



State of the Network: Reviewing and presenting the findings from the five-year assessment report of the Chesapeake Watershed CESU Research Network

Dr. Matt Fitzpatrick, *UMCES-Appalachian Associate Director for Research and CHWA CESU Director*

Ms. Tanya Gossett, *Associate Area Director for Resource Stewardship & Science of the National Capital Area (NPS)*

Dr. Dan Filer, *CHWA CESU National Park Service Research Coordinator*

Ms. Rhonda Schwinabart, *Host Institution Coordinator*



University of Maryland
CENTER FOR ENVIRONMENTAL SCIENCE

Appalachian Laboratory Virtual Seminar Series
October 13, 2021

Today's Presenters



Dr. Matt Fitzpatrick

- Associate Director of Research at the Appalachian Laboratory and Host Director of the Chesapeake Watershed CESU Research Network



Rhonda Schwinabart

- Outreach Coordinator for the Appalachian Laboratory and Chesapeake Watershed CESU Research Network



Tanya Gossett

- Associate Area Director for Resource Stewardship & Science for the National Capital Area of the National Park Service, Supervisor of the Chesapeake Watershed CESU Research Coordinator position



Dr. Daniel Filer

- Research Coordinator for the Chesapeake Watershed CESU Research Network



WHAT IS THE CESU NETWORK?

- A NATIONAL CONSORTIUM OF FEDERAL AGENCIES, TRIBES, ACADEMIC INSTITUTIONS, STATE AND LOCAL GOVERNMENTS, NONGOVERNMENTAL ORGANIZATIONS, AND OTHER PARTNERS WORKING TOGETHER TO SUPPORT INFORMED PUBLIC TRUST RESOURCE STEWARDSHIP.
- OVER 375 PARTNERS IN 17 BIOGEOGRAPHIC REGIONS ENCOMPASSING ALL 50 STATES AND TERRITORIES.



Source: NOAA

CESU Network Units "CESUs"



