

New Member Application-Nonfederal Partner

Great Lakes Northern Forests-Cooperative Ecosystems Studies Unit

University of Wisconsin-Whitewater

800 W. Main St.

Whitewater, WI 53190

Respectfully Submitted

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February 5, 2019

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Formal Application Letter

February 5, 2019

Cooperative Ecosystem Studies Units Network
1849 C Street NW Room 2737
Washington DC 20240

Please accept this letter as part of the application packet for the University of Wisconsin-Whitewater's Great Lakes Northern Forests CESU nonfederal partner affiliation request. The University of Wisconsin-Whitewater (UW-W) is a four year regional comprehensive university serving central and southeastern Wisconsin. As part of the UW-W mission, the university focuses on "the **pursuit of knowledge**, powered by the spirit of innovation, and focused on transforming lives." The University of Wisconsin-Whitewater's application to the CESU is timely, in that, the goals stated in the universities 2017-2022 strategic plan are to; (1) improve student access and success; (2) transform lives and impact society; (3) foster diversity and inclusion; (4) **strengthen our resources**; (5) **deepen partnerships and relationships**; and (6) celebrate the accomplishments of our campus community. The mission and goals at UW-W are similar to the objectives (**provide knowledge** to support decision making, **partner with universities**, and **take advantage of university resources** while benefiting faculty and students) of the CESU Network.

UW-W has a very strong reputation in liberal education. The holistic nature of the students' educational experience provides ample opportunities for inquiry and analysis, critical thinking, problem solving, teamwork, and personal and social responsibility. In the physical and biological sciences (i.e., biology, chemistry, environmental sciences, geography, geology, physics) students are required to become proficient in understanding how human cultures influence the physical and natural world and how human cultures are constantly changing because of physical, biological, and chemical processes. Often serving as the backdrop for these discussions are terrestrial and freshwater ecosystems, where the majority of the biologists and environmental science faculty have been trained.

Currently faculty at UW-W are heavily vested in interdisciplinary ecosystem research across the biological, physical, social, and cultural sciences. A detailed description of these research projects are presented in the following pages of this application, but a few projects include:

- Nutrient storage in alluvial soils
- Agricultural plant productivity using remote sensing models
- Anthropogenic perturbation impact on local freshwater ecosystems
- Examination of complex food webs using stable isotopes

The location of UW-W to the Southern Kettle Moraine and Wisconsin's Ice Age Trail make our geography an ideal place for ecological research on public lands. In addition, the newly created Environmental Science program has grown to over 110 majors over the last five years and has promoted interdisciplinary collaborations among faculty and experiential learning opportunities for students. The opportunity for UW-W to become affiliated with GLNF-CESU would benefit both institutions and serve an unmet niche in southeastern Wisconsin.

Sincerely,

Dale K. Splinter and Carl A. Fox



WISCONSIN SPACE GRANT CONSORTIUM

Carthage College • 2001 Alford Park Drive • Kenosha, Wisconsin 53140-1994
262-551-6054 • spacegrant@carthage.edu • spacegrant.carthage.edu

September 25, 2018

Wisconsin Space Grant Consortium
Carthage College
2001 Alford Park Drive
Kenosha, WI 53140

To: Cooperative Ecosystem Studies Units Network

From: Kevin Crosby, NASA Wisconsin Space Grant Consortium

The University of Wisconsin-Whitewater is applying for membership into the Great Lakes Northern Forest-Cooperative Ecosystem Studies Unit. As part of the application process, a letter sponsoring the new partner from a federal organization is required. The NASA Wisconsin Space Grant Consortium has partnered with faculty and students at the University of Wisconsin-Whitewater for over a decade and strongly supports their application into the Cooperative Ecosystem Studies Unit (CESU).

NASA initiated the National Space Grant College and Fellowship Program (i.e., Space Grant) in 1989. The goal of the program is to fund education, research, and public engagement projects through a network of 52 consortia in all 50 states. The five objectives of the Space Grant are: (1) establish and maintain a national network of Universities; (2) **encourage cooperative programs among universities; aerospace industry, and Federal, state, and local governments**; (3) encourage interdisciplinary education, research and public service programs related to aerospace; (4) recruit and train U.S. citizens, especially women, underrepresented minorities, and persons with disabilities; and (5) promote a strong science, mathematics and technology education base from elementary through secondary levels. The second objective aligns well with the CESU, in that, the research infrastructure of the Space Grant is intended for collaboration with outside partners.

