2015 ANNUAL REVIEW

NATIONAL OCEAN SCIENCES BOWL®
MESSAGE FROM OCEAN LEADERSHIP

The ocean is integrally linked to the global environmental challenges we face as a society—from climate change and coastal resilience to jobs and food security. But ocean science is not a topic generally covered in high school curricula, so most students aren’t learning about this critical subject.

For 18 years, the National Ocean Sciences Bowl (NOSB) has brought together the nation’s brightest high school scholars and immersed them in ocean science. The NOSB, an ocean science academic competition, allows students an invaluable opportunity to dive into the study of the ocean. In 2015, approximately 1,800 high school students and 1,500 volunteers from the academic and professional ocean science community were exposed to this imperative knowledge. The NOSB held 23 regional competitions across the United States, culminating with one Finals Competition, the 18th Annual National Ocean Sciences Bowl Finals in Ocean Springs, Mississippi.

Each year, the NOSB has a theme to increase awareness and comprehension of a societally-relevant subject matter related to ocean science. The theme for 2015 was the Science of Oil in the Ocean; a timely topic given that this year marked the five-year anniversary of the Deepwater Horizon incident in the Gulf of Mexico. The Gulf area has endured many disasters, from Hurricane Katrina to the Deepwater Horizon oil spill, and throughout the 2015 Finals weekend students participated in scientific activities and field trips to gain a deeper understanding of regional issues that have had an impact on organisms, ecosystems and humans alike.

At both the regional and national level, the NOSB competition consists of buzzer-style, multiple choice questions and longer, critical thinking-based team challenge questions on ocean-related topics. Students also participated in the Scientific Expert Briefing, where they recreated a congressional testimony that provides a broader understanding of the connections between science, policy, communication and the public.

At its core, the NOSB is an academic competition. However, it is much more than that. Along with the competitions, the NOSB program hosted a video competition, “Living on the Ocean Planet,” with the National Marine Educators Association; awarded five scholarships; and took the top two 2015 winning teams on awards trips to conduct hands-on marine science research, experience maritime culture, and explore career pathways.

The NOSB is a broad community of students, educators, scientists, federal agencies, and sponsors. All members of the NOSB “family” benefit from the interactions with one another through question development, competition preparation and participation, and more. Many of the NOSB student participants go on to pursue a college degree or future career in marine science, as evidence by data gathered from an ongoing NOSB longitudinal study, which began in 2000. When asked if their NOSB preparation and competition activities benefited them in their college career, 96% responded yes, noting specifically that they gained increased content knowledge, enhanced study and self-discipline skills, greater abilities to communicate in public, and heightened career interest and awareness.

Overall, the NOSB strives to encourage the next generation of marine scientists, policy makers, educators, environmental advocates and informed citizens to consider and appreciate the ocean. While 2015 did just that, programmatic growth and sustainability is a continued focus as we plan for the NOSB’s future, which is why we formed the National Ocean Sciences Bowl Advisory Council in 2014. We have also been building relationships with corporations, foundations, and individuals who want to ensure young people understand the importance of the ocean and the impact they can have on our environment. The NOSB, with the Advisory Council, expects to sustain the core program while focusing on expanding in the areas of technology, environmental stewardship, and broadening the participation of under-represented minorities in 2016 and beyond.

Sherri Goodman
President & CEO, Consortium for Ocean Leadership

Kristen Yarincik
Vice President & Director, Research & Education
Director, National Ocean Sciences Bowl
2015 Year In Review

2015 Theme:
The Science of Oil in the Ocean

Regional Results:
23 regional competitions in 32 states
359 Teams
1,795 students (equal number males and females)
1,510 Volunteers

18th Annual Finals Competition Results:
23 teams, 112 students, 92 volunteers

5 National Ocean Scholar Program scholarships awarded
(made possible through the NOSB’s online crowd-sourcing campaign, Get in the Game)

$1.035 million in funding
(including federal, foundation, corporate and individual support)

$19,915 donated by individuals
The 2015 NOSB National Champions were students from Boise High School, Boise, Idaho, maintaining their 2014 championship title. Coming in second place was Dexter High School (Michigan) and Marshfield High School (Wisconsin) taking third place. “This year, the top three NOSB Finals teams were from states with no direct access to the ocean. What a testament of the reach and scope of this program!” noted NOSB Director, Kristen Yarincik.

The National Champions were invited to participate in Capitol Hill Oceans Week (CHOW), organized by the National Marine Sanctuaries Foundation, in June. CHOW organized its first ever youth panel, “The Wave of the Future: What Do the Youth of America Think?” Boise team captain, Nate Marshall, represented the team and discussed how being part of the NOSB has raised their awareness of ocean issues and careers and how even those in the middle of the country impact the oceans. He also highlighted the vital importance of scientific education and funding for education programs such as the NOSB.

The topic of the 2015 Science Expert Briefing—the mock congressional testimony component of National Finals—was the reauthorization of the Integrated Coastal and Ocean Observation System Act of 2009. The top placing SEB team in 2015 was Thomas Jefferson High School for Science and Technology (Alexandria, Virginia). Boise High School placed second. At the request of Zdenka Willis, Director of the U.S. Integrated Ocean Observing System (IOOS) at NOAA, both teams presented and discussed their recommendations to the Director and other federal agency representatives on June 10 in Washington DC. NOAA’s IOOS Program was particularly interested in the students’ analysis. After hearing the teams’ recommendations, Zdenka Willis noted “to say we were impressed is an understatement. Their astute and critical analysis gave us some new ideas to pursue. We echo Sherri Goodman, President of the Consortium for Ocean Leadership in her weekly newsletter – ‘They are truly the future of ocean science.’ She added – ‘And the future is bright.’”

