



FELLOW NEWS

News for and about the NOAA Fellows

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NCCOS Partnership

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FOCUS ON FELLOWS

EMMA CUTLER



Fellow Emma Cutler grew up in Northampton, Massachusetts, and first became interested in sustainability while in high school. She decided to study environmental studies and math at Bowdoin College in Brunswick, Maine, developing an interest in how climate change affects people and what could be done to address these impacts.

Emma continued to focus on climate adaptation and resilience at Dartmouth College while earning her PhD in engineering sciences. She collaborated with the U.S. Army Corps of Engineers on the Corps' climate resilience and preparedness community of practice, where she researched sea level rise adaptation strategies. This work informed the Corps' coastal resilience missions.

Emma loved this work, so when she heard about the fellowship program through Dartmouth's career planning center, she applied.

Emma's fellowship is with the Wisconsin Coastal Management Program, where she is working on the Wisconsin Coastal Management Data Infrastructure (WICDI) project. The project is focused on establishing a coastal hazards mapping community of practice and cloud-based environment for data sharing and collaboration.

Collaboration among this group became more challenging when everyone started working remotely during the COVID-19 pandemic. The team was forced to develop ways to work together using shared networks and web-based platforms. Testing which platforms worked best for remote collaboration ended up being helpful to the team because it ultimately informed what tools to use in the WICDI cloud-based collaborative environment.

Emma focused on culvert data, and developed a methodology to map culverts using LiDAR-derived digital elevation models (DEMs) and aerial imagery. This process, called hydro-enforcing DEMs, is critical for GIS-based flood modeling studies.

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Emma and her dog, Oliver, hiking on the North Shore of Lake Superior.

She created a process that can be used by anyone with GIS proficiency but does not require advanced hydrologic modeling skills, so it can be used by the WICDI community of practice to create these important data products for future flood mitigation efforts.

Emma is grateful for the strong network the fellowship helped her build in the coastal management field. “I loved getting to know the other fellows and met a lot of people working on coastal management in the Great Lakes region and beyond. Coming from New England, I previously knew very little about the Great Lakes, and I have learned a lot about this region and its coastal resources,” says Emma.

When she’s not at work, you’ll find Emma running and hiking with her dog, a springer spaniel named Oliver.

Emma has recently started a job with the International Institute for Sustainable Development, working on evaluations of nature-based infrastructure. “I am glad to have been exposed to coastal management through this fellowship and am excited to now be expanding my skill set to include nature-based infrastructure in both coastal and noncoastal environments all over the world,” says Emma. She is currently working remotely from Minnesota but ultimately plans to move back to the Northeast. [@](#)

CLASS OF
2019-2021



FOCUS ON FELLOWS ADRIAN LAUFER

Adrian Laufer grew up in the small town of Danville, California, located just east of San Francisco. Although Danville is not directly on the coast, Adrian found lots of opportunities to visit the Bay and nearby coastal cities such as Monterey, and the ocean became an important part of her life.

Environmental science and marine biology classes in high school helped her realize how fragile the ocean environment is, and that knowledge grew into a desire to work on ocean and coastal issues—to spend each day supporting the ecosystem that she loves so deeply.

Adrian went off to college at the University of Redlands, a small liberal arts college in Southern California, where she double-majored in environmental policy and management, and music. The University of Redlands has a close relationship with the GIS company Esri, which is headquartered in Redlands; this led to her interest in GIS and a GIS minor.

She moved north to Oregon for graduate school, where she studied public policy at Oregon State University. She focused specifically on ocean and coastal policy, and was able to participate in Oregon State's many ocean initiatives. She heard about the fellowship program through Oregon Sea Grant and decided to apply.

Adrian is now working with the Oregon Coastal Management Program, where her primary project is updating the program's shoreline access inventory, a GIS dataset of all publicly owned sites that offer public access to an ocean, lake, river, or estuary shoreline.

Her work included a lot of travel across Oregon's coastal zone, but the COVID pandemic posed a huge challenge. The fieldwork originally planned for the summer of 2020 had to be delayed. Adrian was eager to get started when she finally was able to travel in November, and she actually ended up really enjoying seeing the coast during the winter season instead of the crowded summer season.

"I am so thankful for the fieldwork aspect of my fellowship. I love being able to directly interact with the coast, immerse myself in the coastal communities, and spend time experiencing the environment to which I have devoted my career," says Adrian.

When she's not traveling for the inventory, Adrian works on the [Oregon Shore Explorer](#), an online map tool that allows the public to interactively explore publicly accessible shorelines.



Adrian enjoying the view from her research vessel while doing marine mammal research expeditions in the Southern California Bight with Earthwatch.