Over the last decade, faculty and students at the University of Wisconsin-Whitewater have been awarded \$120,591 in Space Grant funding. Faculty have secured 12 research grants totaling \$77,786. A few of the projects directly related to the mission of the CESU are:

- Using unmanned aerial vehicles and a multispectral camera to map vegetation health and water quality in Wisconsin
- Analysis of spatial and temporal climate variability in Wisconsin using dendroclimatic records
- Spatial changes in streamflow conditions: An upper Midwest investigation
- Earthviews: From photos to science

Students have been awarded 14 undergraduate scholarships (\$20,000) and 5 undergraduate research awards (\$12,845). Many of the students receiving awards have published their research, earned Master's degrees, and won prestigious awards, such as the Barry M. Goldwater Scholarship. The collaboration among faculty and students in the biological, physical, and environmental sciences at UW-Whitewater is impressive and has served the Wisconsin Space Grant program well.

Based on our decade-long relationship with the University of Wisconsin-Whitewater we strongly support their application to join the Great Lakes Northern Forest-CESU. The faculty provide the technical expertise to design and conduct sound scientific



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methodologies while providing educational outreach in the Great Lakes Northern Forests ecosystems. Perhaps one of the greatest assets at the University of Wisconsin-Whitewater lies in their ability to investigate land use change and ecosystem disruption using Geographic Information Systems and Remote Sensing imagery.

If accepted into the Great Lakes Northern Forest-CESU I anticipate that faculty and students could develop NASA Space Grants that align with the overall mission of the CESU and vice versa. If you have any questions or need clarification about anything in this letter please contact me at the address below.

Sincerely,

**Kevin
Crosby**

Kevin Crosby
2018.09.26
08:55:25 -05'00'

Kevin Crosby, Director

Initial Contact

Dr. Carl Fox, Director of Research & Sponsored Programs at the University of Wisconsin-Whitewater (UW-W) reached out to Merrill Flanary about becoming associated with the Great Lakes Northern Forest Cooperative Ecosystem Studies Unit (GLNF-CESU) in March 2018. In a subsequent email, Dr. Fox received a document outlining the application process and interest in working with UW-W to become affiliated with GLNF-CESU.

Carl has over 25 years of experience in university administration having served previously as research center director, chief research officer, associate graduate dean, vice provost for research, and graduate dean. Carl has been a tenured full professor in the life sciences at four universities. At UW-W, Carl leads the Office of Research & Sponsored Programs (ORSP) that oversees all university contract and grant funded programs including related research compliance activities. At UW-W Carl also serves as an advisor to the Native American Cultural Awareness Association, Undergraduate Research Program, and the University of Wisconsin System's Water Research Initiative. Carl has served on numerous state and national boards (e.g., Governor's Council on Innovation and Technology, Arizona Technology Council, Council on Research Policy and Graduate Education) and currently serves as Vice Chair of Pathways Into Health, a national consortium of universities, Tribes, Tribal Health Organizations, and the Indian Health Service. Carl also frequently serves as a research reviewer and advisor to the National Science Foundation, U.S. Environmental Protection Agency, the U.S. Forest Service, and the Department of the Interior.

He received his Ph.D. (Botany), M.S. (Plant Physiology) and B.S. (Biology) from Arizona State University, the University of Minnesota, and the University of Wisconsin, River Falls, respectively. He has over 70 research publications and has secured more than \$17 million in research funding through competitive contracts and grants from governmental, corporate, and private organizations.

Formal Letter of Interest

The formal application letter is found on the prior page.

Statement of Interest and CESU Agreement

The University of Wisconsin-Whitewater would like to enroll in the Great Lakes-Northern Forest Cooperative Ecosystem Unit. The preparers of this document, Dale K. Splinter and Carl A. Fox have read the GLNF-CESU Cooperative and Joint Venture Agreement and agree to support the CESU mission.

