



# NOAA EDUCATION IMPLEMENTATION PLAN FISCAL YEARS 2018-2019



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## INTRODUCTION

The *FY2018-2019 NOAA Education Implementation Plan* is a companion to the [2015-2035 NOAA Education Strategic Plan: Advancing NOAA's Mission Through Education](#). NOAA Education supports an informed society that uses NOAA-related sciences to make the best social, economic, and environmental decisions. The Education Strategic Plan identifies five goals that advance NOAA's mission through education and provides a framework for tracking progress.

Our FY18-19 Implementation Plan outlines 42 actions we will take to make progress towards the Strategic Plan. These actions are priorities for our community for the next two years. We commit to tracking and reporting progress on each action.

## PLAN OVERVIEW

The FY18-19 Implementation Plan lays out how the NOAA Education Council and individual education programs will make progress toward the goals of the Education Strategic Plan. The Implementation Plan is structured around actions, or specific steps defining how we will make tangible progress over the next two years.

The plan reflects the many levels of collaboration within the NOAA Education Community. Individual members of the NOAA Education Council developed **program actions** that will improve and enhance their programs. As a community, we identified **Council actions**, in which multiple programs will collaborate to make progress on a high priority topic. These collective efforts complement program activities. Each action identifies the program or programs involved and the tasks that will be completed.

## Goal 1: Science-Informed Society

**An informed society has access to, interest in, and understanding of NOAA-related sciences and their implications for current and future events.**

This goal lays the groundwork for an informed and scientifically literate society. We work with a wide array of educators and partners who collectively reach audiences in the millions. NOAA's education programs provide opportunities for students and the public to learn science and engage in our mission. We aim to inspire students and the public, help educators incorporate NOAA resources into their classrooms, and build enduring relationships with partners whose expertise complements our own.

### OBJECTIVES

- 1.1. Youth and adults from all backgrounds improve their understanding of NOAA-related sciences by participating in education and outreach opportunities.
- 1.2. Formal and informal educators integrate NOAA-related sciences into their curricula, practices, and programs.
- 1.3. Formal and informal education organizations integrate NOAA-related science content and collaborate with NOAA scientists on the development of exhibits, media, materials, and programs that support NOAA's mission.

## GOAL 1 ACTIONS

1.1. Youth and adults from all backgrounds improve their understanding of NOAA-related sciences by participating in education and outreach opportunities.

Program	Action	Tasks
MDP	<b>Increase K-12 marine debris engagement by expanding presence with educators and local schools</b>	<ul style="list-style-type: none"> <li>● Pilot one or two Marine Debris Labs for K-12 schools. These labs will be locally-based, hands-on learning experience at NOAA Headquarters.</li> <li>● Develop a strategy to transport Marine Debris Labs activities to schools.</li> <li>● Review outreach product inventory for products in demand, topics, and audience gaps to determine ways to better reach educators.</li> <li>● Streamline a process for building out educator contact list.</li> </ul>