Californian



Chesapeake
Watershed



Colorado Plateau



Desert Southwest



Great Basin



Great Lakes –
Northern Forest



Great Plains



Great Rivers



Gulf Coast



Hawaii – Pacific
Islands



North Atlantic Coast



North and West
Alaska



Pacific Northwest



Piedmont – South
Atlantic Coast



Rocky Mountains



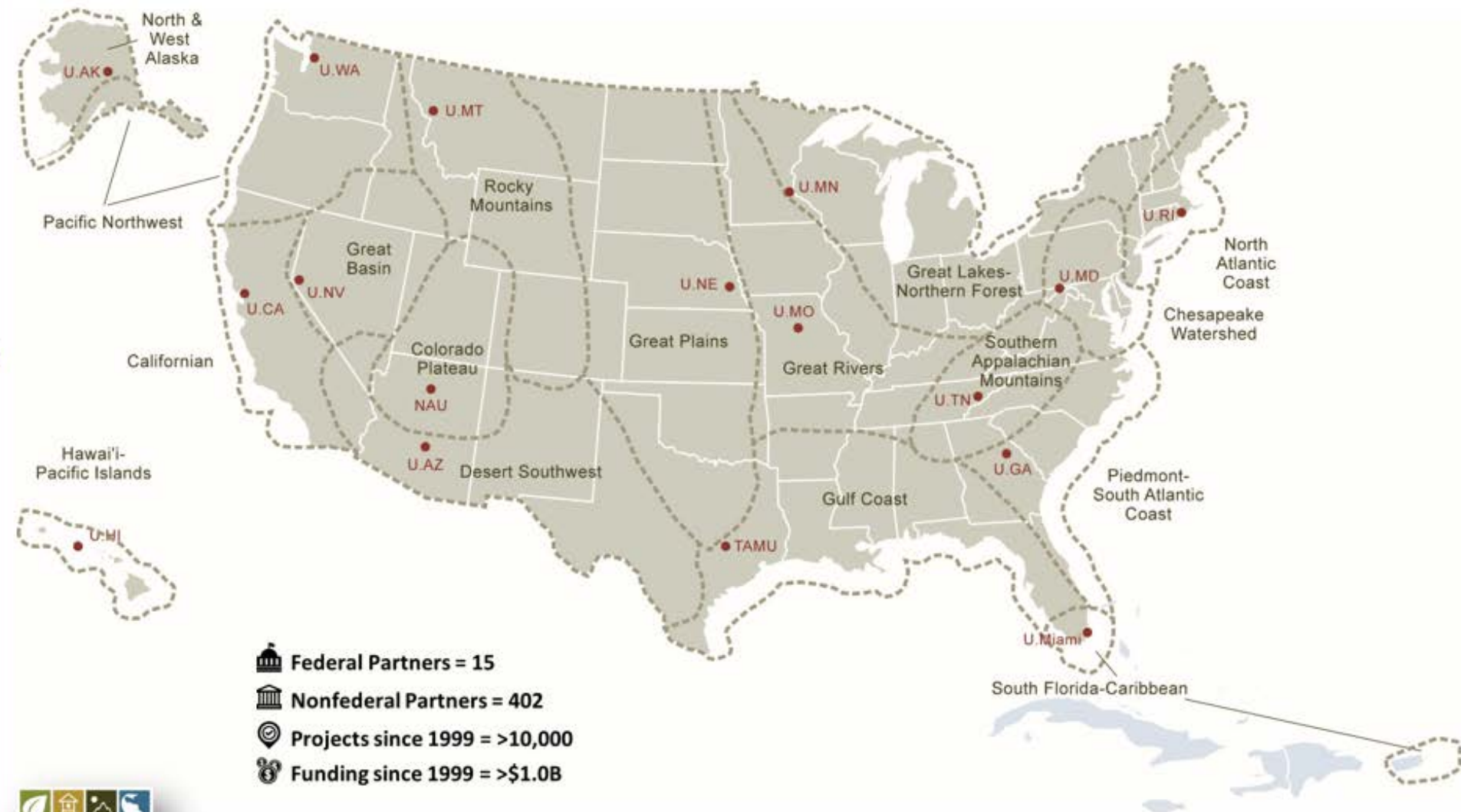
Southern Appalachian
Mountains

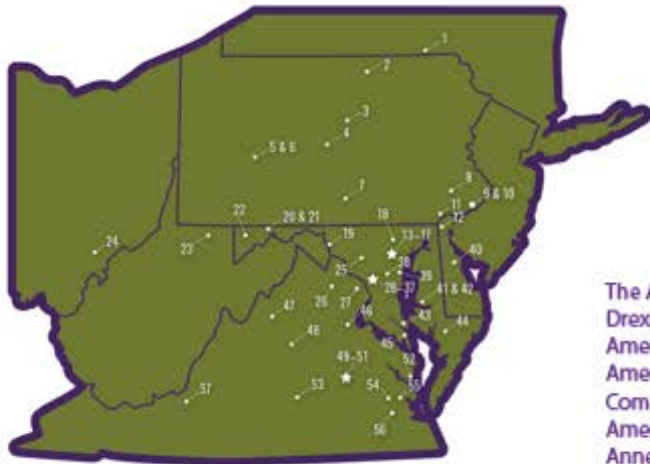


South Florida –
Caribbean



CESU Network Map





2021 Nonfederal Partners

The Academy of Natural Sciences of Drexel University- 9
 American Bird Conservancy- 26
 American Indian Higher Education Commission- 63
 American University- 33*
 Anne Arundel Community College- 41
 Association of African American Museums- 60
 Association for the Study of African American Life and History (ASLAH)- 29*
 Binghamton University- 1
 Bowie State University- 39
 Bryn Mawr College- 8
 Christopher Newport University- 57
 The College of William and Mary- 55
 Delaware State University- 42
 DC Department of Energy and Environment- 31*
 Ecological Society of America- 36*
 Frostburg State University- 20
 Gallaudet University- 61
 Garrett College- 22
 George Mason University- 27
 George Washington University- 37*
 Hood College- 25
 Howard University- 35*
 Indiana University, Eppley Institute- 59
 Indiana University of Pennsylvania- 5
 James Madison University- 48

