



Lake Champlain Sea Grant and Vermont Water Center Undergraduate Internship and Graduate Fellowship Opportunities



January 7, 2020



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MENU

VERMONT WATER RESOURCES & LAKE STUDIES CENTER



**FOCUS ON WATER RESOURCE
ISSUES IN VERMONT**

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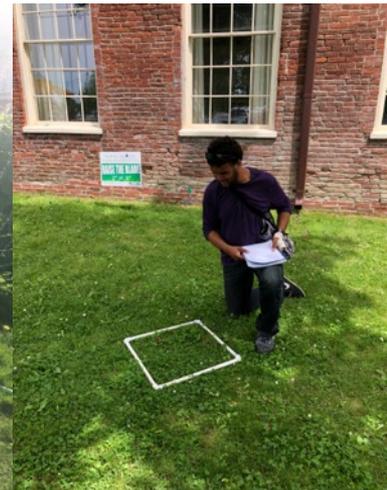
Agenda

1. Introductions and welcome – Julianna White
2. Undergraduate opportunities – Kris Stepenuck
3. Overview of the graduate fellowship opportunities now available - Julianna
4. Knauss application and placement – Hannah Lachance
5. Knauss application, placement, service: a summary – Kristin Raub
6. Questions

We hire undergraduate interns each semester and summer.

Types of internships:

- Watershed education
- Lawncare research
- Shoreline protection
- Clean boating
- Green infrastructure



Research & Extension Experience for Undergraduates (REEU)

- USDA-funded June 1 – July 31, 2020 in Blacksburg, VA on the Virginia Tech campus.
- Application due Feb 15.
- Individual student efforts & interdisciplinary collaboration with diverse team of mentors includes environmental scientists, social scientists, engineers, and computer scientists.
- Chosen undergraduate fellows will receive a stipend of \$500 per week for the 9-week program + housing and meals.
- Some funds to help with travel to and from the site.
- <https://vtconfluence-reeu.weebly.com>

Graduate fellowships

John A. Knauss Marine Policy Fellowship

- Feb 2021 – Jan 2022 fellowship in executive or legislative host offices in or near DC on ocean, coastal, or Great Lakes policy, management, or research
- For graduate students at U.S. accredited higher education institutions on Feb 22, 2020
- \$47,500 living stipend + \$11,500 for health insurance, travel and moving expenses, tuition + up to \$15,000 for work-related travel, conferences
- CV, personal statement, 2 letters of rec, list of upcoming classes, & transcripts **due Jan 15 (review) or Feb 21 (final)** to julianna.m.white@uvm.edu
- <https://www.uvm.edu/seagrant/>

Coastal Management and Digital Coast Fellowship

- Aug 2020 – Aug 2022 opportunity to work on 1 of 9 different state or NGO projects (6 coastal mgmt., 3 digital)
- For U.S. citizens who completed graduate degree in natural resource management or environment-related studies at U.S. university Jan 1, 2019 - Jul 31, 2020
- \$42,000 annual salary, medical benefits, relocation & travel expense reimbursement
- CV, goal statement, 2 letters of rec, & transcripts **due Jan 17** via email to julianna.m.white@uvm.edu
- <https://www.uvm.edu/seagrant/>

PhD funding, Summer Institute

National Marine Fisheries Service/Sea Grant Fellowship

- 2 different fellowships for PhD candidates:
 - Population and Ecosystem Dynamics
 - Marine Resource Economics
- For U.S. citizens who are graduate students enrolled in PhD degree programs in academic institutions in the U.S. and U.S. territories.
- 2-3 year fellowships for \$48,000 per year (\$40,000 in federal dollars and \$8,000 in matching dollars) for salary (stipend), living expenses, tuition, & work travel, inc. annual Fellows meeting
- Comprehensive project and budget narrative application **due Jan 30** via email to julianna.m.white@uvm.edu
- <https://www.uvm.edu/seagrant/>

National Water Center Innovators Summer Institute

- June 8 - July 24, 2020 institute focusing on
 - coupled inland-coastal hydraulics
 - scaling hydrologic and hydraulic models from small basins to regional watersheds
 - utilizing hydroinformatics to address flood inundation
- For incoming graduate students and post-docs within 3 years of graduating with PhD from US universities
- Covers travel, room and board
- Statement of interest, CV transcript, & letter of endorsement **due Jan 13** to Proposal Space at <https://proposalspace.com/calls/d/1133>
- <https://www.uvm.edu/seagrant/>