1.2. Formal and informal educators integrate NOAA-related sciences into their curricula, practices, and programs.

Program	Action	Tasks
CPO	<b>Deploy the new model for climate workshops for formal and informal educators</b>	<ul style="list-style-type: none"> <li>● Create a collection of professional development opportunities.</li> </ul>
NESDIS	<b>Develop and promote the Data in the Classroom online interactive curriculum</b>	<ul style="list-style-type: none"> <li>● Develop a new module on severe weather.</li> <li>● Host a Data in the Classroom teacher workshop at the National Science Teachers Association national conference.</li> <li>● Host a Data in the Classroom webinar as part of the NOAA Planet Stewards monthly webinar series.</li> <li>● Migrate the existing ocean acidification module to the new platform.</li> <li>● Migrate the existing water quality module to the new platform.</li> </ul>
NOS	<b>Improve, amend, market NOS Education websites</b>	<ul style="list-style-type: none"> <li>● Add new coastal resilience simulation documents to the games website.</li> <li>● Market updated sites and new content.</li> <li>● Update old site professional development content.</li> </ul>
NWS	<b>Give educators ideas for how to use NOAA and NWS resources to teach Next Generation Science Standards (NGSS) and other “three-dimensional learning” approaches</b>	<ul style="list-style-type: none"> <li>● Review existing materials that have already been used in California and revise with feedback from the NOAA Education community to create materials for a national audience.</li> <li>● Polish materials created and link with JetStream in order to use the NWS Online School for Weather (JetStream) to help meet standards.</li> <li>● Develop a package of resources that other NWS field offices can use to support teachers in NGSS states.</li> <li>● Offer a webinar to present materials to NWS field staff.</li> </ul>
OCM/ NERRS	<b>Improve consistency in Teachers On the Estuary (TOTE) trainings</b>	<ul style="list-style-type: none"> <li>● Facilitate a discussion with NERRS educators to get feedback on effective TOTE implementation and consistency.</li> <li>● Consult with the NOAA Education community on how TOTE workshops can support science standards.</li> <li>● Refine criteria/expectations for program design and TOTE workshops outcomes.</li> <li>● Officialize the revised criteria in an updated TOTE description document.</li> <li>● Analyze evaluation data from the first year of the three-year TOTE evaluation.</li> </ul>

1.2. Formal and informal educators integrate NOAA-related sciences into their curricula, practices, and programs. *(Continued)*

<u>Program</u>	<u>Action</u>	<u>Tasks</u>
OER	<b>Update current OER educator professional development offerings with an eye toward continuous improvement</b>	<ul style="list-style-type: none"> <li>• Update all lessons and introductory materials associated with Exploring the Deep Ocean with NOAA with recent exploration content.</li> <li>• Provide binders of updated materials for professional development workshops to all Education Alliance Partner sites.</li> <li>• Work with Education Alliance Partners and beyond to execute and deliver updated professional development workshops using updated materials.</li> </ul>
TAS	<b>Improve understanding of the types of NOAA resources and topics used by TAS in their curricula</b>	<ul style="list-style-type: none"> <li>• Survey teachers 10 months post cruise each year.</li> <li>• Analyze data from 10-month survey data each year.</li> </ul>

1.3. Formal and informal education organizations integrate NOAA-related science content and collaborate with NOAA scientists on the development of exhibits, media, materials, and programs that support NOAA’s mission.

<u>Program</u>	<u>Action</u>	<u>Tasks</u>
BWET	<b>Publicize and share best practices</b>	<ul style="list-style-type: none"> <li>• Incorporate Meaningful Watershed Education Experiences (MWEE) best practice recommendations from national evaluation analysis into FY18 and FY19 federal funding opportunities (FFOs).</li> <li>• Develop resources to support grantee implementation of best practices.</li> </ul>
CPO	<b>Support select school districts climate-related implementation of standards</b>	<ul style="list-style-type: none"> <li>• Collaborate and share information about climate and energy literacy, upcoming events, and capacity building opportunities through the Climate Literacy and Energy Awareness Network (CLEAN).</li> </ul>
NOS	<b>Provide distance learning opportunities and face-to-face workshops on Earth System Science and STEM</b>	<ul style="list-style-type: none"> <li>• Develop, deliver, and evaluate distance learning opportunities independently and in partnership with NOAA Program Offices, Programs, and NOAA partner organizations.</li> <li>• Develop, deliver, and evaluate face-to-face workshops independently and in partnership with NOAA Program Offices, Programs, and NOAA partner organizations.</li> <li>• Work cooperatively with National Earth Science Teachers Association to deliver a series of distance learning events on STEM/Earth science education at the elementary school level.</li> </ul>
OED	<b>Develop and implement the Coastal Ecosystem Learning Center (CELC) Aquaculture Initiative</b>	<ul style="list-style-type: none"> <li>• Conduct a literature review of public attitudes and perceptions about aquaculture to identify gaps and inform aquarium actions.</li> <li>• Conduct a survey, designed by the Aquarium of the Pacific, to understand capabilities of network members, specific to aquaculture messaging and public engagement.</li> <li>• Develop a shared set of aquarium messages about aquaculture, addressing seafood production (shellfish, fin fish), habitat restoration, and breeding of ornamental species.</li> <li>• Build capacity by connecting aquariums with local NOAA staff (Fisheries, Sea Grant, NOS) working on aquaculture.</li> </ul>
OER	<b>Expand OER Education Alliance Partnerships to include more inland locations</b>	<ul style="list-style-type: none"> <li>• Work with National Marine Sanctuary Foundation to identify locations for Education Alliance Partner expansion.</li> <li>• Establish at least one new Education Alliance Partnership in an inland state.</li> </ul>

