

NOAA Climate Ready Workforce Competition - Abiola Obafemi

The National Oceanic and Atmospheric Administration (NOAA)'s National Sea Grant Office, Climate Program Office and Office for Coastal Management recognize that a climate ready nation requires skilled workers and new jobs. These offices are collaborating together to help build a climate ready workforce through a Climate Ready Workforce grant competition (CRW). The goal of CRW is to contribute to the development of a climate workforce that is climate literate, informed by climate resilience, and skilled at addressing climate challenges with sustained and good paying employment. CRW aims to assist communities in coastal and Great Lakes states, and territories as they increase staff capacity to prepare for and respond to climate-related risks and disruptions. The funded activities provide training needed to meet the growing and localized demand for resilience jobs and wrap-around services, such as transportation and childcare, that might be a barrier for participation in the program. CRW prioritizes work in disadvantaged and other communities with climate vulnerabilities to improve the quality of life, environment, and health of these communities.

Through this presentation, NOAA will provide an overview of the CRW framework and its funded projects. This presentation supports Focus Area 7 by highlighting how this grant competition strives to improve diversity, equity, inclusion and environmental justice in the coastal sector and work to ensure the costs and benefits of coastal management are distributed equitably and accessibly.

CWPPRA's WaterMarks360: Bringing Coastal Issues into the Classroom with Virtual Fieldtrips - Lauren Leonpacher

Louisiana's coastal wetlands are some of our nation's most valuable and fragile ecosystems, but opportunities to visit these unique environments aren't always accessible, even to those who live nearby. Unfortunately, this region is also home to some of Louisiana's most vulnerable communities, meaning they often lack the resources for K-12 teachers to access quality science, technology, engineering, and math (STEM) curricula, especially on locally relevant material. The Coastal Wetlands Planning, Protection and Restoration Act's (CWPPRA) WaterMarks360 Experience aims to increase accessibility by providing a free, open-source virtual field trip to Louisiana's coastal environments paired with an informative activity guide for educators and learners.

This multifaceted project is intended to teach learners about Louisiana's coastal wetlands through virtual explorations of two wetland restoration sites in southeast Louisiana. In addition to self-navigated 360° video hotspots and informational videos, this project also includes resource materials that support Next Generation Science Standards (NGSS) and several STEM activities in which learners explore concepts like wetland formation and erosion, as well as restoration strategies like vegetative plantings, dune fences, and terrace construction.

By creating free, high-quality environmental education resources, CWPPRA is supporting the knowledge and skills that our coastal citizens need to understand the ecological and economic importance of their communities. The WaterMarks360 Experience gives learners the confidence to participate in conversations surrounding Louisiana's land loss crisis and ongoing

wetland restoration efforts with their peers and community members. Community members of all ages who are informed, engaged, and excited about coastal restoration efforts are our best hope for the future of Louisiana's beautiful coastal environments.

Cool Science: Kids Teaching Adults About Extreme Weather Science - Kimberly Starbuck

Cool Science is a collaborative project funded by the National Science Foundation (2019-2024) aimed at educating students, teachers, parents, and the general public about extreme weather science. Since its inception in 2012, Cool Science has been utilizing youth artwork to promote adult learning and inspire social and behavioral changes that lead to more sustainable living. Each year, Cool Science hosts a K-12 art competition where youth develop posters intended to teach adults about extreme weather science. Winning artwork is displayed on local buses in Massachusetts, Kansas, and Missouri with the intent of educating riders on pressing environmental issues. Riders are surveyed before and after artwork is displayed on the buses to determine the impact of the artwork messaging.

Additionally, Cool Science has organized projects in partner communities to expand our impact and target more diverse audiences. Specifically, Cool Science worked with youth to design and install 1) birdhouses that are resilient to extreme weather, and 2) a colorful mural about biodiversity and sea level rise. These projects exist as stand-alone artwork with messaging aimed at fostering intergenerational learning.

Through this project, we formed partnerships with educators, artists, scientists, regional transit systems, school systems, nature reserves, and others to foster intergenerational informal science learning on complex topics that encourage social and behavioral change. This presentation will provide an overview of the Cool Science project and lessons learned, ways to utilize partnerships to enhance educational outcomes, and how to replicate a similar type of project in other locales.

Realtors and Wetlands: An Educational Partnership in Delaware - Olivia Allread

Delaware continues to face heavy demand for development and real estate. Between the state's 90 miles of coastline and ¼ of land area mapped as wetlands, natural resources are in the spotlight for perspective buyers. Oftentimes, homebuyers are unaware or misinformed about property or building requirements when wetlands or other natural resources are involved. Realtors themselves are often untrained and uncertain of how to find helpful information, especially on the go. In response, Delaware DNREC launched an education campaign to focus on connecting real estate professionals and their clients to better information and resources on Delaware's natural habitats. Streams and buffers, wetlands, flood insurance, tax ditches, and dunes – all are included in our effort to educate this job sector. Over the past few years, communication styles have been adapted to dispel fears or misconceptions within the real estate market, as well as provide professionals an advantage with their clients. This presentation will share the development of the training program, review targeted resources, dive into content, and look at the progression of this continual partnership.

Nature-Based Design Education: Developing the next Generation of Coastal Resilience Practitioners - Christopher Overcash

The struggle to meet the coastal restoration and resilience needs we face as a society is being challenged by the lack of practitioners with the knowledge to create design concepts in an ever-changing environment being impacted by climate change impacts including sea-level rise, storm surge, and compound flooding. One way to help meet this challenge is to provide educational experience focusing on hands-on design-based education which can immerse students in these coastal challenges, so they will become the effective practitioners (engineers, scientists and planners) of the future.

Universities in the Chesapeake Region, including Johns Hopkins University, which has recently established the Coastal Climate Resilience Initiative, is leading the way by providing undergraduate students in the Environmental Health and Engineering department the chance to develop actual solutions to the coastal impacts in the region. Design education is being used to focus on actual projects and solutions, these have included working closely with the USACE EWN program at DOD locations to develop climate resilience solutions; working with grant teams in the disadvantaged communities in Baltimore County to develop design solutions for living shorelines; and interacting with City of Baltimore to develop shellfish beds which can assist in removing nutrient waste from wastewater treatment plants. In these projects, students have had the chance to interact with community organizers to understand the critical social and community aspects of these projects, which are also key to a deeper understanding of how to design lasting solutions for our future.