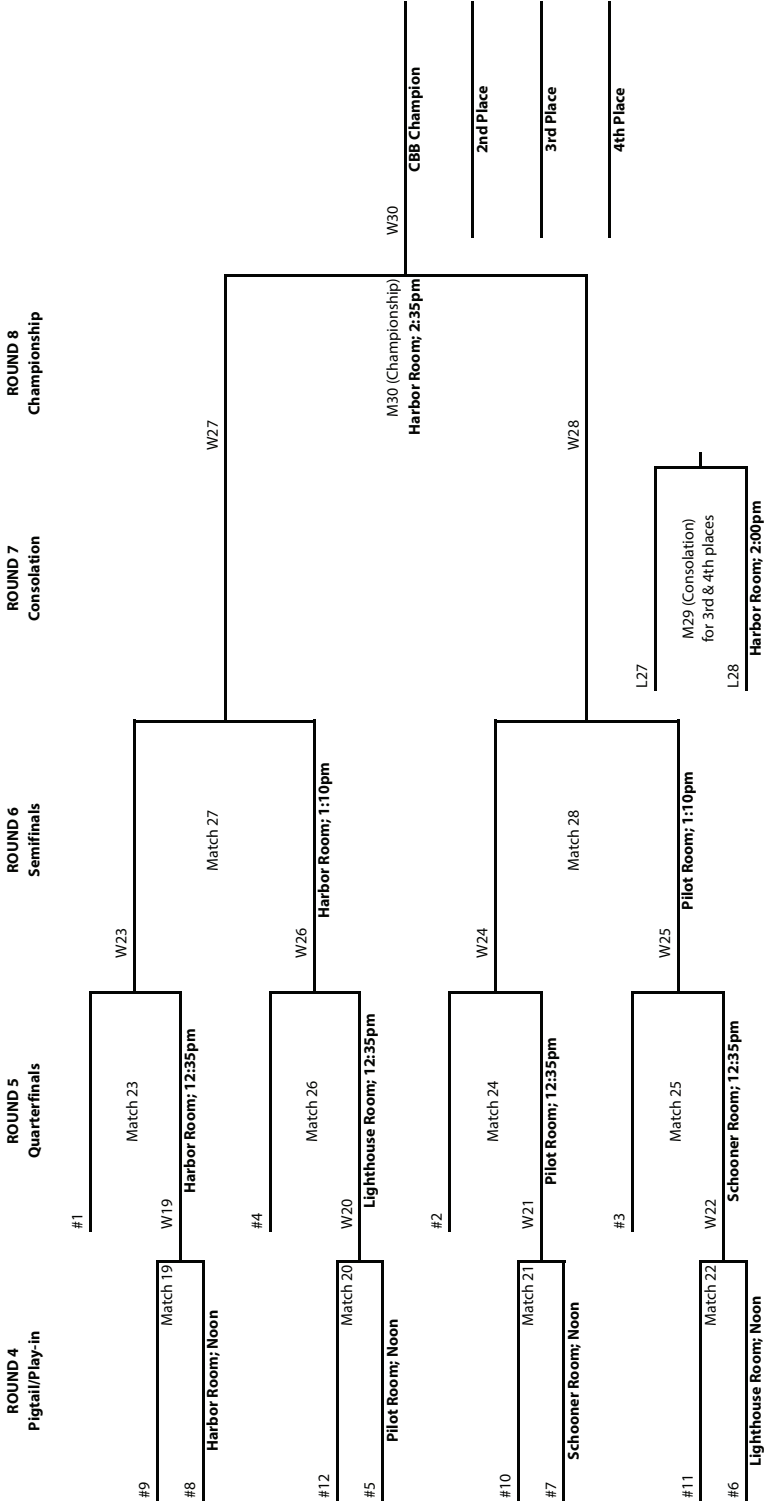
| School | Round 1 | | Round 2 | | Round 3 | | Total Score | Total W/L/T Pts | Seed |
|-----------------------------|---------|--------------|---------|--------------|---------|--------------|-------------|-----------------|------|
| | Score | W/L/T Points | Score | W/L/T Points | Score | W/L/T Points | | | |
| Liberty A | | | | | | | | | |
| Liberty B | | | | | | | | | |
| Loudon Academy of Sci | | | | | | | | | |
| Lower Dauphin | | | | | | | | | |
| Montgomery Blair A | | | | | | | | | |
| Montgomery Blair B | | | | | | | | | |
| Newark Charter A | | | | | | | | | |
| Newark Charter B | | | | | | | | | |
| State College Area A | | | | | | | | | |
| State College Area B | | | | | | | | | |
| Thomas Jefferson A | | | | | | | | | |
| Thomas Jefferson B | | | | | | | | | |