Other opportunities

California Sea Grant Kelp Management Fellow

- 2-year fellowship with the California Department of Fish and Wildlife
- Will support the creation of an Enhanced Status Report (ESR) and/or statewide management plan for bull kelp and giant kelp, including planning, implementation, and management,
- Open to candidates who are close to completing or have recently completed (after May 1, 2018) an advanced degree (Masters, PhD, JD) from an accredited U.S. university, in a field related to marine biology, marine ecology, and/or marine resource management.
- **Due Feb 7**
- Questions to Catherine Courtier at sgproposal@ucsd.edu
- Apply: <https://caseagrants.ucsd.edu/fellowships/california-department-of-fish-and-wildlife-california-sea-grant-statewide-kelp>

2020 NOAA Marine Debris Program - California Sea Grant Extension Fellowship

- Support the NOAA Marine Debris Program's work in California and assist the program and the California Ocean Protection Council (OPC) with the implementation of the California Ocean Litter Strategy.
- 2-year fellowship in Oakland, CA
- Work closely with California Sea Grant's team of extension specialists, the California Ocean Protection Council, and other state agencies, on research, education, and outreach projects to help advance ocean litter reduction efforts in the state.
- Open to candidates close to completing or have recently completed (after May 1, 2018) an advanced degree from an accredited U.S. University. The fellow must complete all degree requirements prior to starting the fellowship
- Due Jan 29
- Questions to Miho Ligare at sgproposal@ucsd.edu.
- <https://caseagrants.ucsd.edu/fellowships/noaa-marine-debris-program-california-sea-grant-extension-fellowship>

Hannah Lachance

- **B.S.**: Animal Science, UVM
- **M.S.**: Natural Resources, UVM
- **Work**: Research, teaching, conservation center, etc.
- **Interests**: Conservation + Restoration of native species
- **2020 Fellowship Position**: International Fisheries Science Specialist - NOAA Fisheries Office of Sci. + Tech.



Knauss Application Advice: Hannah

- Clearly explain interest in fellowship
 - How it will help you and your career goals
 - How you align with their mission
- *****List non-thesis related interests and experiences***
 - scientific communication (i.e. running a lab Instagram), president of a club, etc.

Placement Week: Hannah

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
- Welcome Dinner	- Host Presentations - Evening Networking (old and new fellows)	- Interview scheduling - Interviews - Q and A	- Interviews - Evening Networking (host offices)	- Interviews - *Call top 3 - Evening Networking (host offices)	- Placement - Meet with new host office - Celebrate with Fellows



DEAN JOHN A. KNAUF MARINE POLICY FELLOWSHIP PROGRAM
NATIONAL SEA GRANT COLLEGE PROGRAM
1313 EAST WEST HIGHWAY SILVER SPRING, MD 20910
EMAIL: usg.fellows@hawaii.gov

EXECUTIVE Finalist Interview Schedule
Placement Week October 21-25, 2019

Finalist Name: Hannah Lachance

Tuesday October 22, 2019	Wednesday October 23, 2019	Thursday October 24, 2019
8:00		8:00
8:30		8:30
9:00	18 ✓	9:00 20 ✓
9:30	17 ✓	9:30
10:00		10:00
10:30	27 ✓	10:30
11:00		11:00 11 ✓
11:30	6 ✓	11:30 13 ✓
12:00	10 ✓	12:00 lunch
12:30		12:30
1:00	1:00 * 8 ✓	1:00 24 ✓
1:30	50 ✓	1:30 3 ✓
2:00		2:00
2:30	31 ✓	2:30
3:00		3:00
3:30	36 ✓	3:30 2 ✓
4:00		4:00 * 25 ✓
4:30		4:30
5:00	35 ✓	5:00
5:30		5:30



Kristin Raub

- *University of Vermont*
- PhD Candidate in Natural Resources
- NSF IGERT Smart Grid Trainee
- Graduate Fellow in the Gund Institute for Environment

Knauss Application Advice

1. Start with a story
2. Show, don't tell
3. Lots of detail
4. Have clear career goals (a personal “thesis statement”)
5. Explain WHY you need the fellowship, HOW it will help you reach your goals
6. Strong closer

The UVM Graduate Writing Center can help with all of this!
I am a consultant and would be happy to work with you.