## Goal 2: Conservation and Stewardship

**Individuals and communities are actively involved in stewardship behaviors and decisions that conserve, restore, and protect natural and cultural resources related to NOAA's mission.**

Promoting awareness of conservation issues and stewardship actions is an important way to share NOAA's mission with students and the public. Our education programs offer opportunities to participate in habitat restoration, everyday behaviors, and policy changes that help improve natural resource management. We seek to better understand how our education portfolio supports stewardship and by encouraging educators and institutions to integrate stewardship actions into their educational projects.

### OBJECTIVES

- 2.1. Youth and adults from all backgrounds are knowledgeable about conservation and stewardship practices and skilled in applying them to address local, regional, national, and global issues related to NOAA's mission.
- 2.2. Formal and informal educators integrate NOAA-related conservation and stewardship concepts and activities into their curricula, practices, and programs.
- 2.3. Formal and informal education organizations establish guidance and provide support towards increasing participation of education audiences in conservation and stewardship activities related to NOAA's mission.

## GOAL 2 ACTIONS

2.2. Formal and informal educators integrate NOAA-related conservation and stewardship concepts and activities into their curricula, practices, and programs.

Program	Action	Tasks
BWET	<b>Sustain emphasis on stewardship tasks</b>	<ul style="list-style-type: none"> <li>● Review B-WET projects to collect data on stewardship action project implementation.</li> <li>● Provide additional resources to support stewardship action project implementation.</li> </ul>
NOS	<b>Support NOAA Planet Stewards (PSEP) educators in designing and implementing stewardship projects</b>	<ul style="list-style-type: none"> <li>● Develop specific guidelines for quantitative and qualitative measurements of progress in stewardship projects.</li> <li>● Expand marketing of the stewardship aspect of program.</li> <li>● Move up stewardship community timeline of events (i.e. time of application, time of final project submission, etc).</li> <li>● Revise stewardship project proposal rubric and amend with examples for peer leaders and educators.</li> <li>● Support peer leaders in addressing needs of FY18 stewardship project participants.</li> </ul>
ONMS	<b>Enhance the Ocean Guardian School Program</b>	<ul style="list-style-type: none"> <li>● Build capacity in California Title I schools so they can apply and successfully receive the award.</li> <li>● Have conversations with two new school districts to become an Ocean Guardian School District.</li> <li>● Work with a volunteer(s) to evaluate the market values of stewardship activities of the Ocean Guardian Schools Program.</li> <li>● Work with state and environmental networks to create this as a strategic pathway for the State of California to reach environmental literacy goals.</li> </ul>



## Goal 3: Safety and Preparedness

**Individuals and communities are informed and actively involved in decisions and actions that improve preparedness, response, and resilience to challenges and impacts of hazardous weather, changes in climate, and other environmental threats monitored by NOAA.**

NOAA is committed to building a nation that is resilient to environmental hazards. Our agency provides sound environmental science to help guide choices that protect lives and property and support a strong economy. Public awareness is a crucial aspect of national safety and preparedness. Resilience to environmental hazards also depends upon coordination. Therefore, NOAA's education programs cultivate relationships with many partner organizations that help connect NOAA's science to actions that keep communities safe.