Johns Hopkins University- 64
 Live It, Learn It- 62
 Lock Haven University- 3
 Longwood University- 54
 Mansfield University- 2
 Maryland Institute College of Art- 16*
 Monmouth University- 65
 Morgan State University- 17*
 National Aquarium in Baltimore- 15*
 NatureServe- 66
 Ohio University- 24
 Old Dominion University- 53
 Park Rx America- 32*
 Pennsylvania State University- 4
 Shepherd University- 19
 Shippensburg University- 7
 Smithsonian Institution- 30
 St. Mary's College of Maryland- 46
 Stroud Water Research Center- 11
 Temple University- 67
 Towson University- 18
 University of Delaware- 12
 University of the District of Columbia- 34*
 University of Maryland Baltimore County- 13*
 UMCES-Appalachian Laboratory (Host office)- 21
 UMCES-Chesapeake Biological Laboratory- 44
 UMCES-Horn Point Laboratory- 43

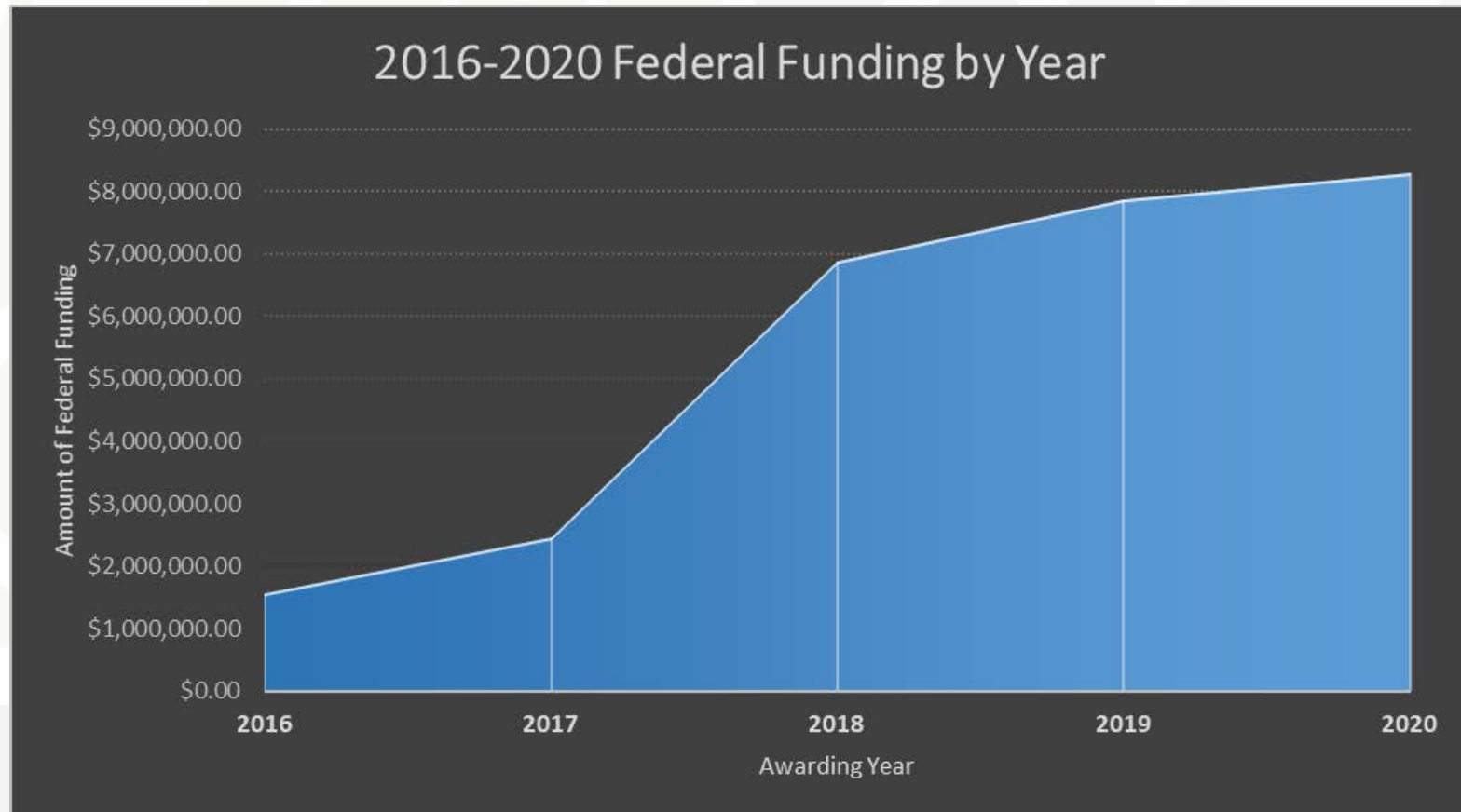
UMCES-Institute of Marine and Environmental Technology- 14*
 UMCES-Integration and Application Network- 40
 UMCES-Sea Grant- 28
 University of Maryland College Park- 38*
 University of Maryland Eastern Shore- 45
 University of Mary Washington- 47
 University of Pennsylvania- 10
 University of Richmond- 50*
 University of Virginia- 49
 Virginia Commonwealth University- 51*
 Virginia Department of Conservation and Recreation- 52*
 Virginia Institute of Marine Science- 56
 Virginia Tech- 58
 West Virginia University- 23
 Western Pennsylvania Conservancy- 6



