

# NOAA's 2018 Environmental Literacy Grants

NOAA's Environmental Literacy Program (ELP) is funding nine new projects that will use education to build the foundation for resilience to weather and climate hazards. Together, these projects - reaching from Alaska to the U.S. Virgin Islands - will receive a total of \$4.3 million to empower communities to protect themselves from local environmental threats.

These nine new projects join a cohort of 13 previously ELP-funded resilience education projects that support the education of K-12 students and the public so they are knowledgeable of the ways in which their community can become more resilient to extreme weather events and/or other environmental hazards, and become involved in achieving that resilience.

## SUMMARY OF 2018 FUNDED PROJECTS

**Project Title:** R4Ed: Rigor, Relevance, and Relationships in Resilience Education

**Recipient:** University Corporation for Atmospheric Research (UCAR) Center for Science Education

**City/State:** Boulder, Colorado

**Funding:** \$389,427

**Abstract:** This project will increase awareness, knowledge and understanding of weather and climate-related hazards in Louisiana; such as, hurricanes and sea-level rise, to help high school students in Houma, Louisiana better prepare for, respond to, and recover from them. Participating students will collect local stories of sea-level rise and erosion, coastal flooding, and hurricane damage and compare these stories with resources from NOAA Digital Coast and the NCAR Cyclone Damage Potential Index. The project will work directly with students and community members, helping them to better prepare themselves and build a more resilient community. In addition, the project will also create a replicable, education model for schools in coastal communities that increases students' interest and skills in STEM, community engagement, and resilience planning.

**Project Title:** Empowering Climate Change Resiliency through Education in an Underserved Community

**Recipient:** Ocean Discovery Institute

**City/State:** San Diego, California

**Funding:** \$500,000

**Abstract:** This project will build understanding of climate change and impacts on local hazards, human-nature interactions, and individual and community capacity for resilience through place-based education in the underserved community of City Heights, San Diego, CA. Project activities encompass the design, piloting, and implementation of multi-grade level, integrated curricula that incorporate hands-on student climate science research, innovative solution building, and teacher professional development. This 5-year project will serve 1,500 middle school students and 15 teachers annually.

**Project Title:** CREATE Resilience: Community Resilience through Education, Art, Technology, and Engagement

**Recipient:** Nurture Nature Center

**City/State:** Easton, Pennsylvania

**Funding:** \$429,420

**Abstract:** CREATE Resilience, a collaboration between youth and community, engages three hazard-prone communities in the Lehigh Valley (PA) in a comprehensive education and action initiative to increase knowledge about weather and climate science, risks from local hazards, and strategies for hazard mitigation, while storytelling and co-creating a vision for community resilience. Residents will participate in active-learning education events, dialogue forums, arts-based activities, technology-based programs using NOAA assets, and hands-on preparedness activities.

**Project Title:** Resilience from the Youth Up

**Recipient:** University of Michigan / Michigan Sea Grant

**City/State:** Ann Arbor, Michigan

**Funding:** \$497,658

**Abstract:** This project, led by the Michigan Sea Grant College Program, in partnership with Eastern Michigan University's Southeast Michigan Stewardship Coalition and EcoWorks, will work with high school educators and students from the Detroit metropolitan area to increase awareness, knowledge and understanding of climate-related hazards. Using NOAA assets, including the Great Lakes Integrated Science and Assessments' localized climate data and Sea Grant education and outreach expertise, participating educators and their students will partner with climate scientists to explore, through project-based learning, local climate impacts firsthand and to develop comprehensive strategies that protect vulnerable households and neighborhoods. Participants will contribute to broader sustainability initiatives within those communities.

# NOAA's 2018 Environmental Literacy Grants

## SUMMARY OF 2018 FUNDED PROJECTS (Cont.)

**Project Title:** Colorado Youth Empowerment and Community Resilience

**Recipient:** University of Colorado / Cooperative Institute for Research in Environmental Sciences

**City/State:** Boulder, Colorado

**Funding:** \$500,000

**Abstract:** This project will develop four instructional units and use immersive scenario-based role play games focused on drought, flood, wildfire, and extreme heat. Participating middle and high school students in rural Colorado will explore a locally relevant natural hazard and learn about existing mitigation and response plans. Students will identify and develop resilience strategies for their communities and present their ideas at a Resilience Expo, which will serve as a dialogue between them and community stakeholders. Students are also encouraged to develop and implement student-led resilience action projects in their communities.

**Project Title:** Citizen Science, Civics, and Resilient Communities

**Recipient:** Museum of Science Boston

**City/State:** Boston, Massachusetts

**Funding:** \$500,000

**Abstract:** This phase-2 project, conducted in partnership with Arizona State University, Northeastern University, and SciStarter, engages diverse groups of participants at 28 U.S. science centers in active learning and resilience planning about four natural hazards (heat waves, sea level rise, extreme precipitation, and drought). Participants will collect, analyze, and share data relevant to local resilience planners, learn about vulnerabilities through visualizations of geospatial data and participate in deliberative problem-solving, sharing perspectives about resilience strategies and their societal and environmental trade-offs, formulating community resilience plans, and presenting findings and recommendations to resilience planners and the public.

**Project Title:** Climate Strong—Building Tribal Youth Leadership for Climate Resiliency

**Recipient:** Fond du Lac Tribal and Community College

**City/State:** Cloquet, Minnesota

**Funding:** \$499,407

**Abstract:** For indigenous peoples, climate change threatens culturally significant traditions that rely on sustainable fish, plant, and wildlife resources. Working with University of Wisconsin Extension, this project aims to increase the knowledge and readiness of middle to high school students to deal with the impacts of extreme weather and environmental hazards that face the Ojibwe Ceded Territories (Minnesota, Wisconsin, and Michigan). Ultimately, this culturally-relevant, place-based education will enable communities to critically assess community resiliency to extreme weather events and engage in action in order to resolve it.

**Project Title:** U.S. Virgin Islands Storm Strong Program

**Recipient:** University of the Virgin Islands / Center for Marine and Environmental Studies

**City/State:** St. Thomas, U.S. Virgin Islands

**Funding:** \$499,998

**Abstract:** The USVI Storm Strong Program will be the Territory's first sustained, community-based, hurricane hazard preparedness program. Through new and strengthened strategic partnerships and the development of a long-term community-based program, underrepresented middle- and high-school youth, and their families will be empowered as environmental leaders and change agents. Partners from the NOAA's Marine Debris Program will share lessons and materials to their networks, allowing for national dissemination and impact.

**Project Title:** Environmental Literacy for Alaskan Climate Stewards

**Recipient:** Chugach School District

**City/State:** Anchorage, Alaska

**Funding:** \$499,888

**Abstract:** Bringing together traditional Alaska Native ways of knowing and Western scientific data, this project will provide rural, K-12 Alaskan students, teachers, and their communities with opportunities to build resilience to extreme weather events and other environmental hazards. Chugach and Kenai Peninsula School District's students and teachers will work with NOAA science to participate in a variety of first-hand activities, such as facilitating citizen science, building ocean observation systems, and ultimately developing and implementing community resilience action plans.