UW-W Description and Primary Focus

The University of Wisconsin-Whitewater began as a Normal School in 1868 and later became a State Teachers' College. Today UW-Whitewater is a regional comprehensive university, one of 13 universities in the UW System. UW-Whitewater offers over 50 undergraduate majors, 14 masters and one doctoral program, and 15 continuing education programs. The University of Wisconsin-Whitewater is situated in Whitewater, WI and primarily serves Wisconsin and northern Illinois. In fall 2017 the total student enrollment was 12,430. Undergraduate students comprise the majority (90%) of the population. UW-Whitewater is accredited by the Higher Learning Commission and received high marks in the 2015 evaluation process.

University Mission:

- The University of Wisconsin-Whitewater is a preeminent academic institution driven by the pursuit of knowledge, powered by a spirit of innovation, and focused on transforming lives. As part of the University of Wisconsin System, UW-Whitewater embraces the Wisconsin Idea and is an economic and cultural driver of our region. We are a community with a deep appreciation for diversity and global perspectives. We are nationally and internationally recognized for the accomplishments of our students, faculty, staff and alumni. We inspire members of our community to make positive contributions to the State of Wisconsin, to our nation and to the world. Our academic programs span the disciplines, from the theoretical to the applied, and encompass study in the arts, business, education, humanities, natural sciences, social sciences, technology, professional, and interdisciplinary programs offered at the associate, bachelor, master, and doctoral levels. These programs prepare students to become lifelong learners who lead successful lives and productive careers.

University Vision:

- The University of Wisconsin-Whitewater will be a national and international leader in providing transformational and empowering educational experiences.

The primary focus of collaborative activities to be supported through CESU activities include serving as a partner institution to provide knowledge to support informed decision making, ensure the objectivity of research, and to share resources and expertise with federal partners. As a member of the GLNF-CESU the University of Wisconsin-Whitewater can provide expertise and multiple levels. Researchers at UW-W have expertise in, but not limited to, aquatic biology, geomorphology, soil science, ecosystems, GIS, remote sensing, biodiversity, conservation, Native American history, land use change, environmental policy and law, environmental economics, invasive species, environmental justice, climate change, analytical chemistry, restoration ecology, plant systematics, and restorative justice.

Academic Relevancy to CESU Activities

The University of Wisconsin-Whitewater has multiple programs, departments, and other institutional divisions relevant to federal land management, environmental science, and research agencies likely to be engaged in CESU activities. These are outlined in the following sections. Please note that only the most relevant are included here.

Programs and Majors

- Biology – Ecology, Evolution, and Behavior
- Biology – Marine Biology and Freshwater Ecology
- Chemistry – Analytical/Instrumental
- Environmental Science – Natural Sciences
- Environmental Science – Geosciences
- Environmental Science – Environmental Resource Management

- Geography – General
- Geography – Geology
- Integrated Science and Business – Water Resources
- Occupational Safety – Environmental Management
- Sociology – General

Centers and Institutes

- The **Pangea GIS Center** specializes in providing GIS products to clients on and off campus and conducting GIS research. Past projects include updating the UW-Whitewater campus map system, using GPS surveyors to digitize the city of Elkhorn’s Public Work’s program, using small unmanned aerial vehicles to map seasonal vegetation change, and mapping water quality in the Rock River basin. <https://gis.uww.edu/>
- The **Fiscal and Economic Research Center** provides expertise and outreach services in areas including: Land-use planning, economic development, GIS analysis, ecological and biological related economic impact analyses, government and public policy studies, economic forecasting and business development, and market research, strategies, and planning.
<http://www.uww.edu/ferc/>
- The **Institute for Water Business** is the first of its kind in the United States created for the purpose of developing water business acumen and capacity through education, research, and multi-stakeholder collaboration. A place for transdisciplinary action learning, research, and outreach, the **Institute for Water Business** seeks to engage, educate, and empower stakeholders to identify and successfully respond to regional, national, and international water business issues, challenges, and opportunities. <http://www.uww.edu/cobe-old/water>
- The **Software Development Center (SDC)** addresses the demand for software and mobile application development. Areas of focus include embedded systems, mobile apps, desktop applications, and web applications. The SDC provides real-life hands-on experience for students, collaborations with regional companies, and serves as a regional resource for businesses and organizations that have unmet software development needs.
- The **Innovation Center** is a mixed-use business incubator catering to startup and early stage companies. The Innovation Center offers traditional incubator services such as office and laboratory space, business consultation, business education and workshops.
<https://whitwatertechpark.org/innovation-center>

Associated Faculty and Expertise

The table below signifies the faculty and staff at UW-Whitewater that will contribute to the GLNF-CESU. This list will be updated annually by the technical representative.