She also leads the Shoreline Access Work Group, an interagency group working to collaborate on access management. With this group she is creating Shoreline Access Planning Guidance, which helps local jurisdictions assess their current shoreline access in terms of supply and demand, American's with Disabilities Act access, environmental stewardship, and encroachment. It also provides strategies for improving shoreline access across these four topics.

The fellowship has given Adrian a great opportunity to explore state-level management of ocean and coastal resources and get ideas of what interests her most for the future. She is grateful for the breadth of professional development opportunities that are supported by the fellowship program.

"I have been able to take trainings, present at conferences, publish articles, join professional organizations, and network within this field. All of these have played a tremendous role in establishing myself as a new professional in the field of ocean and coastal management," says Adrian.

When she's not working, Adrian is a devoted dog mom, yogi, runner, reader of crime fiction, musician (mostly piano), and self-proclaimed granny-in-training due to her love of knitting and crochet. On Oregon's sunny weekends, you can find her and her pup playing Frisbee in the park, going on bike rides, hiking in a nearby forest, or exploring the Oregon coast.

After the fellowship ends, Adrian hopes to stay in Oregon and continue working in coastal management. "I am passionate about this state and want to use my experience and knowledge to contribute to one of Oregon's many ocean and coastal initiatives," says Adrian. 

FAREWELL TO OUR AMAZING 2019-2021 COASTAL MANAGEMENT FELLOWS



Leah Feldman worked with the New York State Department of State in its Office of Planning, Development, and Community Infrastructure on the [Coastal Lakeshore](#)

[Economy and Resiliency Initiative, or CLEAR](#).

The project focused on the coastal communities of Lake Ontario, which have been severely impacted by record flooding and coastal erosion over the last 10 years. The CLEAR project aimed to reinvigorate the area with community-based resilience and rehabilitation efforts using policy, planning, and resilience concepts. Leah's focus was scenario planning and working with Lake Ontario communities to help them visualize a better future using the values, priorities, and local knowledge of the community members.



Adrian Laufer worked with the Oregon Coastal Management Program to improve the availability of public access information for planning efforts and to encourage public

enjoyment of and appreciation of the Oregon coast. To do this, Adrian's primary project was to update the program's shoreline access inventory, a GIS dataset of all publicly owned sites that offer public access to an ocean, lake, river, or estuary shoreline. Adrian also worked on the [Oregon Shore Explorer](#), an online map tool that allows the public to interactively explore publicly accessible shorelines. She also led the Shoreline Access Work Group, an interagency group working to collaborate on access management. With this group she created Shoreline Access Planning Guidance, which helps local jurisdictions assess their current shoreline access in terms of supply and demand, Americans with Disabilities Act access, environmental stewardship, and encroachment. It also provides strategies for improving shoreline access across these four topics.



Sabrina Pereira worked with New Jersey's Department of Environmental Protection within its Climate and Flood Resilience Program. She created an [Equitable Community](#)

[Resilience Adaptation Toolkit](#) for resilience planners on how to integrate social equity and justice into climate resilience planning processes and projects. The toolkit provides a step-by-step guide to resilience planning, introduces concepts that are central to achieving equity and justice, defines which groups of people are most vulnerable to climate change impacts, and explains why these groups experience disparate impacts. It also includes planning actions for planners, community organizations, and residents to take during each step of a typical resilience planning process that will enable meaningful inclusion of vulnerable populations in thoughtful development of solutions. The toolkit should help planning teams check that their planning processes and proposed adaptation and resilience projects are on track to achieve equitable outcomes. Finally, Sabrina helped to integrate the research and lessons learned throughout her project into the state's first [Climate Change Resilience Strategy and Coastal Resilience Plan](#) to help New Jersey achieve its equity goals.



Melanie Perello worked with Minnesota's Lake Superior Coastal Management Program to provide data, tools, and resources to area practitioners and landowners tackling Lake

Superior erosion in Minnesota. Coastal erosion is a pressing issue for Minnesota because Lake Superior has reached near-record high water levels. The project had three main goals: 1) map coastal erosion hazards on Minnesota's coast, 2) establish a community of practice around coastal hazards, and 3) develop outreach for property owners.

Melanie worked with partners to develop methods for mapping erosion hazards and putting it into practice at pilot sites along the coast. She launched a [community of practice called Coastal Hazards of Superior \(CHAOS\)](#) that has engaged over 200 coastal professionals in learning and sharing about hazards. Melanie's fellowship resulted in several products to help Minnesota's coastal communities address the impacts of coastal erosion, including standards for assessing and mapping erosion hazards, an established community of practice, and outreach and training materials on erosion. Visit the [Coastal Erosion Hazard Mapping website](#).