2016 Knauss Marine Policy Fellow

Host Offices:



US Army Corps
of Engineers®

IWR



- U.S. Army Corps of Engineers Institute for Water Resources
- Coastal States Organization

I did a lot...



John A Knauss Marine Policy Fellowship

The Sea Grant Knauss Fellowship provides a unique educational and professional experience to graduate students who have an interest in ocean, coastal and Great Lakes resources and in the national policy decisions affecting those resources.

The fellowship, named after one of Sea Grant's founders, former NOAA Administrator, John A. Knauss, matches highly qualified graduate students with "hosts" in the legislative and executive branch of government located in the Washington, D.C. area, for a one year paid fellowship.



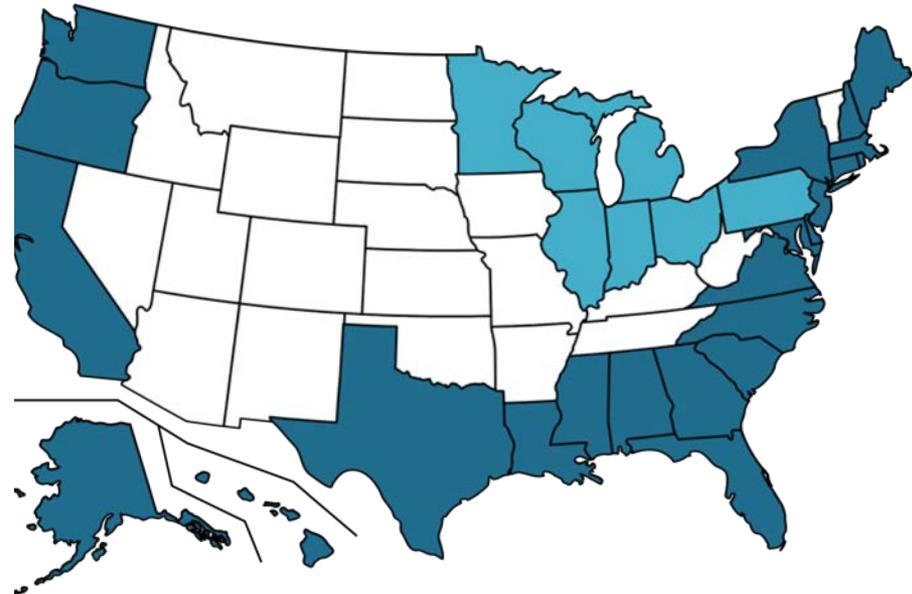
2016 Knauss Fellow, with Dr. Kathy Sullivan and Dr. Rick Spinrad, at the close of the NOAA regional water meeting in Sacramento, CA.



Coastal States Organization



Helping states to maintain their leadership role in the development and implementation of national coastal and ocean policy. CSO works with Congress to shape legislation and arrange for state testimony and works with Federal Agencies to comment on proposed regulations. CSO advocates for increased federal funding and support for state-based coastal and ocean programs, as well as responsiveness of federal agency program administration and policies to state concerns.



Community Rating System Green Guide



- CSO + ASFPM
- Green Guide = best practices manual:
 - interactive and web based
- 23 Elements: floodplain ecosystems and future conditions
- 36 interviews turned into success stories
- CRS workshops in OH and RI



Funding for this project is provided by the Department of the Interior through a grant from the National Fish and Wildlife Foundation's Hurricane Sandy Coastal Resiliency Competitive Grant Program



CSO Coastal Toolkit Project



- Characterize challenges with using and finding tools/toolkits
- Describe how adaptation change and planning occurs
- Provide recommendations for how the coastal programs can and should be used during development

- 24 interviews:
 - coastal programs and toolkit developers
- Became the first chapter of my dissertation



USACE-IWR



US Army Corps
of Engineers®

IWR was created in 1969 to **analyze and anticipate changing water resources management conditions, and to develop planning methods and analytical tools to address economic, social, institutional, and environmental needs in water resources planning and policy.** Since its inception, IWR has been a leader in the development of strategies and tools for planning and executing the USACE water resources planning and water management programs.