### OBJECTIVES

3.1. Youth and adults from all backgrounds are aware of, prepare for, and appropriately respond to environmental hazards that impact health, safety, and the economy in their communities.

3.2. Formal and informal educators use and produce education materials and programs that integrate and promote consistent science-based messaging on hazards, impacts, and societal challenges related to water, weather, and climate.

3.3. Formal and informal education institutions integrate water, weather, and climate hazard awareness, preparedness, and response information into curricula, exhibits, and programs that create learning opportunities for youth and adults.

## GOAL 3 ACTIONS

3.1. Youth and adults from all backgrounds are aware of, prepare for, and appropriately respond to environmental hazards that impact health, safety, and the economy in their communities.

Program	Action	Tasks
OCM/ NERRS	<b>Support NERRS Education Coordinators in framing and advancing resilience education</b>	<ul style="list-style-type: none"> <li>Facilitate a discussion with NERRS educators on defining resilience education.</li> <li>Consult with the NOAA Education community on defining a framework that captures resilience education.</li> <li>Generate a framework for resilience education tailored for NERRS education.</li> <li>Implement the framework by having education coordinators map activities to the framework.</li> <li>Assess progress, create case stories, identify opportunities, and figure out how to make a larger impact in resilience through education as part of a larger discussion at the 2018 NERRS Annual Meeting.</li> </ul>

3.2. Formal and informal educators use and produce education materials and programs that integrate and promote consistent science-based messaging on hazards, impacts, and societal challenges related to water, weather, and climate.

Program	Action	Tasks
Council	<b>Develop event-driven education products for NOAA-related hazards</b>	<ul style="list-style-type: none"> <li>Capture use cases of teachers and get feedback on prototype.</li> <li>Draft a rough prototype of the template for tornadoes.</li> <li>Develop a final template for tornadoes.</li> <li>Draft a dissemination and coordination strategy.</li> <li>Draft an analytics strategy.</li> </ul>

3.3. Formal and informal education institutions integrate water, weather, and climate hazard awareness, preparedness, and response information into curricula, exhibits, and programs that create learning opportunities for youth and adults.

Program	Action	Tasks
Council	<b>Establish a Education for Community Resilience Community of Practice (EfCR-COP)</b>	<ul style="list-style-type: none"> <li>Develop the EfCR-COP membership to include NOAA and external partners.</li> <li>Establish roles and responsibilities for the EfCR-COP members.</li> <li>Establish communication tools for the EfCR-COP members.</li> <li>Establish time commitment from the EfCR-COP members.</li> <li>Develop goals and objectives for the EfCR-COP.</li> </ul>
CPO	<b>Support NOAA Education Community Resilience grants</b>	<ul style="list-style-type: none"> <li>Review on communication and support efforts (proposals).</li> </ul>
OED	<b>Foster a new community of practice (CoP) of resilience grantees</b>	<ul style="list-style-type: none"> <li>Provide opportunities for Environmental Literacy Grant (ELG) awardees to showcase their work to a broader community and benefit from the input of that community.</li> <li>Host regular webinars and facilitate other means of communication to provide ELG awardees with opportunities to share lessons learned.</li> <li>Publish 2017 ELG awardee Workshop Report.</li> <li>Convene second ELG awardee Workshop in 2019.</li> </ul>

## Goal 4: Future Workforce

**A diverse and highly-skilled future workforce pursues careers in disciplines that support NOAA's mission.**

Building and supporting a diverse and skilled future STEM workforce is critical to NOAA's mission. A sustainable workforce pipeline introduces young students to NOAA careers and to transitional programs that prepare graduates to be successful in the workforce. Our programs inspire and cultivate the next generation of scientists that resembles our diverse nation.

### OBJECTIVES

4.1. Students, particularly from underrepresented groups, consider education and career pathways in disciplines that support NOAA's mission.