W = 2
points

Tie = 1
point

Loss = 0
points

Single Elimination Bracket



About the National Ocean Sciences Bowl & the Consortium for Ocean Leadership

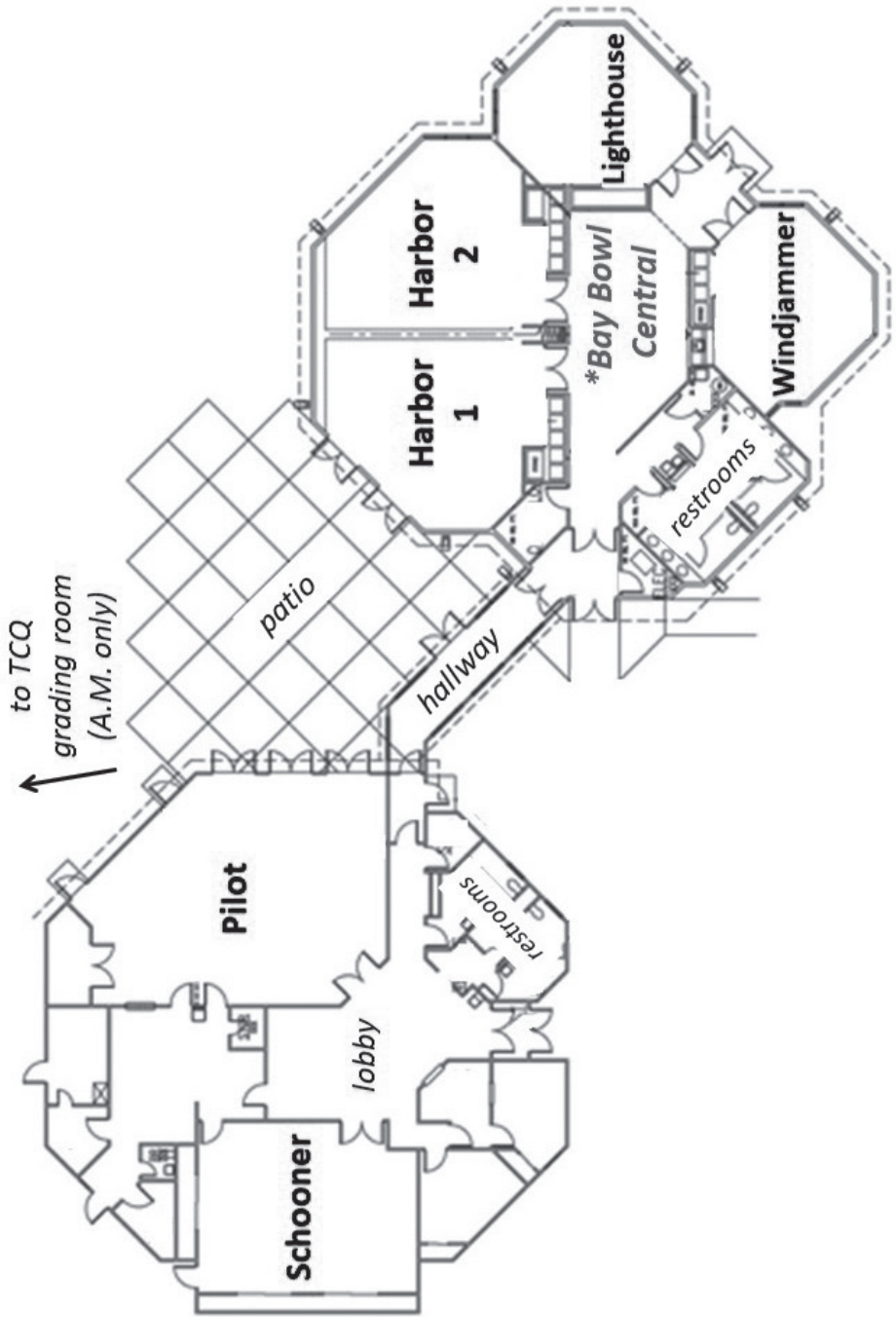


The Consortium launched the first National Ocean Sciences Bowl (NOSB) competition in 1998 for Oceanographic Research and Education (CORE) to further its mission of supporting and expanding ocean sciences education during the International Year of the Ocean.