USACE-IWR

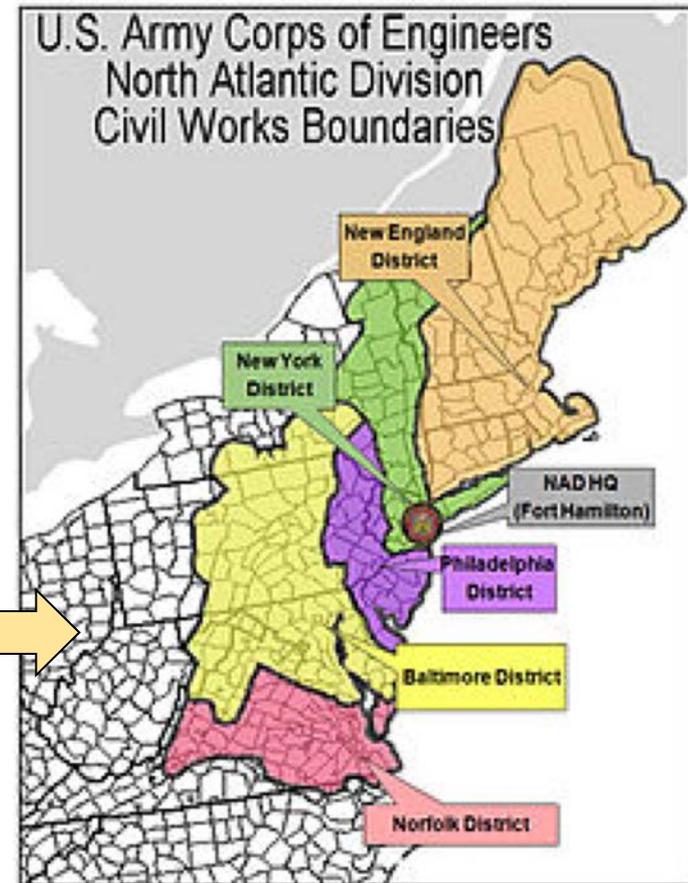
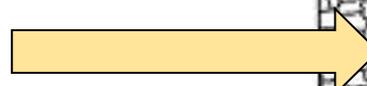


US Army Corps
of Engineers®

1. Draft National Shoreline Management Study Reports
2. **Social Network Analysis of SAGE**

a. Poster presentation at RAE conference in December

New England District Detail



Social Network Analysis of SAGE



US Army Corps of Engineers®

Social Network Analysis of Systems Approach to Geomorphic Engineering (SAGE)

Kristin Raub, MSc^{1,3}, Pamela Collins, PhD^{2,3}, Aaron Rosenberg, MSc⁴

¹Naval Sea Grant Center, NOAA Science & Technology Center, U.S. Army Corps of Engineers, United States Army, Vicksburg, Mississippi; ²US Army Corps of Engineers, Vicksburg District, Vicksburg, Mississippi; ³US Army Corps of Engineers, Vicksburg District, Vicksburg, Mississippi; ⁴US Army Corps of Engineers, Vicksburg District, Vicksburg, Mississippi

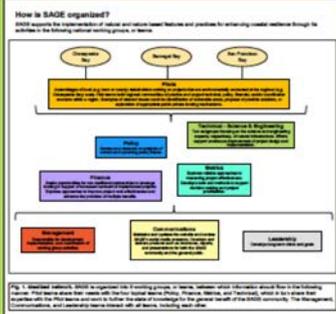


What is SAGE?

SAGE is a collection of online tools, data, and model outputs for governmental organizations (NGOs), academic institutions, engineers, and private businesses working together to:

- Provide the user with a user-friendly interface to address the challenges of communication, coordination, and decision-making in the face of an ever-evolving and complex system.
- Support decision-making by providing a common platform for data, information, and communication.
- Facilitate decision-making by providing a common platform for data, information, and communication.

SAGE Partners:



Driving Questions

As an applied research and engineering organization, how will SAGE be used to address the challenges of communication, coordination, and decision-making in the face of an ever-evolving and complex system?

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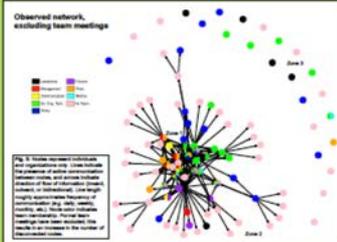
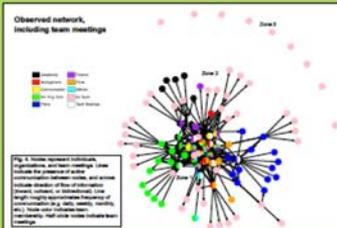
How will SAGE be used to address the challenges of communication, coordination, and decision-making in the face of an ever-evolving and complex system?