Ben Sweeney worked with the New Hampshire Department of Environmental Services Coastal Program and the Piscataqua Region Estuaries Partnership (PREP) to develop creative funding mechanisms and policy to support adaptation and resilience in coastal New Hampshire communities. His fellowship project had two parts. First, Ben worked directly with the City of Dover, New Hampshire, to establish an [Ad Hoc Committee to Study Stormwater and Flood Resilience Funding](#), which comprises diverse stakeholders and is charged with assessing the community's current and future funding needs, evaluating various funding strategies, and determining which strategy has the greatest potential for providing secure, adequate, flexible, and equitable funding. Ben is currently compiling the committee's findings and developing a recommendations report that will be presented to city council by the end of October 2021. Second, Ben facilitated a collaborative process to investigate and recommend state coastal resilience policy options. Ben created an inventory of policy options that aim to increase coastal resilience in

New Hampshire, but after a pivotal policy-option brainstorming workshop attended by over 40 local resilience professionals, he and his project team realized the importance of engaging historically underserved populations in the policy development process from the onset. Therefore, Ben's focus has transitioned to interviewing historically underserved populations to better understand their biggest needs and challenges. Ben will use the findings of those interviews to inform next steps the coastal program and PREP can take to center equity, diversity, inclusion, and justice in their planning, policy development, and decision-making processes.



Emma Cutler worked with the Wisconsin Coastal Management Program on its Wisconsin Coastal-Management Data Infrastructure (WICDI) project. The project focused on establishing a coastal hazards mapping community of practice and cloud-based environment for data sharing and collaboration. Emma focused on culvert data, and developed a methodology to map culverts using LiDAR-derived digital elevation models (DEMs) and aerial imagery. This process, called hydro-enforcing DEMs, is critical for GIS-based flood modeling studies. She created a process that can be used by anyone with GIS proficiency but does not require advanced hydrologic modeling skills, so it can be used by the WICDI community of practice to create these important data products for future flood mitigation efforts. For more information about WICDI, visit wicdi.org. Emma also worked with the Wisconsin Initiative on Climate Change Impacts to prepare a [report](#) on the state of practice regarding climate change and infrastructure in Wisconsin.

COASTAL MANAGEMENT FELLOWSHIP IS BACK – BIGGER AND BETTER

After a year-long pause in 2021, the NOAA Coastal Management Fellowship will be back better than ever in 2022. We have spent this year reviewing the program for areas we can improve on, and are still finalizing a full list of things to be implemented in 2022 and in future years. Specifically, we are working to incorporate diversity, equity, and inclusion principles into the outreach for the program, fellowship project development and selection, candidate recruitment and selection, and the fellowship experience. We're also working on improvements to communication, to the matching process, and to other aspects of the program.

One of the most exciting parts is that, due to a new partnership with the National Centers for Coastal Ocean Science, we are able to offer three additional Coastal Management Fellowship positions, for a total of nine in 2022. Including the three Digital Coast Fellowship positions, we'll have 12 fellows in 2022!

Please keep an eye out for the call for proposals in August 2021. Candidate applications will be due to state Sea Grant programs in January 2022. [@](#)

UPCOMING CONFERENCES AND EVENTS

JULY 2021

14 to 17: **National Marine Educators Association Conference**
Virtual
marine-ed.org/conference/2021

19 to 20: **Social Science Working Group Conservation Twitter Conference**
Virtual
scbsocialscience.org/our-work/twitter-conference

19 to 22: **14th International Coral Reef Symposium**
Virtual
icrs2021.de/registration/online-registration-2021

20 to 22: **Mid-Atlantic Marine Debris Summit**
Virtual
midatlanticocean.org

OCTOBER 2021

27 to 30: **Conservation Marketing Conference**
Virtual
consmark.org/conference-updates

NOVEMBER 2021

1 to 4 AND 8 to 11: **Coastal and Estuarine Research Federation**
Virtual
conference.cerf.science

DECEMBER 2021

13 to 17: **American Geophysical Union**
Virtual
agu.org/Fall-Meeting

NOAA OFFICE FOR COASTAL MANAGEMENT TRAINING

JULY

20: Economic Guidance for Coastal Management Professionals
[Live Webinar](#)

21 to 22: Virtual - Facilitation Basics for Coastal Managers
[Live Webinar](#)

21: Seven Best Practices for Risk Communication
[Live Webinar](#)

27 to 29: Virtual - Social Science Basics
[Live Webinar](#)

28 to 29: Virtual - Facilitation Basics for Coastal Managers
[Live Webinar](#)

AUGUST

11 to 12: Virtual - Facilitation Basics for Coastal Managers
[Live Webinar](#)

18 to 19: Virtual - Facilitation Basics for Coastal Managers
[Live Webinar](#)

18: Seven Best Practices for Risk Communication
[Live Webinar](#)

For more information on virtual and site-specific trainings, visit coast.noaa.gov/digitalcoast/training/home.html.

CREDITS AND INFORMATION

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

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

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