Federal Agency Partners



Growth of the Network



Engagement of the Federal Partners

Figure 2: Federal Funding in 2016 and 2020
Chesapeake Watershed CESU Research Network



Top Eight Cooperators in Dollars: 2016-2020

Cooperator	Number of Projects	Total Dollars
Virginia Tech	38	\$5,290,679
University of MD (CP)	33	\$3,397,361
UMCES	17	\$2,114,419
University of Delaware	16	\$2,066,493
University of Penn.	20	\$1,695,382
Penn State University	23	\$1,673,257
University of Virginia	6	\$1,624,163
George Mason Univ.	11	\$1,084,634



Benefits of the CESU Network

To the Government...

- Direct access to cooperators offering a wide range of expertise in thousands of disciplines
 - 63 cooperators in our network (tied for the most in the nation) and nearly 450 nationwide.
- Streamlined agreement process without competition in most cases
- Reduced overhead rate of 17.5%

To the Cooperator...

- Opportunity to engage with the federal workforce and use applied science on public lands (match research interests with federal needs)
- Fund graduate opportunities
- Generate funding and build partnerships
- Advance science in the public forum



Benefits of CESU Partnership

“Binghamton University's membership in the CESU places it within a community of like-minded institutions, which has the potential to facilitate interinstitutional and transdisciplinary collaboration. As BU's participation in available projects increases, the impact of membership, via increased opportunities for research projects, publications, student learning experiences, etc. will also expand.”

-Tanja deMauro, Binghamton University

“Effective access to science capabilities, new partnership and program development opportunities.”

-Thomas (Tom) J. O'Connell, USGS



2021 Renewal

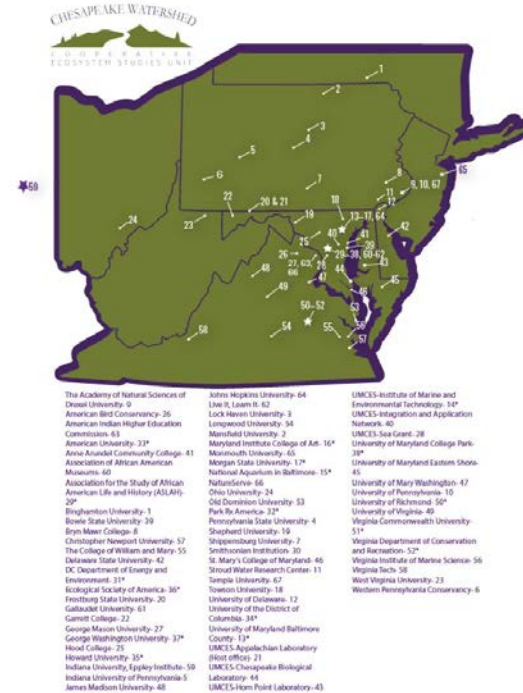
- Five-year cycle
- Three part application:
 - Host self-assessment
 - Federal Managers Committee report
 - External reviewer reports
- Host self-assessment
 - Conducted November 2020 to January 2021
 - Project data review
 - Partner survey
- Renewed in May 2021!