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Social Network Analysis 101

Social network analysis (SNA) is the study of connections between individuals or groups. Connections can be general relationships, based on interests, which individuals share (for example, club or other type of affiliation). One, many, many, and many-to-many relationships can be studied. SNA is used to analyze the social structure, or the social organization, of the study population.

The nodes in the network, or individuals, are represented by colored circles. The edges, or connections, are represented by lines connecting the nodes. The size of the nodes and the thickness of the edges can be used to represent different attributes of the individuals and their relationships.



Results

The individuals and organizations participating in the SAGE network had the three broad categories (Fig. 1 and 2):

- Zone 1 - CORE:** Number of connections is high, information flow is bidirectional, membership is multiple times in two.
- Zone 2 - PERIPHERY:** Number of connections is low, information flow is unidirectional, membership is multiple times in two.
- Zone 3 - ISOLATED:** Number of connections is low, information flow is unidirectional, membership is multiple times in two.

Fig. 3. Results of Social Network Analysis (SNA) for the SAGE network. The bar chart shows the number of connections for each zone. Zone 1 (CORE) has the highest number of connections, followed by Zone 2 (PERIPHERY) and Zone 3 (ISOLATED).

Discussion

Driving questions, resolved:

1. The observed network revealed the SAGE network.
2. The observed network is primarily centered on the team meetings.
3. The observed network is primarily centered on the team meetings.
4. The observed network is primarily centered on the team meetings.

Recommendations:

- 1. The observed network revealed the SAGE network.
- 2. The observed network is primarily centered on the team meetings.
- 3. The observed network is primarily centered on the team meetings.
- 4. The observed network is primarily centered on the team meetings.

Want to get learn more or get involved? Visit us at...

www.sagecoast.org

...and share [10.1016/j.jce.2014.03.001](https://doi.org/10.1016/j.jce.2014.03.001) on our homepage

Acknowledgements

We would like to thank the current and former SAGE members for the time they spent providing data for this study. Thanks also go to Chris Cleveland, Peter Sauer, and Shelly Walker for reviewing the survey. The authors would like to thank the current and former SAGE members for providing data for this study. Thanks also go to Chris Cleveland, Peter Sauer, and Shelly Walker for reviewing the survey. The authors would like to thank the current and former SAGE members for providing data for this study. Thanks also go to Chris Cleveland, Peter Sauer, and Shelly Walker for reviewing the survey.



Social Network Analysis of SAGE: A Study to Benefit Intra-Program Communication

This survey is to collect information to perform a social network analysis, which will assess communication within the program. Your participation is encouraged as each perspective will increase the usefulness of the set of recommendations. The results of this study are for intra-program use only. Your name will be used for analysis only. Any publicly shared results will be highly generalized and anonymously coded. Please know that the results will be used for program improvement and not for individual performance evaluation. This survey will take 15 minutes or less to complete.

