FELLOW NEWS

News for and about the NOAA Fellows

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October 2014, Issue 63

Focus on Fellows

Kelsey Ducklow

Fellow Kelsey Ducklow has spent most of her life on the U.S. East Coast. She was born on the Eastern Shore of Maryland, grew up in Williamsburg, Virginia, and spent some time living on Cape Cod.

Having grown up so close to the Chesapeake Bay, Kelsey was aware from elementary school onward that the bay was experiencing the impacts of pollution and that actions could be taken to protect and restore it. Some of her first memories involved running around on beaches, wading in salt marshes, and exploring tide pools with her father, a marine biologist, and the rest of the family.

It was no surprise to family members when Kelsey decided to study environmental science at the University of Virginia and then go on to earn a master's in environmental management at Duke University. She had known about the NOAA Coastal Management Fellowship for many years and decided it was a good next step to take after her graduate degree.

Venturing to the West Coast, Kelsey now works as a fellow for the California Coastal Commission. She helps promote and assist efforts to integrate climate change and sea level rise adaptation into the commission's planning and regulatory processes.

"I think the most gratifying aspect of my job is being right at the forefront of sea level rise adaptation planning and implementation," says Kelsey.

For instance, one of Kelsey's primary tasks to date concerns the commission's draft document on sea level rise policy guidance. She has tracked and responded to many public comments, made draft revisions, and hosted webinars or made in-person presentations on the draft guidance for staff members, local governments, partner organizations, and other interested parties.

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Kelsey visits proposed project sites at Bodega Head in Sonoma, California.

Kelsey also is developing related training and outreach materials. "I hope that this set of materials will help commission staff members and local government planners to identify sea level rise adaptation strategies and to put them into practice, whether for individual projects or for long-term land use planning," she remarks.

Another task includes reviewing applications for a commission grant program. The approved grants will help local coastal programs update their plans for sea level rise adaptation.

Kelsey has been given the opportunity to attend a variety of exciting meetings and workshops. "As a fellow, I've been encouraged to just get involved with whatever I find interesting, so that has been really great," she notes, adding that the fellowship has featured incredible opportunities to jump-start and develop her professional career.

"I didn't have a lot of professional experience prior to the fellowship, so this has provided a perfect bridge from my academic experiences to real-world application of coastal management," explains Kelsey.

The agencies and organizations Kelsey has worked with include the California Coastal Conservancy, San Francisco Bay Conservation and Development Commission, California Ocean Protection Council, California State Lands Commission, and the regional offices of NOAA and the Federal Emergency Management Agency.

Having lived mostly in small towns, Kelsey is spending her free time enjoying the perks of big-city life in San Francisco, visiting the plethora of restaurants, bars, and museums. She also explores the city by bike and has figured out (mostly) how to avoid those infamous San Francisco hills. She takes every opportunity to get out of the city and go to the beach, too.

After the fellowship, Kelsey would absolutely like to continue working in coastal management, focusing in particular on sea level rise adaptation. Working for the California Coastal Commission has been an amazing learning experience for her, and she is open to exploring whatever opportunities arise next.

Focus on Fellows

Emily Norton

Maine Coastal Fellow Emily Norton grew up in the landlocked state of West Virginia, and although she spent a lot of time outdoors when young, her fascination with marine and coastal environments did not blossom until college. She studied biology at Bowdoin College in Maine, spending time at the college's Coastal Studies Center to conduct independent research on sea stars and green crabs.

During a study abroad in Zanzibar, Tanzania, Emily encountered some of the most beautiful and pristine marine ecosystems she had ever seen.

"In other, more populated areas, though, I saw the environmental devastation stemming from lax management and enforcement of marine policy," says Emily, recalling the coral reefs destroyed by dynamite fishing and mangrove forests ravaged by the timber industry.

"The Swahili people depend on these marine ecosystems, which is why it's so important to maintain healthy habitats and restore the ecosystem to its former condition."

The experience in Tanzania influenced Emily's decision to enroll at the University of Hawaii at Manoa, where she earned an M.S. in oceanography.

While there, Emily became keenly aware of a difficult reality: Many scientists understand the causes and potential consequences of climate change—yet government agencies and the public still hesitate to implement policies reducing greenhouse gas emissions. In seeking an opportunity to understand this "disconnect," Emily discovered the NOAA Coastal Management Fellowship.

Emily's primary fellowship role at the Maine Coastal Program is to oversee the Maine Coastal Mapping Initiative (MCMI), an effort started in 2012 to collect hydrographic data that will be used to inform ocean planning for state waters.