“This year, the top three NOSB Finals teams were from states with no direct access to the ocean. What a testament to the reach and scope of this program!”

– NOSB Director, Kristen Yarincik.

Each year, the award for the top winning teams at NOSB Finals Competition is an experiential trip that provides unique hands-on field and laboratory experience in the marine sciences. The trips expose students to science professionals and career opportunities, while enriching their understanding and stewardship of the ocean. These trips were made possible through funding from the IEEE Oceanic Engineering Society. The 2015 NOSB National Champions from Boise High School were awarded a week-long trip to Southeast Alaska where they conducted a humpback whale survey, collected plankton samples, and learned about bioenergetics, salmon research, aquarium outreach and hatchery research and Alaska native totem poles while visiting numerous research laboratories, aquariums and museums. The team from Dexter High School placed 2nd and received a five-day trip to the coast of Texas. The team toured aquariums, museums, met with numerous researchers studying marine genomics, fisheries and benthic organisms and snorkeled in sea grass beds.
TESTIMONIALS

What I as a parent especially value about NOSB competitions and the overall program is the breadth and depth of focus across the disciplines. Be it policy, chemistry, geology, oceanography, biology...the NOSB curriculum takes them all into account. It is an absolutely amazing preparation for an effective approach to applying one’s academic study to the real world.

– Jennifer Dickey, parent of Salmon Bowl student

I didn’t really have awareness of any impacts to the ocean before I was involved in [NOSB], and then I was exposed to [a lot] of different information about oil spills, about ocean acidification, about climate change, about sea level rise... It’s helped me to realize that even though I’m from an inland state, everyone on the planet plays a role in conserving the oceans. It’s helped me to be aware of how the choices that I make might affect the ocean.

– Nate Marshall, student, Boise High School (Idaho), Salmon Bowl

As educators, we often plant seeds not knowing in what ways they will grow. NOSB certainly plants seed of greatness in the students that it touches. There is not a student in my science classes who does not want to try-out for, and make, the NOSB teams for next year. Several freshmen have even asked for study materials to check out for the summer (we don’t try-out until October). The program has also energized my teaching, my enthusiasm, and my knowledge and, for that, I am very appreciative.

– Heather Moran, coach, Boardman High School (Ohio), Penguin Bowl

Coaching our school’s NOSB team has been one of the most satisfying aspects of my teaching career, as it has provided an opportunity to combine two of my favorite things—love of the ocean and joy of working with highly motivated and enthusiastic young people. Working with the [NOSB] team has allowed me to build relationships with students outside of the classroom, throughout the course of their high school careers (I teach freshmen), and to enjoy their company during the national competitions and on the three wonderful award trips we have made together.

– Sarah Damassa, coach, Lexington High School (Massachusetts), Blue Lobster Bowl

The [NOSB] provides opportunities [for volunteers] to plant the seed of knowledge for the next generation of marine scientists. When you talk to [the kids], and they see what kinds of things you do for work, they can see what it’s actually like to be a marine scientist.

– Tyler Carrier, Volunteer, 2015 Nor’easter Bowl
THANK YOU!
The NOSB would like to thank each and every person who gave to the program, including the NOSB sponsors and the support of a grassroots network of current students and their families, dedicated alumni, volunteers, regional competition coordinators, NOSB staff, and others who give to ensure the program’s sustainability. During the 2014-2015 competition year, more than 150 generous individual donors helped support the NOSB program. These donations enabled the NOSB to continue offering students a unique way to learn about the environment and ocean sciences.
We would also like to thank our 2015 sponsors; 2015 regional and Finals Competition hosts; and award trips hosts. Your support is invaluable and helps keep the program thriving year after year.
The NOSB staff would specifically like to thank Dr. Robert Gagosian, past President and CEO of the Consortium for Ocean Leadership, for his leadership and dedication to the NOSB program from 2007-2015. The NOSB greatly appreciates his continued commitment to the mission and students of the NOSB.

The NOSB would also like to thank the Advisory Council who shares the responsibility, with the Consortium for Ocean Leadership, for the strategic direction and long-term sustainability of the NOSB program.

Chair: RADM Dick West (U.S. Navy, Retired), former President/CEO of the Consortium for Oceanographic Research and Education
Hon. Brian Baird, former U.S. Congressman (D-WA)
Ms. Elizabeth Creed, Principal Systems Engineer at Kongsberg Underwater Technology
Dr. Rosanne W. Fortner, Professor Emeritus, The Ohio State University
Mr. Matthew Huelsenbeck, Manager, Team Relations, Wendy Schmidt Ocean Health XPRIZE
Dr. Nancy Knowlton, Sant Chair for Marine Science, Smithsonian National Museum of Natural History
VADM Conrad Lautenbacher (U.S. Navy, Retired), CEO, GeoOptics and former Administrator of the National Oceanic & Atmospheric Administration
Dr. Ellen Prager, Marine Scientist and Author, Earth to Ocean
Dr. Ralph Rayner, Sector Director of Energy, BMT Group Limited, and Professorial Research Fellow, London School of Economics and Political Science
Dr. Nancy Targett, Dean of the College of Earth, Ocean, and Environment, University of Delaware
HOW TO STAY IN TOUCH:
Website – http://nosb.org/
Facebook – https://www.facebook.com/nosb.org
Twitter – #NOSBRocks https://twitter.com/NOSBRocks
Instagram – NOSBRocks https://instagram.com/NOSBRocks/
Tumblr – NOSBRocks http://nosbrocks.tumblr.com/

HOW TO HELP THE NOSB:
Volunteer – http://nosb.org/community/volunteers/
Combined Federal Campaign – #12167