* Required

Name: *

Your answer _____

Email: *

Your answer _____

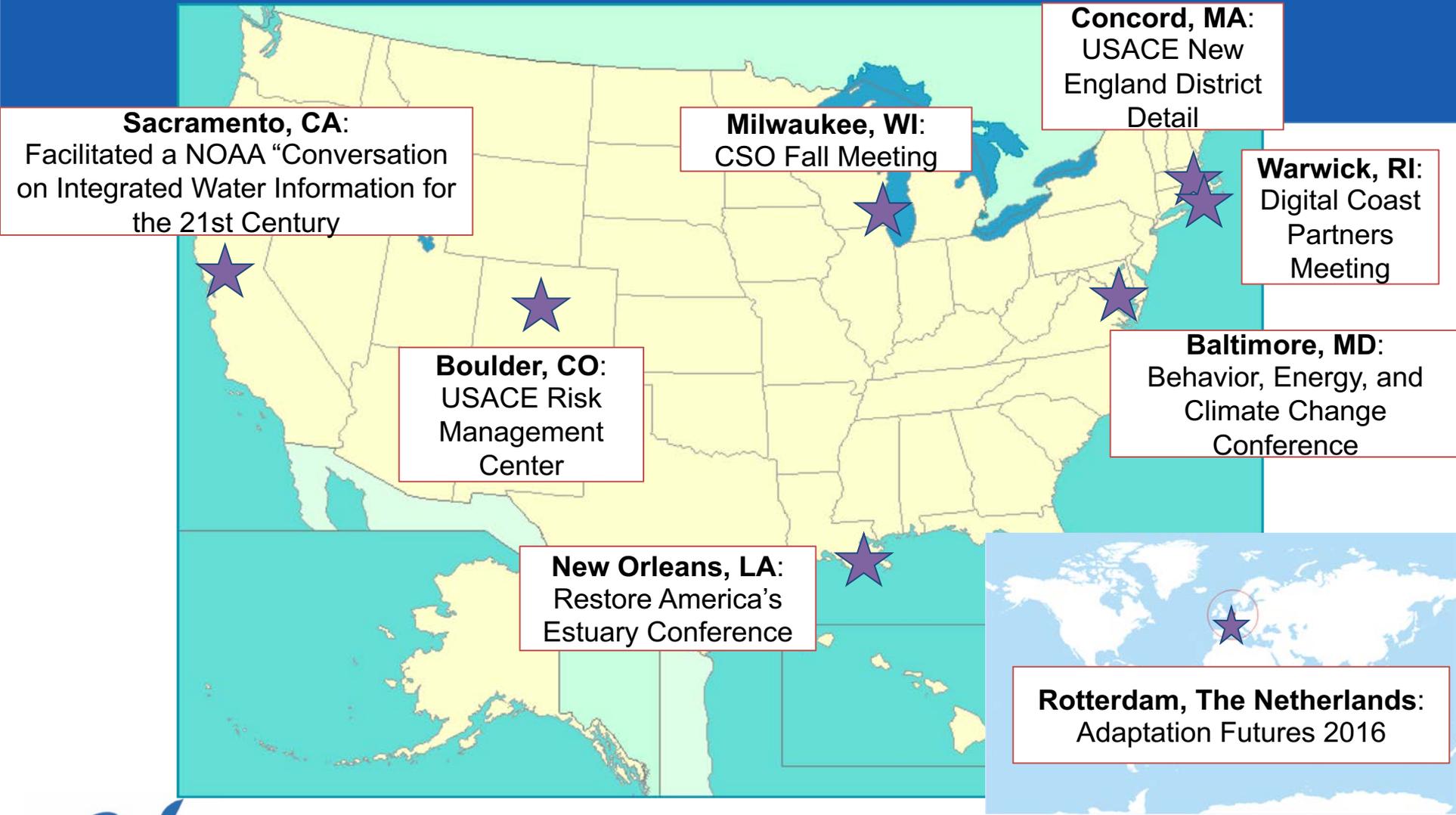


Other Stuff

- Capitol Hill Ocean Week (CHOW)
- Salary Negotiation Seminar
- Networking 101 Seminar
- Planning Effective Projects Training (by NOAA)
- Sharing Science Workshop (by AGU)
- Department of the Interior Day
- Committee on the Marine Transportation System (CMTS) Day
- Accompany CSO on Hill visits/meetings