4.2. NOAA and partner institutions leverage federally-funded assets to provide students, particularly those from underrepresented groups, with experiential learning, research, and scholarship opportunities.

4.3. Postsecondary students, particularly from underrepresented groups, pursue and complete degrees in disciplines critical to NOAA's mission.

4.4. Graduates completing NOAA-supported student opportunities continue education, enter the workforce, and advance in careers that support NOAA's mission.

## GOAL 4 ACTIONS

4.1. Students, particularly from underrepresented groups, consider education and career pathways in disciplines that support NOAA's mission.

<u>Program</u>	<u>Action</u>	<u>Tasks</u>
Council	<b>Develop regionally-relevant career resources for NOAA-related fields</b>	<ul style="list-style-type: none"> <li>• Develop speaker calendar to bring other regional/national networks to our bimonthly meetings.</li> <li>• Work with national networks to identify career resources.</li> <li>• Compile career resources into one-stop portal for NOAA.</li> </ul>
DPAWG	<b>Use the Diversity and Professional Advancement Working Group (DPAWG) to enhance awareness of NOAA science and career opportunities among minorities</b>	<ul style="list-style-type: none"> <li>• Create and support a unified plan for NOAA groups to engage at key minority conferences.</li> <li>• Create a sustainable and evergreen list of targets for engagement that can be shared with NOAA Leadership and members of DPAWG.</li> <li>• Create and implement opportunities for DPAWG to engage with NOAA scholars, students, and NOAA personnel.</li> </ul>
NMFS	<b>Strengthen career development resources</b>	<ul style="list-style-type: none"> <li>• Create NOAA Fisheries career development materials and resources (e.g. marine science careers brochure for middle/high school and undergraduate).</li> <li>• Share information and best practices between NOAA Fisheries offices about internships and hosting students.</li> </ul>
WCM	<b>Collect information on number of student volunteers in Weather Forecast Offices (WFOs)</b>	<ul style="list-style-type: none"> <li>• Analyze and share survey data collected in FY17.</li> <li>• Send survey to WFOs to collect the number of student volunteers and any student success stories in FY18.</li> <li>• Determine whether this data collection effort can be incorporated into the efforts to improve the NWS education and outreach database.</li> </ul>

4.2. NOAA and partner institutions leverage federally-funded assets to provide students, particularly those from underrepresented groups, with experiential learning, research, and scholarship opportunities.

<u>Program</u>	<u>Action</u>	<u>Tasks</u>
EPP/H	<b>Connect with and gather better trajectory data from alumni to understand student pathways</b>	<ul style="list-style-type: none"> <li>• Analyze alumni survey data annually to examine trajectories of alumni.</li> <li>• Revise the Volunteer Alumni Update System to collect alumni outcomes data through a survey platform.</li> </ul>
NESDIS	<b>Create a repository of quantitative and qualitative data on students participating in or impacted by NESDIS-supported activities</b>	<ul style="list-style-type: none"> <li>• Create a network of education contacts across NESDIS and NESDIS-partners.</li> <li>• Collect student stories from points of contact.</li> <li>• Evaluate quantitative data collected for use for the NOAA education common measures.</li> </ul>
NWS	<b>Design a university partnership program that provides students with additional education and experiences that prepare them for careers in the National Weather Service</b>	<ul style="list-style-type: none"> <li>• Complete a local demonstration of the university partnership program with the University of Kansas in the NWS Central Region.</li> <li>• Review the local demonstration and refine the partnership proposal.</li> <li>• Expand the partnership to other universities and NWS regions.</li> </ul>

4.2. NOAA and partner institutions leverage federally-funded assets to provide students, particularly those from underrepresented groups, with experiential learning, research, and scholarship opportunities. *(Continued)*