Table 1. Faculty and staff at UW-W with research interest applicable to GLNF-CESU.

Name	Department	Specialty
Catherine Chan	Biological Sciences and Chemistry	Plant growth and development; Effects of pharmaceuticals and personal care products in water on plants
George Clokey	Biological Sciences	Applying the techniques of molecular biology to questions of ecology; Animal tracking; Yellowstone National Park and Great Plains geology and ecology
Kirsten Crossgrove	Biological Sciences	Genetic pathways involved in responding to environmental change like the movement of a parasite from mosquito to human host
Kris Curran	Biological Sciences	Effects of selected chemicals on the development of frogs, hydra, and planaria
Ellen Davis	Biological Sciences	Animal behavior
Bruce Eshelman	Biological Sciences	Water purification and water quality metrics; Blue-green algae and blue-green algal toxins; mammals
Elisabeth Harrahy	Biological Sciences	Aquatic ecology and environmental toxicology; Effects of pharmaceuticals and personal care products on aquatic organisms; Blue-green algae and blue-green algal toxins; pesticides
Josh Kapfer	Biological Sciences	Vertebrate ecology, conservation, habitat selection, spatial ecology, population biology, and behavioral ecology of amphibians and reptiles
Kerry Katovich	Biological Sciences	Insect biodiversity and their natural history and identification
Stephen Levas	Biological Sciences and Geography, Geology, & Environmental Science	Response of corals to climate change; local freshwater ecosystems and invasive species
Brian O'Neill	Biological Sciences	Food webs, ephemeral ecosystems, aquatic ecology, and aquatic invertebrates
Andrea Romero	Biological Sciences and Geography, Geology, & Environmental Science	Mammal communities response to human-induced changes to the environment; issues of women and people of color in the sciences
Nicholas Tippery	Biological Sciences	Plant structure, diversity, evolution, and reproductive biology; Invasive aquatic plant species and restoration ecology
John Ejnik	Chemistry	Analytical chemistry involving trace metal analysis in the fields of geology, environmental science, forensic science, and toxicology
Paul House	Chemistry	Inorganic molecules
Juk Bhattacharyya	Geography, Geology, & Environmental Science	Geochemical analysis of igneous and metamorphic rocks; STEM education research
Eric Compas	Geography, Geology, & Environmental Science	Private land development in the greater Yellowstone ecosystem; using small unmanned aerial systems (sUAS) to map fine-scale vegetation change; Conservation in Wisconsin; National Parks land protection; GIS

Rocio Duchesne-Onoro	Geography, Geology, & Environmental Science	Environmental management with strong interest in remote sensing and GIS applied to terrestrial ecosystems; multispectral remote sensing applied to shrub expansion in the Arctic
John Frye	Geography, Geology, & Environmental Science	Focus on land-surface process that enhance weather systems; climate change
Rex Hanger	Geography, Geology, & Environmental Science	Late Paleozoic and Cretaceous marine invertebrate fossils; distribution of freshwater gastropods in the upper Midwest
Peter Jacobs	Geography, Geology, & Environmental Science	Origin and environmental history of soils; glacial history of the upper Midwest
Jeff Olson	Geography, Geology, & Environmental Science	GIS and geospatial data to study socioeconomics, landscape change, and historical trends and events
Dale Splinter	Geography, Geology, & Environmental Science	Ecological regions as a scale for examining physical processes; fluvial geomorphology, and upper Midwest streamflow trends
Tony Gulig	History	American Indian law; environmental history; Indian land claims; treaty rights
Jonah Ralston	Political Science	American environmental policy
Holly Denning	Sociology	Restorative justice approaches to analyzing disasters; global water issues
Carl Fox	Biological Sciences and Environmental Sciences	Ecological Monitoring and Assessment, Ecosystem Impact Analysis, Dendroecology
Susan DeVries	Biological Sciences	Avian Behavior, Behavioral Endocrinology, Avian Ecophysiology

Student Demographics

The information presented below comes from the fall 2017 Profile, which was created by Institutional Research and Planning (www.uww.edu/irp) at UW-W. Based on the definition by the U.S Department of Education the University of Wisconsin-Whitewater is not a minority-serving institution.