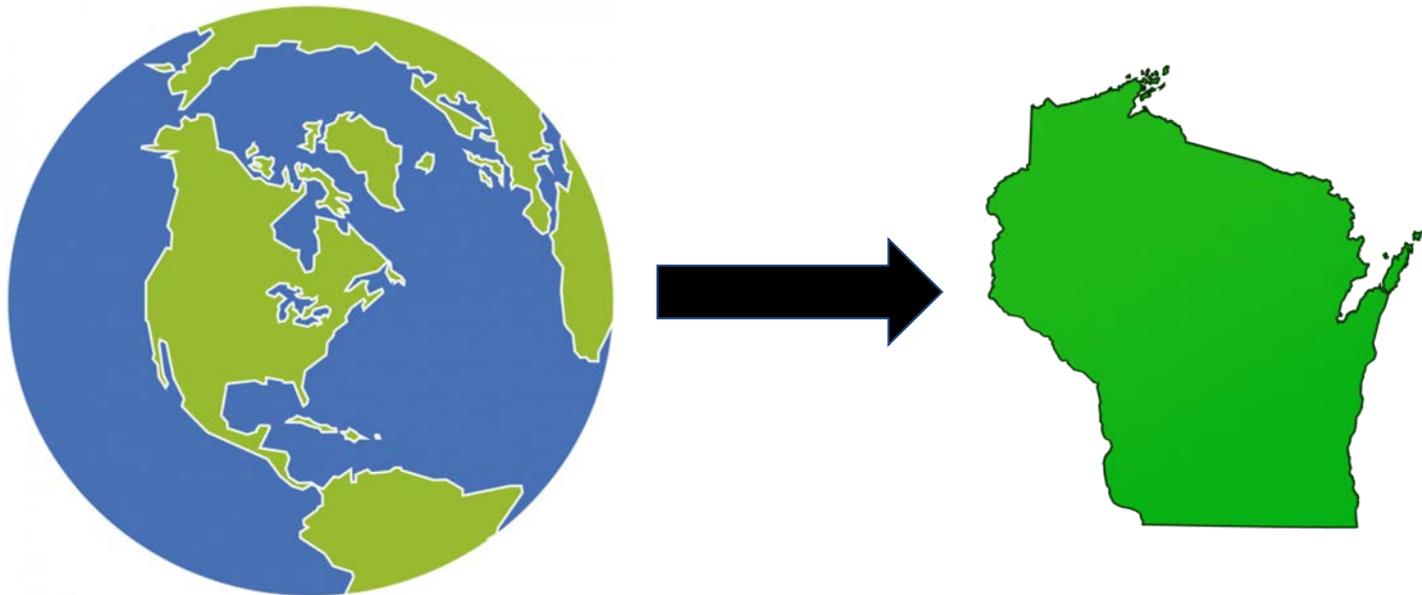


Travel



What did I learn?

Policy at the international, national, regional, state, and local levels.



¿Questions?



More info



Lake Champlain Sea Grant:

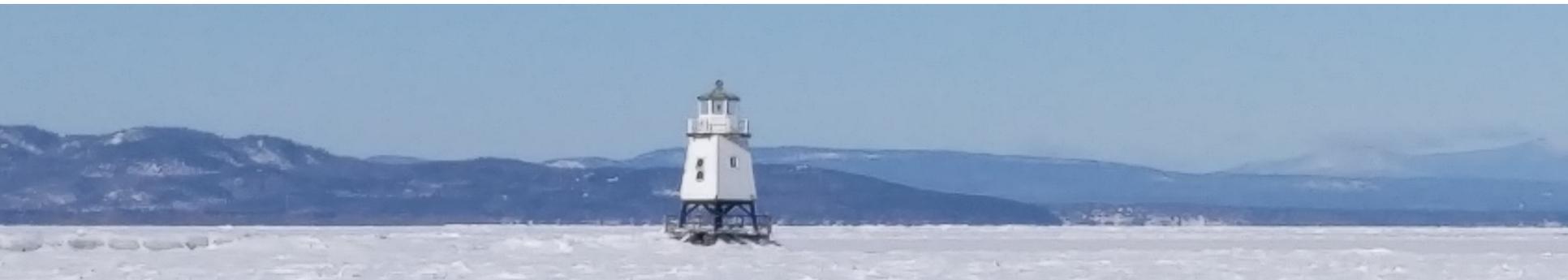
www.uvm.edu/seagrant



Vermont Water Center:

www.uvm.edu/rsenr/vtwatercenter

Julianna.M.White@uvm.edu 802-656-4277



Knauss executive and legislative placements

- Executive – Placements with NOAA, Dept of Transportation, Dept of Energy, Navy, Fish and Wildlife, EPA.
- Legislative – Typically US Senators or Representatives or Senate or House committees (Marine Transportation, etc.). Could be any political party.
- Typically more executive than legislative placements
- Both – You must demonstrate that you are comfortable supporting ideas they may not support in application (outside of office, must represent opinion of the person they are representing).

Knauss application timeline

- **January 15, 2020: Optional submission** of CV, personal statement, 2020 plans statement, and transcripts to Lake Champlain Sea Grant for feedback. Send to julianna.m.white@uvm.edu
- **February 21, 2020: Submit full application to Lake Champlain Sea Grant** via julianna.m.white@uvm.edu (Incomplete applications will be rejected without review.)
 - **CV** (≤ 2 pages)
 - **Personal education and career goal statement** (≤ 1000 words)
 - abilities (what you bring to the program)
 - expectations of the fellowship experience (what you expect to get from the program)
 - how the fellowship supports your career development (what it means to you)
 - executive or legislative placement preference
 - **2 signed letters of recommendation**, one from the student's major professor
 - **Listing of classes and/or plans** for spring, summer and fall 2020 (≤ 1 page)
 - **Undergraduate and graduate student transcripts** (official or scanned)
 - **If applying from outside of the Lake Champlain basin**, a letter from the National Sea Grant office referring you to Lake Champlain.