<u>Program</u>	<u>Action</u>	<u>Tasks</u>
ONMS	<b>Reduce barriers for underrepresented applicants to the Dr. Nancy Foster Scholarship Program</b>	<ul style="list-style-type: none"> <li>• Continue direct contacts to Minority Serving Institutions (MSI) and top institutions for bachelors, masters and doctoral degrees in NOAA mission-related sciences for Black, Hispanic students and other minorities.</li> <li>• Continue to identify and alleviate biases of application and review process to increase broadened participation</li> <li>• Identify the stage in the process where minorities are encountering barriers.</li> </ul>

4.4. Graduates completing NOAA-supported student opportunities continue education, enter the workforce, and advance in careers that support NOAA’s mission.

<u>Program</u>	<u>Action</u>	<u>Tasks</u>
EPP/H	<b>Review and revise application process for the Hollings Scholars Program to identify and address barriers to selection</b>	<ul style="list-style-type: none"> <li>• Analyze applicant demographic data for possible connections between race/ethnicity, selection factors, and institution type.</li> <li>• Review application selection factors and use them more effectively.</li> <li>• Use existing alumni networks and connections to recruit a diverse pool of reviewers.</li> </ul>

## Goal 5: Organizational Excellence

**NOAA functions in a unified manner to support, plan, and deliver effective educational programs and partnerships that advance NOAA's mission.**

The NOAA Education Community is dedicated to continually improving our efforts to reach the goals set out in our strategic plan. The goal of organizational excellence drives us to enhance performance, provide the best service and resources to the public, and create avenues for the NOAA Education community to showcase their work. By integrating partnerships, evaluation, and professional development, we are able to uphold our commitment to provide quality education opportunities and expand our reach.

### OBJECTIVES

- 5.1. Leaders internal and external to NOAA recognize and support education investments as a way to achieve agency mandates, mission, and goals.
- 5.2. The NOAA Education community develops implementation plans and establishes agency education priorities informed by stakeholder needs and national initiatives.
- 5.3. NOAA educators and partners collaborate at local, regional, and national levels to coordinate efforts, build capacity, and better serve educational audiences.
- 5.4. NOAA and partner organizations use effective evaluation, performance monitoring, and evidence-based approaches in the design and management of educational programs, products, and services.
- 5.5. NOAA develops and supports a coordinated portfolio of products, programs, and partnerships that improves education opportunities in NOAA-related content areas for underserved audiences.

## GOAL 5 ACTIONS

5.3. NOAA educators and partners collaborate at local, regional, and national levels to coordinate efforts, build capacity, and better serve educational audiences.

Program	Action	Tasks
BWET	<b>Telling a better story</b>	<ul style="list-style-type: none"> <li>• Develop and disseminate a media toolkit to help grantees tell project stories.</li> <li>• Continue to improve the media toolkit resources and encourage its use.</li> </ul>
Council	<b>Develop multimedia and distance learning capacity for NOAA Education</b>	<ul style="list-style-type: none"> <li>• Develop an internal needs assessment to understand how NOAA programs use multimedia and distance learning.</li> <li>• Develop an external needs assessment to understand how educators use NOAA-related multimedia and distance learning.</li> <li>• Create a template product(s) to demonstrate how the studio space can be used for educational programming.</li> </ul>
CPO	<b>Transfer effective practice to support communities climate plans</b>	<ul style="list-style-type: none"> <li>• Facilitate professional development for state and local governments</li> </ul>
NOS	<b>Reconfigure and reorganize NOAA Climate Stewards (CSEP) into NOAA Planet Stewards (PSEP)</b>	<ul style="list-style-type: none"> <li>• Amend content on existing CSEP website to reflect expanded priorities of NOAA Planet Stewards.</li> <li>• Develop new briefing materials and presentations to reflect expanded priorities of PSEP.</li> <li>• Develop new marketing materials (i.e. logos, one pagers, etc.) reflecting new program name.</li> <li>• Revise application to stewardship community to reflect expanded priorities of PSEP.</li> </ul>
ONMS	<b>Build a NOAA Volunteer Network to share best practices, coordinate recruitment, and tracking</b>	<ul style="list-style-type: none"> <li>• Contact the volunteer point of contact for NOAA at Workforce Management Office</li> <li>• Expand volunteer coordination at the NOAA level for the Federal Interagency team for Volunteerism (FITV).</li> <li>• Recruit representatives from NOAA Line Offices to participate in the Volunteer Network.</li> <li>• Share best practices, lessons learned, required paperwork, coordinate volunteer recruitment, tracking, and onboarding amongst members of the network.</li> </ul>
WCM	<b>Convene a WCM education committee with regional representatives</b>	<ul style="list-style-type: none"> <li>• Invite representatives from the field to attend existing NWS education meeting.</li> <li>• Reassess meeting format and representation going forward and make changes as needed.</li> </ul>