Table 2. Enrollment characteristics of the UW-Whitewater student body.

	Undergraduate	Graduate
Total Degree Seeking	10,522	1,204
Freshman	2,196	
Sophomores	2,909	
Juniors	2,506	
Seniors	2,911	
Total Non-Degree Seeking	606	
Partners in Education (PIE) program	340	
Other	266	
Master's		1,137
Education Specialist		16
Doctoral		51

Total Non-Degree Seeking		98
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Table 3. Geographic origins of the UW-Whitewater student body.

Geography	Undergraduate	Graduate
Wisconsin	9,300 (83.6%)	1,083 (83.2%)
Illinois	1,519 (13.7%)	61 (4.7%)
Minnesota	66 (0.6%)	26 (2.0%)
States Represented	36	34
Countries Represented	29	20
Non-Domestic Students	110 (1.0%)	38 (2.9%)

Table 4. Diversity indicators at UW-Whitewater.

Indicator	Undergraduate	Graduate
Underrepresented Minorities	1,468 (13.2%)	154 (11.8%)
Veterans	274 (2.5%)	70 (5.4%)
First-Generation Students	4,465 (40.1%)	N/A
Nontraditional Students	1,021 (9.2%)	987 (75.8%)
Federal Pell Grants (2015-2016)	3,315 (29.8%)	N/A

Table 5. Ethnicity at UW-Whitewater.

Indicator	Undergraduate	Graduate
African American/Black	441 (4.0%)	59 (4.5%)
American Indian/Native Alaskan	20 (0.2%)	7 (0.5%)
Hispanic/Latino	684 (6.1%)	58 (4.5%)
International	123 (1.1%)	47 (3.6%)
Native Hawaiian/Pacific Islander	5 (<0.1%)	3 (0.2%)
Other Asian	107 (1.0%)	23 (1.8%)
Southeast Asian	92 (0.8%)	10 (0.8%)
White/Caucasian	9,119 (81.9%)	1,071 (82.3%)
Two or More Races	525 (4.7%)	21 (1.6%)
Unknown	12 (0.1%)	3 (0.2%)

Facilities, Equipment, and Centers

Upham Hall at the University of Wisconsin-Whitewater is home to faculty in the physical, biological, chemical sciences that would contribute to the GLNF-CESU. Faculty are generally outfitted with their own labs to perform research. Through a combination of alumni donations, grants, and university funding, UW-W has acquired an impressive suite of specialized instrumentation ideal for

environmental science work. Some examples of the instrumentation and equipment that is available include:

- Shimadzu total organic carbon analyzer
- CETAC QuickTrace M-8000 cold vapor fluorescence mercury autoanalyzer
- Bruker 300 Ultrashield nuclear magnetic resonance (NMR) spectrophotometer
- Bruker EMX electron spin analyzer
- Perkin Elmer inductively coupled plasma (ICP) spectrophotometer
- Two atomic absorption (AA) spectrophotometers
- Fourier transform infrared spectrophotometer
- UV-VIS spectrometer
- Fluorescence spectrophotometer
- Hewlett Packard HP 6890 gas chromatograph (GC) with mass spectrometer (MS) detector
- Several other GC models
- Several high pressure liquid chromatography (HPLC) machines
- Speed vacuum lyophilizer
- TMAAnalytic gamma counter
- Emax model plate reader
- Real time polymerase chain reaction (PCR) machines
- X-ray diffractometer
- McCrone micronizing mill
- Sonic Sifter and related particle size analysis equipment
- Petrographic microscope
- Other equipment for basic analysis of soil and sediment properties
- Computational and Visualization Lab with 10 SGI workstations and a server
- Atomic force microscope
- Jeol scanning electron microscope
- Olympus mvx 10 microscope
- Olympus BX 41 microscope
- Olympus 1X81 spinning disk confocal microscope with isolation table
- Zeiss Vert.A1 inverted microscope with X-Cite LED and phase contrast
- All research-grade microscopes are equipped with digital imaging technology.
- Several walk-in environmental chambers
- Geographic information systems (GIS) laboratories with most current software
- Survey level grade Trimble GPS units
- On-site archive of digital aerial photography, satellite imagery, elevation data, and a full array of digital hydrologic data
- Research drone
- 3000 ft² greenhouse
- Smith-Root backpack electrofishing unit
- Fish nets and cages
- Aquatic macroinvertebrate samplers (e.g., Surber, Hess, D-Frame, driftnets, etc.)