Knauss application timeline

- February 22 – March 22, 2020: LCSG interviews candidates
- April 3: LCSG submits up to 6 applications to the national program
- April-May: National Sea Grant Panel reviews applications
- Summer (ideally late June): National Sea Grant office announces selected fellows.
- October or December: Placement week
- February 1, 2021 – January 31, 2022 - Fellowship

Tips for a successful application (Knauss)

- Take advantage of optional review.
- Limit your CV/Resume to no more than 2 pages as requested and provide only 2 recommendations; anything beyond limit will be truncated.
- Use no more than 1000 words in narrative.
 - Be specific, direct and concise in discussing what you would bring to and gain from the Knauss Fellowship.
 - Reflect evidence of creative thinking, analytical skills, and indicate your capacity and willingness to make connections between science and the broader economic, social and political issues.
 - The goal statement should demonstrate your ability to convey scientific knowledge in a broader or non-scientific context and should include clear objectives which align with the broader missions of Sea Grant and NOAA.
 - If low grades or missing time, it is advisable to provide a one-sentence explanation in narrative.
- Follow the directions completely.
- Watch this comprehensive webinar on application process, including many tips:
<https://www.gotostage.com/channel/8cc61026ffb5448abdc803541a54c71b>

Knauss scoring and review

- Scoring rubric at LCSG and nationally. (Be sure to read the scoring in detail, as there are many elements to each section below.)
 - Academic record 10%
 - Recommendations 15%
 - Statement of career goals 35%
 - Additional relevant experience 40%
- Expect to be interviewed locally
- LCSG submits up to 6 qualified candidates for national review
- National Panel is not a consensus panel – each candidate gets an individual score and compare ranks, and the panel provides rank order list
- May select out of order to get degree or geographic diversity
- ~50% acceptance rate (65 of 126 chosen in 2018)

Coastal Management and Digital Coast 2020 projects

- Mitigating Multiple Loss Properties: Guidance and Training for Coastal Communities, Madison, Wisconsin
- California State Coastal Conservancy's Wetland Recovery Project, Oakland, California
- A Roadmap to Protection: Understanding the Costs of Adaptation, Dover, Delaware
- Update the Draft Seashore Reserve Plan, Hagatna, Guam
- Resilience and Public Recreational Lands in Maryland: Developing Strategies for On-the-ground Climate Adaptation, Annapolis, Maryland
- Building Our National Capacity to Protect Coastal Wetland Migration Pathways: Assessing Stakeholder Needs and Creating Transferable Communications Tools, Prudence Island, Rhode Island
- Building Capacity to Use Existing Digital Coast Tools and Resources for Implementing Nature-Based Solutions after a Major Hurricane, Florida Keys, Florida
- Implementation and Improvement of the Texas Coastal Nonpoint Source Pollution Program, Austin, Texas
- Updating the St. Thomas East End Reserves (STEER) Management Plan to Recover and Improve Coastal Resilience in the U.S. Virgin Islands, St. Thomas, U.S. Virgin Islands

Coastal Management and Digital Coast application timeline

- **Applications due January 17, 2020** to Julianna White at Lake Champlain Sea Grant (julianna.m.white@uvm.edu).
- **Interviews** by Lake Champlain Sea Grant will be completed by February 14, 2020.
- **Finalist** notifications by March 20, 2020. (18 finalists will be announced; but only 9 finalists will receive placements.)
- **Placements** will be decided in a workshop to match hosts with fellows in Charleston, SC, April 27 to May 1, 2020.

Coastal Management and Digital Coast selection criteria

- Academic performance and diversity of educational background, including extracurricular activities, awards, and honors
 - Endorsement of the applicant's Sea Grant Director
 - Support from two letters of recommendation
 - Content of goals statement
-
- 18 finalists from across all 33 Sea Grant program submissions are selected by a national panel for the 9 positions