

NORTHEAST CLIMATE ADAPTATION SCIENCE CENTER

FY20 Science Priorities

1. Expanding Climate Science for Fish and Wildlife Management.

We welcome projects that conduct regional syntheses, quantitative evaluations/modeling, management assessments, or increase the application and dissemination of recent research in support of freshwater fish and wildlife management needs. Projects can be focused on:

- Increasing the state of knowledge and/or assessments of direct (e.g., shifts in range, phenology, abundance) and indirect (e.g., habitat condition, species interactions, ecosystem properties) responses and thresholds by fish and wildlife to climate impacts;
- Increasing the state of knowledge and/or assessments of the adaptive capacity of fish and wildlife (e.g., phenotypic or genotypic diversity) and/or habitat conditions (e.g., abiotic or biotic features) that increase the likelihood of species persistence;
- Management assessments that compare the risks, costs, and efficacy of potential and/or implemented adaptation actions in response to observed or anticipated climate impacts to fish and wildlife;
- Increasing the application and dissemination (e.g., workshops) of recent research that expands on previous NE CASC projects and/or integrates results from multiple sources to increase engagement and foster collaboration among scientists and managers in adaptation planning and implementation.

Special consideration will be given for focal species including Species in Greatest Conservation Need (SGCN), listed species or those under consideration for the Federal Endangered Species Act, fish and wildlife resources of economic and/or cultural importance, and habitats of importance to multiple focal species.

2. Science to Steward the Great Lakes and Atlantic Coasts in an Era of Climate Change.

We welcome projects that conduct quantitative evaluations/modeling or management assessments to integrate climate and adaptation science in coastal zone management. Projects can be focused on:

- The direct and/or indirect impacts of coastal storms, altered ice cover, changes in Great Lakes water levels, sea-level rise, and/or inundation of natural and cultural coastal resources. Special consideration will be given to projects evaluating the effects on sediment, nutrient and contaminant dynamics in the Great Lakes coastal zone;
- Evaluations of potential management strategies, actions and interventions including risk and cost-benefit assessments for increasing resilience and/or the likelihood of persistence of coastal natural and cultural resources under future projections of landscape and climate change. Special consideration will be given to projects that identify thresholds for management intervention and/or advance strategies to build resilience through green infrastructure, hybrid (natural and grey), and other adaptation approaches.

Special consideration will be given to projects focused on federal, state, or Tribal lands.

3. Coupling of Freshwater and Terrestrial Systems Under Climate Change.

We welcome projects that address the interactive and/or synergistic effects of climate and non-climate (e.g., land use change, nutrient pollution) stressors, as well as cascading impacts, on linked terrestrial-aquatic systems by:

- Conducting quantitative analyses of climate-driven changes in terrestrial systems, including forest communities (e.g., tree species range shifts), and the subsequent changes in streams or lakes;
- Advancing application (e.g., workshops) and dissemination of recent research findings, especially on topics related to the impacts of extreme precipitation, aquatic connectivity, and thermal refugia. Projects may expand on previous NE CASC research and/or results from multiple sources to increase engagement and foster collaboration among scientists, managers, and practitioners in adaptation planning and implementation;
- Evaluating the implications, risks, costs, and efficacy of planned and/or implemented adaptation actions. Special consideration will be given to projects that emphasize integrated land and water management in response to climate change.

4. Climate Science on the Changing Invasive Plant, Pest, and Pathogen Landscape.

We welcome projects that address the impacts of and solutions to emergent or anticipated (non-native) invasive species or native species with climate-driven transformational roles in forests, grasslands, or wetland systems by:

- Assessing climate induced shifts in the range, distribution, abundance, and/or functional role of an invasive plant, pest, or pathogen;

- Evaluating the effectiveness of planned and/or implemented management actions to address climate-driven biological invasions or transformations.

FY20 Solicitation Timeline*

December 13, 2019	Call for Statements of Interest
January 31, 2020	Statements of Interest Due by 5pm CST via email to Olivia LeDee (oledee@usgs.gov) and Michelle Staudinger (mstaudinger@usgs.gov). Please note if SOI is responsive to Northeast or Midwest region in the subject line.
February 17, 2020	Full Proposals Solicited
April 24, 2020	Full Proposals Due
May 29, 2020	Selection Decisions and Applicant Notifications**

*Timeline is an estimate and subject to revisions.

**Awards are contingent on Department of Interior approval and Fiscal Year 2020 appropriations.

Additional Information:

Each project should target one or more issues faced by natural and/or cultural resource managers from federal, state, and/or Tribal government, generate knowledge to address that challenge, and engage resource managers in meaningful ways. Projects can be focused on:

- expansion, engagement, synthesis, or implementation related to recent or current research initiatives to deliver the best available science to resource managers.
- climate impact science in response to a natural or cultural resource management challenges.
- novel research in the design and evaluation of climate adaptation including anticipatory, autonomous and planned adaptation.

Anticipated FY20 research funding for the NE CASC (Northeastern region): \$800,000-1,000,000.

- Projects must be based within the NE CASC, in the Northeastern U.S. region: <https://necsc.umass.edu/about-us>.
- Projects longer than one year are strongly encouraged to include interim deliverables.
- Projects should not exceed three years in duration.
- Total funding for individual projects should not exceed \$390,000.

Anticipated FY20 research funding for the Midwestern region: up to \$3,000,000.

- Projects must be based in the Midwestern U.S. Regional boundaries not yet defined.
- Projects longer than one year are strongly encouraged to include interim deliverables.
- Projects should not exceed two years in duration.
- Total funding for individual projects should not exceed \$600,000.

Background information on the Northeast Climate Adaptation Science Center can be found at (<https://necsc.umass.edu/> and <https://www.doi.gov/csc/northeast>). Background information on the Climate Adaptation Science Center network can be found at: <https://www.usgs.gov/land-resources/climate-adaptation-science-centers>

USGS requires CASC consortium proposers to work with their respective sponsored research support staff to ensure appropriate budget detail, formatting, overhead/indirect rate calculations, etc. Host Institution sponsored research support staff will have a period following submission of full proposals to review all budgets, but investigators are strongly encouraged to conduct this consultation prior to submission.

All NE CASC funded projects are required to submit quarterly reports on a set schedule of April 1, July 1, October 1 and January 1. Final reports are due 90 days after the close of the performance period covered by each project agreement. An initial (partial) Data Management Plan (DMPs) is to be submitted as part of the full proposal package and updated if an award is made. A full DMP must be in place before the awarded project begins. When a project is complete, the USGS

Science Coordinator and data steward will collect all final products and make them publicly available to the USGS repository (ScienceBase).

NE CASC Contacts:

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