- Limnology equipment (e.g., Secchi disks, Kemmerer and Beta samplers, plankton nets, etc.)
- Various water quality meters for field and laboratory
- Particle-size sampling equipment
- Surveying equipment (i.e., level, stadia rod, tripods, etc.)
- Insect nets
- Various types of animal traps and game cameras

Past Research, Technical Assistance, and Educational Services Relevant to CESU Activities

Agency	Title	Amount
National Endowment for the Humanities	Created Equal: America's Civil-PRJ75PK	\$ 1,200
Department of Education	Gear Up	\$ 75,000
National Endowment for the Arts	It Gets Better Live	\$ 3,200
Department of Education	McNair	\$ 231,149
Department of Education	GoGames: Meeting Common Core Standards with Tablet-Enhanced Multi-player Role Play Games	\$ 11,000
Department of Education	Understanding Contemporary China through Collaborative K-16 Curriculum Development Study Abroad	\$ 75,000
Department of Health & Human Services	Chronic Disease Prevention Program	\$ 7,500
National Endowment for the Arts	Young Auditoriums 21st Season	\$ 5,070
National Science Foundation	Impacts of Agricultural Practices	\$ 3,000
Department of Transportation	2014 Seat Belt Survey	\$ 96,916
Department of Transportation	TRaCs Enforcement	\$ 10,490
Department of Transportation	DRIVE SOBER Equipment Request	\$ 4,000
Small Business Administration	Small Business Development Center 2014	\$ 53,068
Small Business Administration	Wisconsin Innovation Service Center 2014	\$ 13,120
Department of Education	Integrating Science and Literacy Learning with English Proficient and English Language Learners	\$ 87,165

Department of Health & Human Services	WIPHL Data Report	\$ 6,430
National Institutes of Health	Molecular Mechanisms of Retinal Ganglion Cell Death	\$ 244,408
National Endowment for the Arts	Creation and Presentation	\$ 5,330
National Endowment for the Arts	Challenge America Fast-Track, FY 2015	\$ 10,000
National Endowment for the Arts	Big Read--My Antonia	\$ 15,000
United States Department of Transportation	Safety Belt Observational Study	\$ 100,520
Department of Education	Investigating, Teaching, and Implementing Evidence-Based Practices to Support Children's Learning in Inclusive Classrooms	\$ 20,000
Department of Education	Integrating Science and Literacy Learning with English Proficient and English Language Learners	\$ 99,992
US Small Business Administration	SBA Regional Innovation Cluster Initiative	\$ 7,500
National Aeronautics and Space Administration	Direct from NASA's Spitzer Space Telescope: Introducing Citizen Science into Wisconsin Universities and Colleges	\$ 10,000
US Dept of Health and Human Services	Pyramid Model Research	\$ 30,000
Department of Health & Human Services	Supporting Ojibwe Students Through Articulation to a 4 Year Degree Completion: A Story of Collaboration Culture and Complexity	\$ 25,000
United States Department of Transportation	Seat Belt Survey 2017	\$ 84,295
National Aeronautics and Space Administration	Nanostructured Silicides for Next-Generation Radioisotope Thermoelectric Generators	\$ 10,000
United States Department of Transportation	TRaCs Equipment	\$ 9,449
National Endowment for the Arts	Aquila Theatre Company 2018	\$ 4,000
Department of Education	Summer Camps	\$ 161,750
Department of Education	Upward Bound	\$ 1,414,530
Department of Education	McNair	\$ 1,219,515