As a part of this effort, the state coastal program and Maine Geological Survey entered into a cooperative agreement with the Bureau of Ocean Energy Management to identify and characterize sediment deposits that could be used to nourish beaches after erosive storms.

The coastal program purchased a state-of-the-art multibeam sonar and navigation system. Next, the program hired a lobsterman to convert his fishing vessel to a high-tech research vessel and installed the equipment on board.

For this initiative, Emily has helped hire and manage a team that includes a marine mammal observer, a multibeam technician to run the sonar, and a benthic ecologist who collects benthic data to ground-truth the sonar data.

Although ultimately the MCMI will generate bathymetric maps for the entirety of Maine state waters, Emily's fellowship is focused on Maine's southern coastal region. "The most gratifying part of this work was seeing all of the pieces finally come together and having the crew conduct their first successful survey," she says.

Emily has enjoyed the project immensely but has also been grateful for the opportunity to investigate projects aside from the MCMI. For instance, she has organized and facilitated stakeholder engagement meetings on the issues of ocean acidification, invasive species, and regional ocean planning.

Emily also has attended local and international scientific conferences, state legislature working group sessions, regional planning body meetings, and invasive species meetings.

The fellowship has introduced Emily to an amazing network of previous and current fellows. "I have been inspired by their outstanding creativity and determination to work with the public to resolve coastal issues now and in the future," she says.

Members of the Maine Coastal Mapping Initiative crew unpack the multibeam sonar for the Research Vessel Amy Gale.

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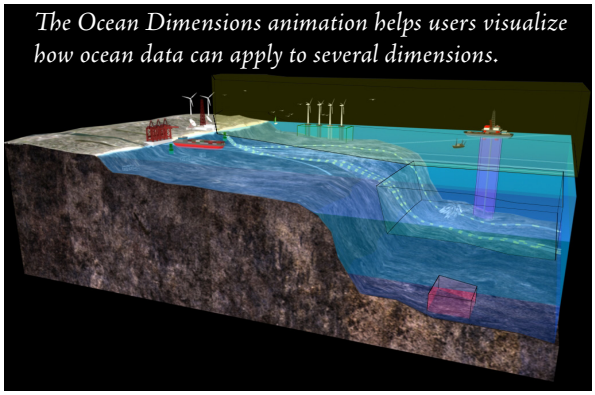
When not at work, Emily is soaking up the sun and enjoying Maine's seemingly endless outdoor opportunities. She spends warm-weather time hiking, camping, swimming, and berry picking. During the short, cold days of Maine's winter, she spends more time baking, swing dancing, knitting, and breaking in the pair of cross-country skis she bought last fall.

Although Emily has really enjoyed working at the interface between science and policy, she is eager to return to a more scientific position after the fellowship and hopes to live in a warmer climate.

"I have been inspired by their outstanding creativity and determination to work with the public to resolve coastal issues now and in the future," she says.

Focus on the Center:

Using Visualizations to Explain Ocean Data Concepts



The Ocean Dimensions animation helps users visualize how ocean data can apply to several dimensions.

Two new products—the Ocean Dimensions animation and Crowded Ocean Space: A 3D View visualization—explain why two-dimensional marine maps cannot tell the whole story. Understanding this fact helps viewers gain a more accurate picture of marine-siting conflicts and compatibilities, including those related to offshore wind development.

Traditional maps can give the false impression that the marine space is very crowded. In reality, marine uses are spread out among many dimensions: the sea surface, seafloor, water column, air column, and even the dimension of time. Marine planners and managers who take into account these many dimensions are better able to consider specific uses for specific locations.

The Ocean Dimensions animation can be found at *www.csc.noaa.gov/digitalcoast/tools/mmc*, while the Crowded Ocean Space visualization can be found here: *www.csc.noaa.gov/vis/mmc_info.html*. Related information can be found on MarineCadastre.gov, an integrated information system that features 170-plus authoritative ocean data layers, as well as offshore planning tools and technical support.

MarineCadastre.gov allows users to create and customize marine maps, share maps and data, and address critical planning details with partners. This resource was co-developed by the U.S. Department of the Interior's Bureau of Ocean Energy Management and the NOAA Coastal Services Center.

What's New on the Digital Coast?

New Version of Coastal County Snapshots Now Available – The snapshots shape complicated data from a variety of sources into an easy-to-use electronic and print information piece that brings home county-level messages. The new version comes equipped with new navigation, improved printing, and mobile-friendly displays. Visit the product at *www.csc.noaa.gov/snapshots*.

