



Commitment to Community Engagement

COLLEGE OF EARTH, OCEAN, AND ENVIRONMENT

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What community engagement means for the College of Earth, Ocean, and Environment

While the areas of study at the College of Earth, Ocean, and Environment (CEOE) revolve around marine, earth and atmospheric science, there has always been a simultaneous commitment to investigating how advances in those sciences can benefit society.

This dedication to employing science in service to society is a part of CEOE's core, the ethos that serves as a foundation for the college's identity. Community engagement is the method through which our college's faculty, staff and students ensure that we are living up to that fundamental ideal, that we are serving society in ways that are valuable and useful as well as scientifically rigorous.

Community engagement at CEOE means fostering and maintaining partnerships with state officials, small town residents, business owners and others to identify and study issues of concern to them, then develop and implement with their full participation actions that will improve those partners' well-being or solve problems. Put simply, community engagement means asking members of our community what they need and helping them create it.

This process unfolds in multiple ways at CEOE, from individual faculty members collaborating with individual subjects to ongoing, formal programs that have community engagement built into the way they operate. The clearest example of the latter may be the Delaware Sea Grant College Program, a federal program harnessing research, education and extension services to enable coastal communities to benefit from their unique resources while ensuring the environment's continued health and value to future generations.

Delaware Sea Grant passes on more than two-thirds of its funding to researchers in the form of competitive grants. Proposals have to satisfy not only the scrutiny of other environmental scientists, but also evaluation by stakeholders from throughout the state who assess potential projects' utility. By involving fisheries and other resource managers, owners of businesses dependent on the coastal environment, executives from water utilities and others early in the process, Delaware Sea Grant selects research projects for that people in the community identify as producing data, tools, or knowledge they will be able to use.

Delaware Sea Grant also has considerable impact through its extension and education activities, which uses community engagement to match the science to the needs of local people. Efforts in establishing a shellfish aquaculture industry in Delaware, for instance, have been closely coordinated with regulators at the Delaware Department of Natural Resources and Environmental Control, economists from the university who have done considerable research into the best ways for watermen to create a robust market for their products and community members interested in entering the business. Delaware Sea Grant's marine education specialist works closely with both CEOE faculty and K-12 teachers to deliver tools, lesson plans and field experiences that enhance students' learning in marine science. (See www.underthescope.udel.edu for a good example of the results of this close collaboration.) Delaware Sea Grant also provides support to state officials, researchers and environmental groups through the **citizen monitoring program**, which trains and uses volunteers to collect vital water quality data.

Delaware Sea Grant Acting Marine Advisory Service Director Ed Lewandowski is also the coordinator for the **Sustainable Coastal Communities Initiative**, which epitomizes CEOE's approach to community engagement. The initiative facilitates

citizen engagement by local governments to develop visions and strategic plans for revitalizing their towns, then helps them apply for grant funding, organize volunteers and turn those plans into tangible realities.

Sea Grant may be the most visible community engagement project in the college, but it is far from the only one. **The Center for Environmental Monitoring and Analysis (CEMA)**, housed in the Department of Geography, provides many useful tools, data and advice to state and local officials as they grapple with weather-driven challenges. Using data gathered by its Delaware Environmental Observing System and other methods, the center has created web-based tools for emergency managers, planners and other officials to evaluate flood risks, storm severity and water quality. CEMA is led by Dan Leathers, Professor of Geography, who also serves as Delaware's State Climatologist.

The Delaware Geological Survey (DGS) is a Delaware state agency that is administratively part of the university and housed within CEOE. The DGS is directed by David Wunsch, the Delaware State Geologist. DGS is a science-based, public-service-driven agency that conducts geologic and hydrologic research, service and exploration for the benefit of the citizens of the First State. DGS provides objective earth science information and advice that impact a wide variety of issues in the state, ranging from water resources, agriculture, environmental protection, energy and mineral resources, economic development, land-use planning, emergency management, public health and recreation. The DGS, by merit of their mission, performs outreach and engagement with the public on a continuing basis. For example, DGS hosts a bi-annual geoscience symposium intended for stakeholders and partners who use DGS information and products in order to engage industry scientists and engineers, as well as the public at large, regarding their current and future needs for geoscience information. As a service component, DGS staff serves on over 30 committees for professional societies and government agencies, as well as on three professional licensing boards.

Community engagement at the College of Earth, Ocean, and Environment is not relegated solely to centers and other institutional frameworks, however. As directly tied to the college's mission as it is, community engagement permeates all of its work and can be seen in the research and teaching of individual faculty members as well.

In the Department of Geography:

- Saleem Ali mediates international environmental disputes through diplomacy.
- Lindsay Naylor works directly with community members in her research on issues of food justice and the use of agriculture for empowerment.
- April Veness is one of the inaugural **Community Engagement Fellows** and will help CEOE's efforts coordinate with and enhance the university's Community Engagement Initiative.

In the Department of Geological Sciences:

- Several faculty members study groundwater resources locally and internationally, including Holly Michael and Ronald Martin, who has collaborated with Peter McLaughlin of the Delaware Geological Survey on the topic locally.
- Neil Sturchio and his students are studying radioactivity of the Nubian Aquifer in Egypt and have used the isotopic composition of perchlorate as a forensic tracer in the groundwater basins of southern California, where the drinking water of 15 to 20 million people is affected by perchlorate contamination.

In the School of Marine Science and Policy:

- Jeremy Firestone has conducted research on public perceptions of offshore wind power generation, helping to evaluate the support for offshore turbines. Firestone was recently named to Gov. John Carney's Offshore Wind Working Group.
- School Director Mark Moline conducts Project Recover, in which he uses the school's autonomous underwater vehicles to search for American planes lost at sea during World War II.
- The school has an educational partnership with the United States Naval Academy that involves hosting midshipmen as interns each summer and providing instruction in Annapolis, Lewes and online.

The College of Earth, Ocean, and Environment sees community engagement as central to its strategic focus. By working directly with the people who stand to benefit, CEOE science and scholarship will be relevant and valuable. Listening to the voices of those we serve as a public research university will encourage inclusion and

diversity. And approaching research by seeking problems to solve will require interdisciplinary studies, deepening connections between colleagues, specialties and institutions.

Community engagement is not a goal of the college. It is one of the central ways in which the college will accomplish its goals.