Department of Health & Human Services	Now is the Time Conference	\$ 175,000
United States Department of Transportation	TRaCs Equipment	\$ 9,449
United States Department of Transportation	2018 TRaCS Mobilization Grant	\$ 1,000
National Endowment for the Humanities	Big Read	\$ 20,000
National Endowment for the Humanities	Wisconsin Art Board 2018	\$ 5,530
National Science Foundation	Pacific Northwest Collaborative Opportunities for Success in Mentoring of Students	\$ 1,749,701
National Science Foundation	Pacific N.W. Alliance for Graduate Educations and the Professoriate	\$ 149,000
Centers for Disease Control	Mountain West Preparedness and Emergency Response Learning Center	\$ 100,000
Department of Health & Human Services	Strategic Initiative for Community Health/Public Health Curriculum	\$ 10,250
Department of Commerce	University-based Applied Research & Development Building Containing a Technology Incubator	\$ 2,576,384
Department of Education	Gaining Early Awareness and Readiness for Undergraduate Programs	\$ 2,167,822
Department of Education	Gaining Early Awareness and Readiness for Undergraduate Programs	\$ 2,075,452
Department of Interior and Department of Agriculture	Cooperative Ecosystems Studies Unit	\$ 40,000
Environmental Protection Agency	Advancing Environmental Sciences in North Dakota	\$ 950,561
National Science Foundation	Research Experiences for Undergraduates: DakotaLink	\$ 48,462
National Science Foundation	High Performance Network Connection in Support of Meritorious Research: DakotaLink Supplemental Award	\$ 222,956
National Science Foundation	DREAMS: Disability Research Encompassing American Indians in Math and Science	\$ 900,000
National Science Foundation	High Performance Network Connection in Support of Meritorious Research: DakotaLink	\$ 1,761,456
Department of Agriculture	Great Basin Environmental Research Laboratory, ECOCELLS	\$ 242,500
Environmental Protection Agency	Modeling Forest Tree and Strand Responses to Ozone in North America	\$ 63,133
Environmental Protection Agency	Environmental Monitoring and Assessment Program for Arid Ecosystems Phase II	\$ 4,456,347

Environmental Protection Agency	Ecosystems Level Measures of Response to Stress: A Regional Health Assessment	\$ 500,000
Environmental Protection Agency	North American Landscape Characterization	\$ 90,000
Environmental Protection Agency	Remote Sensing Support for Landscape Characterization	\$ 60,000
National Science Foundation	Dendroclimatology of Western Great Basin	\$ 4,106
Environmental Protection Agency	The Integration of Models of Whole-Plant Carbon Dynamics and Leaf-Level Biochemistry to Stimulate Carbon Gain, Photosynthate Allocation, and Growth of Woody Plant in Response to Ozone	\$ 43,429
Environmental Protection Agency	Environmental Monitoring and Assessment Program for Arid Ecosystems	\$ 730,193
Department of Energy	Special Nevada Report	\$ 55,648
National Science Foundation	Experimental Program to Stimulate Competitive Research in Nevada, EPSCoR	\$ 1,283,609
Environmental Protection Agency	Quantitation of Sulfur Dioxide Effects in Ponderosa Pine and Western Larch	\$ 54,710
Department of Energy	Quantitation of Ecological Responses to Perturbations: The Effect of Air Pollution on Western Larch and Ponderosa Pine	\$ 49,757
Environmental Protection Agency	The Impact of Air Pollution on the Forest Ecosystem for the Lead-Zinc Smelter to Trail, British Columbia	\$ 2,000

Current Formal and Informal Agreements

National Aeronautics and Space Administration	The Windy Milky Way Galaxy	\$ 47,869.00
National Institutes of Health	Sensory Interaction in Voice and Voice Disorders	\$ 1,045,150
Department of Health & Human Services	TEACH Early Childhood Wisconsin	\$ 56,425
Federal Reserve Bank	Federal Reserve Bank	\$ 4,500
US Small Business Administration	Small Business Development Center 2018	\$ 140,303
National Endowment for the Humanities	The Lands We Share Community Engagement Initiative	\$ 10,000
National Science Foundation	2014-2019 Wisconsin Louis Stokes Alliance for Minority Participation-WiscAMP-Senior Level Alliance-Summer Bootcamp	\$ 24,697
Department of Education	McNair	\$ 1,287,515
Department of Education	Summer Camps	\$ 161,750