5.4. NOAA and partner organizations use effective evaluation, performance monitoring, and evidence-based approaches in the design and management of educational programs, products, and services.

Program	Action	Tasks
NESDIS	<b>Improve staff understanding of NESDIS investments in education</b>	<ul style="list-style-type: none"> <li>● Develop materials to explain NESDIS educational goals and priorities, Next Generation Science Standards (NGSS), and NESDIS-funded activities in plain language.</li> <li>● Meet with major programs to evaluate existing program-level educational activities and to walk through potential opportunities for investment that are aligned with NESDIS priorities.</li> </ul>
NWS WCM	<b>Increase the use of and improve capabilities of the National Weather Service Education and Outreach database</b>	<ul style="list-style-type: none"> <li>● Assess the functionality of the current platform for tracking K-12 education and outreach events and student volunteers.</li> <li>● Assess the needs of the regions and different users for K-12 education and outreach events and student volunteers.</li> <li>● Consider alternative platforms for data management and provide recommendations to NWS.</li> </ul>
OAR	<b>Improve reporting from Cooperative Institutes (CIs)</b>	<ul style="list-style-type: none"> <li>● Create a network of education contacts at the Cooperative Institutes.</li> <li>● Investigate tools for more frequent accomplishment reporting from CIs.</li> <li>● Work with CI Program Director to include NOAA education performance measures in annual reporting requirements when new awards are made.</li> </ul>
OER	<b>Coordinate an independent review of NOAA OER education efforts and products</b>	<ul style="list-style-type: none"> <li>● Work with the NOAA Ocean Exploration Advisory Board and the National Marine Sanctuary Foundation to execute an independent review of the NOAA OER education offerings (this will be the first independent review of NOAA OER education materials and efforts since the program's inception in 2001).</li> <li>● Respond to and build on review outcomes. These results will provide guidance and direction for product development over the next two years and beyond.</li> </ul>
SG	<b>Increase reporting measures to NOAA Education</b>	<ul style="list-style-type: none"> <li>● Conduct a pilot study to test increased reporting at three Sea Grant programs.</li> <li>● Refine implementation of increased reporting.</li> <li>● Develop a recruiting strategy for the rest of the network.</li> <li>● Roll out increased reporting to the entire Sea Grant Network with the goal of having 15 programs report additional education metrics by June 30, 2018.</li> </ul>



## Appendix A: NOAA Education Council

The Education Council is a forum of representatives from NOAA's major education programs. Council members represent NOAA Line and Staff Offices, with special representation for programs with education activities authorized by statute. The Council is chaired by the Director of NOAA Education and supported by the Office of Education.

The following Council Members contributed to this implementation plan.