Stories from the Field: Providing Climate Education Aids for a Changing Chesapeake Bay – Teachers often find that climate change is a difficult topic to educate students about. Teachers in the Gloucester and Mathews areas (fronting the Chesapeake Bay) requested help in identifying the most beneficial data, tools, and resources for climate change education. Climate Education for a Changing Bay, a program offered through the Chesapeake Bay National Estuarine Research Reserve, brings the classroom out into the field while providing professional development for teachers. During its pilot year, this program reached approximately 75 students and five teachers with classroom visits, schoolyard field experiences, and a second field experience at the research reserve in Virginia. For more information, visit *www.csc.noaa.gov/digitalcoast/stories/climate-education*.

Stories from the Field: Planning for Resilient Coastal Communities in New York – With preliminary damage estimates nearing $50 billion, the impact of Post-Tropical Cyclone Sandy emphasized the need for New York and other East Coast communities to plan for future hazardous weather and climate change impacts. Using a process designed by NOAA, the Roadmap for Adapting to Coastal Risk, New York City managers evaluated Sandy's impacts to natural and cultural resources. Additionally, NOAA's Coastal Services Center worked with the New York Department of State to create a composite map of inundation hazards and future flood risk. These resources helped target both damage assessment areas and funding requirements for recovery, as well as assess the vulnerability of key community assets. For more information, visit *www.csc.noaa.gov/digitalcoast/stories/new-york-rising*.

To stay updated on all new additions to Digital Coast, subscribe to the *Digital Coast Connections* e-newsletter at *www.csc.noaa.gov/publications/subscriptions.html*.

Focus on the Coastal Fellowship:
Call for State Proposals

All U.S. states and territories with federally approved coastal zone management programs are eligible to submit one project proposal to compete for selection as a 2015-2017 fellowship host state. Multiple state agencies or organizations with partnered implementation of a state's coastal management program are also eligible. States that currently host a first-year fellow are not eligible to apply for a second fellow. This year, up to five project proposals will be selected. Puerto Rico will be automatically invited to participate this year, since it was selected but not successfully matched for the 2014-2016 fellowship cycle.

A six- to eight-page proposal in 12-point font must include these sections:

- Background and Introduction
- Goals and Objectives
- Milestones and Outcomes
- Project Description
- Fellow Mentoring
- Project Partners
- Cost Share Description
- Strategic Focus Area

Proposals are due to the NOAA Coastal Services Center by close of business on Friday, October 17, 2014. One signed original must be received through the mail, email, or fax on this date (not postmarked, but received). Proposals can be sent to

Coastal Management Fellowship Program
c/o Margaret Allen
NOAA Coastal Services Center
2234 South Hobson Avenue
Charleston, SC 29405
Email: *csc.fellowships@noaa.gov*
Fax: (843) 740-1224

To view examples of previously selected state proposals, visit the fellowship website at *www.csc.noaa.gov/cms/fellows/stateprojects.html*.

Save the Date: Coastal GeoTools is Back!

Building on the success of past GeoTools conferences, the Association of State Floodplain Managers is hosting Coastal GeoTools 2015. Join your fellow coastal management data professionals, March 30 to April 2, 2015, in North Charleston, South Carolina, to discover new technologies and applications—and learn from your peers about how they're addressing today's coastal issues using geospatial data and tools. The Call for Abstracts is open through October 6, 2014.

NOAA Coastal Services Center
2234 South Hobson Avenue
Charleston, SC 29405-2413

Upcoming Conferences and Events

NOVEMBER

1 to 6: **Summit 2014: Inspiring Action, Creating Resilience**
Washington, D.C.
www.estuaries.org/summit

NOAA Coastal Services Center Training

OCTOBER

On-Site:
22 to 23: Planning and Facilitating Collaborative Meetings
Port Aransas, Texas

Online:
29: Fostering Behavior Change for Coastal Management: An Introduction to Community-Based Social Marketing

NOVEMBER

On-Site:
6 to 7: Planning and Facilitating Collaborative Meetings
San Francisco, California

DECEMBER

On-Site:
3 to 4: Project Design and Evaluation
Santee, South Carolina

For more information on virtual and site-specific trainings, visit *www.csc.noaa.gov/training.*

Credits and Information

Fellow News is published by the National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center to relay information about the fellowship program and provide a forum for information exchange among fellows, mentors, Sea Grant, and the Center.

Please send your questions and suggestions for future editions to *csc.fellowships@noaa.gov*

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