Chesapeake Watershed (CHWA CESU) Self-Assessment Report 2016-2020

February 4, 2021

Eric A. Davidson, Director

Rhonda Schwinabart, Host Coordinator



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Network Feedback

“According to Dr. Rice and Dr. Schiavo, working with Danny Filer these past few years has been an absolute pleasure...He is accessible and professional, helpful and kind.”

-Sylvia Ezekilova, George Washington University

“Dan and Rhonda do a terrific job regularly communicating CHWA funding and job opportunities to partner institutions....Dan is accessible to our researchers to discuss project and funding ideas.”

- Elissa Welch, Ohio University

“Good communication and interaction with partners.”

-Chris Petersen, Department of Defense (Navy)

Satisfaction with Host Institution (1-5 scale, with 5=“extremely satisfied”):

Federal partners: 4.4

Nonfederal (research) partners: 4.6

“Database development, job postings and other announcements, addition of different types of non-federal partners, use of virtual tools - all work to make the Network a network.”

-Perry Wheelock, National Park Service

“Dr. Davidson and his team are extremely well organized and have been very responsive to questions from our organization....They demonstrate strong leadership of the CHWA CESU that empowers our organization.”

- Scott Ensign, Stroud Water Research Center



Federal Council Feedback

“Council members were strongly supportive of renewal, acknowledging the active engagement with many agencies, and remarking about their respective positive experiences working with Chesapeake Watershed CESU partners as well as the benefits of the ‘very active program’ to both nonfederal and federal partners...”

“The Council commended the CESU host university team at the Appalachian Laboratory for the development of the online expert database and acknowledged the value of such a resource for both federal and nonfederal partners...”

“...reasonably expect the development of a new strategic plan, with input/participation from federal and nonfederal partners, within the first year of the new five-year term (2021-2026)...

“...additional acknowledgement was given to the proposed idea of organizing smaller topical discussions to directly engage partner institutions that may not have had funded projects and to foster connections between partners on shared subject matter and common research interests...”

“...suggested convening a broader network discussion to share best practices and work toward identifying/developing consistent, durable, culturally competent coordination approaches to build lasting relationships with tribes and other under-represented organizations...”



Student Engagement

Twenty-eight (28) research partners
135 undergraduate students
130 graduate students



Student Engagement

Benefits to engaged students:

- Experience with all phases of research from planning to publication;
- Capstone/thesis/dissertation research opportunities;
- Improved science communication skills



“This project allowed me to gain experience working with an agency I had not previously worked with (US ArmyCorps of Engineers; USACE) in a portion of the US to which I previously had minimal exposure. Gaining new experience working on conservation science related to imperiled songbird habitat modeling in the western US was important to my professional development. Moreover, it has prepared me to take advantage of other potential opportunities the USACE may make available in the future.”

- Student from Indiana University of Pennsylvania



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Student Engagement

Best practices:

- Regularly talking about research activities with students.
- Preparing students for the research experience.
- Maintaining contact with students throughout the experience.



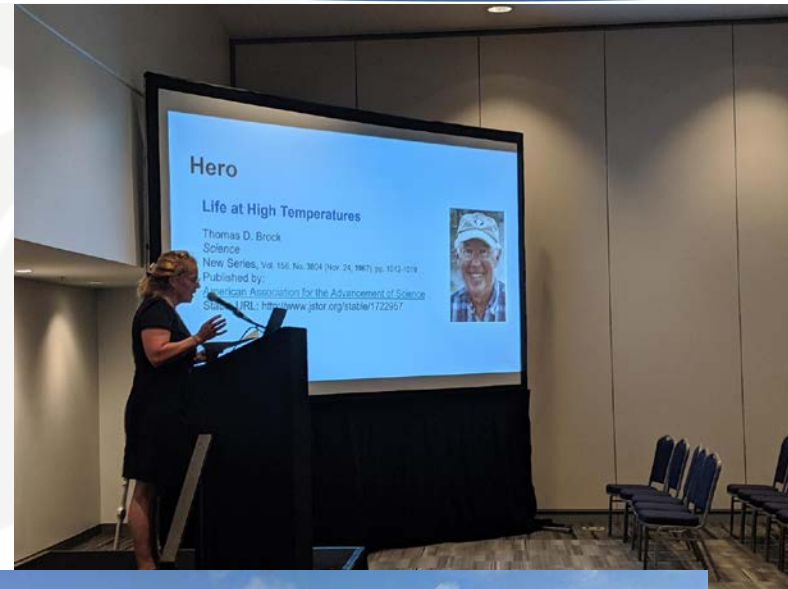
Student Engagement

Example project: Science in the Parks (NPS, USM, American University)