In 2007, CORE merged with the Joint Oceanographic Institutions to form a new organization, the Consortium for Ocean Leadership (COL). Representing over 100 of the nation's leading public and private oceanographic institutions, universities, industries and aquariums, COL's mission is to advance research, education, and sound ocean policy. The Consortium office in the District of Columbia hosts the NOSB national headquarters and coordinates the annual national finals competition.

Designed to inspire and challenge high school students, the NOSB and the 25 regional competitions test competitors' knowledge of the marine sciences. Each match pits two teams of four students in an academic quiz-bowl format. Competitors use a buzzer system to respond to rapid-fire multiple choice and short answer questions read by a moderator. Additionally, teams work collectively to produce written answers to complex analytical questions called Team Challenge Questions (TCQs).

Virden Center Map



Since the college's founding in 1970, the administration, faculty and researchers at University of Delaware's College of Earth, Ocean, and Environment (CEOE) have sought to create one of the preeminent institutions with earth, ocean and environmental programs in the nation.

The 2006 union with the Department of Geological Sciences and the 2009 union with the Department of Geography added the critical component of earth systems to the college's work and furthered its quest for excellence in the field.

Through the addition of these departments and the School of Marine Science and Policy, CEOE brings the latest advances in technology to bear on both teaching and conducting ocean, earth and atmospheric research.



Since the University of Delaware was designated the nation's ninth Sea Grant College in 1976, Delaware Sea Grant's goal has been to promote the wise use, conservation, and management of marine and coastal resources through high-quality research, education and outreach activities that benefit the public and the environment.

Currently, Delaware Sea Grant is conducting research in priority areas ranging from seafood safety to coastal hazards, preparing the next generation of environmental leaders through hands-on research and educational activities, and sharing trustworthy information on coastal topics with people from all walks of life.

***For more information about
CEOE and Delaware Sea Grant's programs and facilities visit
www.ceoe.udel.edu | www.deseagrant.org***

University of Delaware Hugh R. Sharp Campus

The Hugh R. Sharp Campus serves as the research and teaching base for faculty in marine biosciences and oceanography. The 62-acre campus comprises offices, classrooms, two primary laboratories, a meeting and conference facility, a fully equipped modern library and electronic meeting facilities.

The harbor is home to state-of-the-art research vessels, including the 146-foot flagship, the *R/V Hugh R. Sharp*. The Lewes campus is also home to a 2-megawatt wind turbine that powers the campus (with surplus) from September to May.



Connect with us to learn about
"Science Serving the Delaware Coast!"

Find us on social media:
DESeaGrant

Visit us online:
www.deseagrant.org



2018 Chesapeake Bay Bowl SPONSORS



College of Earth, Ocean,
& Environment



Under the
Sea





Interested in pursuing a career in the ocean sciences?

Apply for a National Ocean Scholarship!

The **National Ocean Scholar Program** offers tuition assistance to rising college freshmen planning to major in an ocean science field.

To be eligible, students must:

- Have participated in the National Ocean Sciences Bowl (NOSB®) or the NOSB Living on the Ocean Planet video contest during high school
- Be graduating from high school this year
- Be planning to pursue a post-high school degree in a marine or ocean science field this coming fall

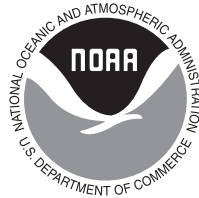
Application materials are available online at www.nosb.org.

For more information or questions please contact Ocean Leadership at nosb@oceanleadership.org.



Photos courtesy of NOAA

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EASTMAN



THE CURTIS & EDITH MUNSON FOUNDATION

Sharon & Wayne
Sternberger

 RAPP MARINE



Presented by the University of Delaware
College of Earth, Ocean, and Environment and
the Delaware Sea Grant College Program



**Sunday, Oct. 7, 2018
11 a.m. to 5 p.m.**

**UD Hugh R. Sharp Campus
Lewes, Delaware**



Join us ...

for a free family-friendly celebration of the sea!

**Touch tanks • Children's activities • Research demonstrations
Crab cake cook-off • Live music • Ship tours • Much more!**

#DeCoastDay



www.decoastday.org