Department of Education	Upward Bound	\$ 1,456,965
USDA	CACFP Contract	\$ 5,432
National Science Foundation	2014-2019 Wisconsin Louis Stokes Alliance for Minority Participation-WiscAMP-Senior Level Alliance-Student Research Support	\$ 2,200
National Aeronautics and Space Administration	Using low-cost drones for rapid natural resource imagery and research	\$ 4,969
National Science Foundation	2014-2019 Wisconsin Louis Stokes Alliance for Minority Participation-WiscAMP-Senior Level Alliance-Student Research Support	\$ 1,800
National Science Foundation	Nanotechnology Research Immersion Experience	\$ 7,287
USDA	CACFP Contract	\$ 9,403
National Science Foundation	CSEDI Collaborative Research: Investigating the Nature of the Subcontinental Upper Mantle	\$ 70,005
National Science Foundation	2014-2019 Wisconsin Louis Stokes Alliance for Minority Participation-WiscAMP-Senior Level Alliance-Summer Bootcamp Support	\$ 24,665
National Science Foundation	2014-2019 Wisconsin Louis Stokes Alliance for Minority Participation-WiscAMP-Senior Level Alliance-Summer Bootcamp Support	\$ 24,968
Office of Naval Research/Department of Defense	Dynamic Context-Centric Commander's Decision Support through Real-Time Inverse Reinforcement Learning	\$ 150,000
National Endowment for the Humanities	Wisconsin Farms Oral History Project Community Outreach Initiative	\$ 1,850
National Aeronautics and Space Administration	Oceanic Anoxic Event (OAE) in the Cretaceous of Central Texas	\$ 5,000
National Science Foundation	2014-2019 Wisconsin Louis Stokes Alliance for Minority Participation-WiscAMP-Senior Level Alliance-Student Research Support	\$ 3,000
National Science Foundation	2014-2019 Wisconsin Louis Stokes Alliance for Minority Participation-WiscAMP-Senior Level Alliance-Student Research Support	\$ 3,600
United States Department of Transportation	Seat Belt Survey 2018	\$ 65,119
National Aeronautics and Space Administration	Next-Generation Radioisotope Thermoelectric Generators based on Low-Cost and Non-Toxic Nanostructured Silicides	\$ 7,602

National Aeronautics and Space Administration	Incorporating Astrobiology Utilizing Virtual Field Trips(VFT's) in an Introductory-level General Education Geology Course-Earth to Life History	\$ 4,882
The Nature Conservancy	Snake population monitoring and tracking of Ornate Box Turtles	\$ 21,500
Department of Natural Resources	Internship Agreement	Memo of Understanding
Department of Natural Resources	Common Reed DNA analysis	\$ 27,447
Rock River Coalition	Real-time water quality data collection and analysis	\$ 2,500
Ice Age Trail Alliance	Community-Based Learning partnership	Memo of understanding

Acceptance of Limited Overhead

The University of Wisconsin-Whitewater accepts a limited overhead rate of 17.5% for activities conducted through the CESU.

Designation of Technical Representative

The technical representative to serve on the CESU steering committee, participate in CESU annual/semi-annual partner meetings, and facilitate internal and external communication, promotion, and response to CESU correspondence and administrative actions (e.g., announcements, new member applications, processing agreements/amendments, five-year reviews) is Dale K. Splinter.

- Dale K. Splinter, Ph.D.
 Professor of Geography, Geology, & Environmental Science
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 800 W. Main St., Upham Hall 120
 Whitewater, WI. 53190
 262-472-5156
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Relaying Agency-Specific Research, Technical Assistance, and Educational Needs

The Director (Carl Fox) of the Office of Research and Sponsored Programs at UW-W oversees all university contract and grant funded programs and will lead the effort to relay all CESU information to faculty, staff, and students. The UW-W CESU technical representative will verify that all relevant information is being shared to those interested individuals on campus.

Administrative Endorsement

I verify that I have the authority to commit institutional resources in a binding multiple-year federal cooperative joint venture agreement.



Carl A. Fox, Ph.D.

Director of Research & Sponsored Programs
University of Wisconsin-Whitewater
Whitewater, WI 53190