Fall 2017: MEES 608W: Classic Readings in Ecology led by Dr. Katia Engelhardt.

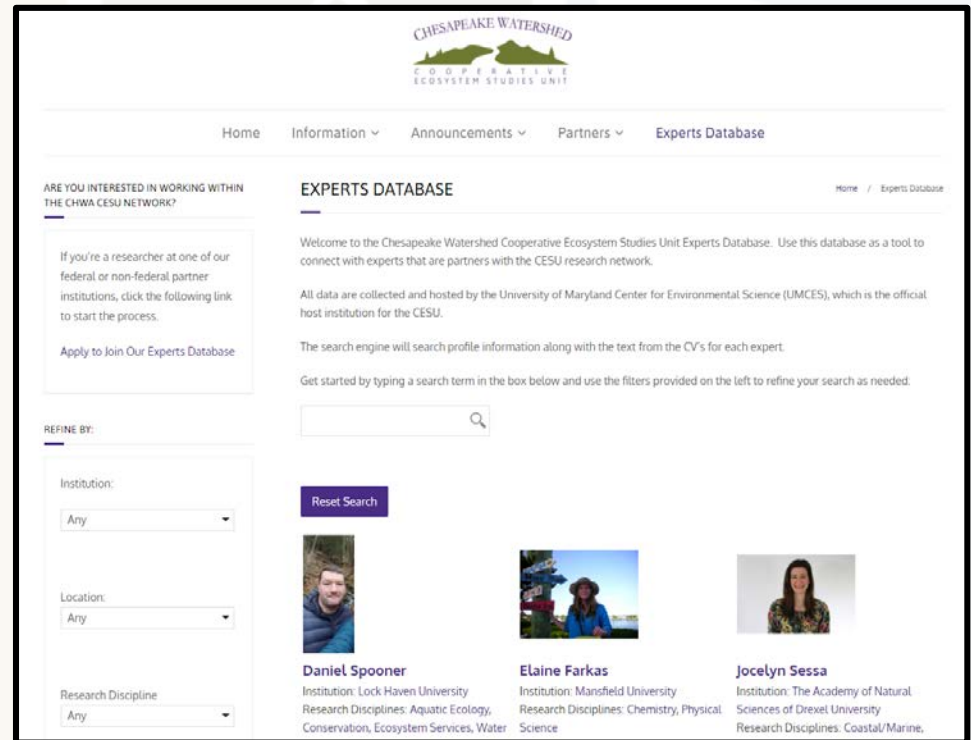
Summer 2019: USM students present at Ecological Society of America (ESA) conference.

2019-2020: Robert Boyd, a filmmaker and graduate student at American University (AU), films, edits and co-hosts two videos about the history of science.



What are we planning for the Future?

- Experts Database
- Projects Database
- Expanded engagement opportunities
- Efforts in Diversity, Equity, and Inclusion
- Renewed federal priorities



Questions?

Thank you to all of our CHWA CESU partners for their efforts in support of the 2021 renewal and to the following individuals at UMCES and the National Park Service for their support of the CHWA CESU:

- Dr. Peter Goodwin
- Katie Kline
- Heather Johnson
- Claudia Cochrane
- Kristen Harper
- Cami Martin
- Barb Jenkins
- Ginger Steelman
- Angela Richmond
- Tom Fish (NPS)

Learn more about the CHWA CESU at

<https://chwacesu.org/>

Sign up for our CHWA CESU email list at

<https://chwacesu.org/mailling-list/>

Add your profile to Experts Database at

<https://chwacesu.org/expert-database-application/>

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