### **National Environmental Satellite, Data and Information Service**

National Environmental Satellite, Data and Information Service Education (NESDIS-At Large)

### **National Marine Fisheries Service**

Fisheries Education (NMFS-At Large)

Teacher at Sea Program (TAS)

### **National Ocean Service**

National Ocean Service Education (NOS-At Large)

Office for Coastal Management & National Estuarine Research Reserve System (OCM/NERRS)

Office of National Marine Sanctuaries (ONMS)

Marine Debris Program (MDP)

### **National Weather Service**

National Weather Service Education (NWS-At Large)

Warning Coordination Meteorologists (WCM)

### **Office of Oceanic and Atmospheric Research**

Oceanic and Atmospheric Research Education (OAR-At Large)

Climate Communications and Education Program, Climate Program Office (CPO)

National Sea Grant College Program (SG)

Office of Ocean Exploration and Research (OER)

### **Office of Education (OEd)**

Office of Education K-12 and Informal Education (K-12/Informal)

Higher Education and Hollings Scholarship Program (Higher Ed)

Bay Watershed Education and Training Program (B-WET)

## Appendix B: Implementation Planning Process

The FY18-19 Implementation Plan builds on the progress NOAA Education has made in the past two years. The FY16-17 Implementation Plan outlined 29 high-priority actions. The NOAA Education community chose ambitious actions that were above and beyond business as usual. These actions included the efforts of individual programs as well as collaborative working groups composed of educators from across NOAA. We completed 27 out of the 29 actions (93%). One remaining action was completed in Q1 of FY18 and the other will be completed in Q2. For more details on the progress made by the NOAA education community during the past two years, please see the [FY16 and FY17 NOAA Education Accomplishments Reports](#).

Goal	Actions	Completed
1: Science Informed Society	10	10 (100%)
2: Conservation and Stewardship	4	4 (100%)
3: Safety and Preparedness	4	3 (75%)
4: Future Workforce	4	4 (100%)
5: Organizational Excellence	7	6 (86%)

To develop this plan, Council members and the NOAA education community worked individually and together. We identified and prioritized ideas for collaborative actions that align with what our programs are doing.

Individual programs evaluated progress towards their FY16-17 Actions with guidance from the NOAA Education Council's Data Team. Working with the Data Team, programs also drafted new actions to advance their programs.

The NOAA Education Council members and representatives of the larger NOAA Education community participated in an implementation planning retreat. There, we reviewed progress towards the goals in the NOAA Education Strategic Plan during the FY16-17 Implementation Plan. We identified opportunities, gaps, and strengths to build upon during the next plan.

We also facilitated a process to identify new collaborative efforts. Unlike the previous plan, which recognized either program or council-wide actions, the FY18-19 planning process considered a spectrum of collaborations, from individual program actions to partnerships to council actions.

Participants used the draft program actions as a starting point for brainstorming and synthesizing ideas for the council to address. We used a participatory polling process to identify which ideas

were important for our programs and which ideas we, as members of the education community, felt were priorities. We ended up with a list of seven priority ideas.

*Priority Ideas:*

- *Connecting Citizen Science to Conservation and Stewardship.*
- *Strengthening NOAA Alumni Networks*
- *Developing Resilience Communication in Real-Time*
- *Diversifying the Student Pipeline by Identifying Barriers and Career Resources*
- *Creating a Resilience Education Community of Practice*
- *Improving Communication*
- *Using Multimedia and Distance Learning for NOAA Education*

In the two months following the retreat, planning groups developed all of these ideas into informal collaborations or Council actions with input from the Council as a whole. During this process, four groups submitted Council actions. Three groups will become informal collaborations and will continue to foster communication and collaboration. Past implementation plans only focused on two-year council actions implemented by broad working groups. This planning process encouraged flexibility to reflect how programs interact on a daily basis.

*Council Actions:*

- *Develop regionally-relevant career resources for NOAA-related fields*
- *Establish a Resilience Education Community of Practice*
- *Develop multimedia and distance learning capacity for NOAA Education*
- *Develop weather event-driven education products*

A major focus for the next two years will be empowering programs to achieve their actions and complete their tasks. Members of the Education Council developed program actions to include in the plan, with guidance from the Education Council Data Team. The Data Team will work with programs over the next two years to monitor progress towards these actions.

