

ANNUAL FUNDING OPPORTUNITY - FISCAL YEAR 2015
U.S. Department of the Interior
U.S. Geological Survey
DOI Climate Science Centers
and
The National Climate Change and Wildlife Science Center

GENERAL INFORMATION AND INSTRUCTIONS

IN THIS DOCUMENT:

- Funding Opportunity Details & Schedule ([Page 1](#))
- Application Process & Additional Considerations ([Page 3](#))
- Online Proposal Management System Information ([Page 8](#))
- CSC/NCCWSC Science Needs and Funding Opportunity Details ([Page 9](#))
- Format for Statements of Interest ([Appendix A, Page 59](#))
- Format for Invited Proposals ([Appendix B, Page 61](#))
- Annual Report Instructions for CSC/NCCWSC-Funded Projects ([Appendix C, Page 68](#))
- Final Report Instructions for CSC/NCCWSC-Funded Projects ([Appendix D, Page 70](#))
- Instructions for Manuscripts Intended for Publication ([Appendix E, Page 73](#))

Funding Opportunity Details and Schedule

Background: This document provides information about funding opportunities from the Department of the Interior (DOI) Climate Science Centers (CSCs) and from the National Climate Change and Wildlife Science Center (NCCWSC).

Funding Opportunities In this Document: This document invites Statements of Interest (SOI) for projects to be initiated in **Fiscal Year (FY) 2015** for the **Alaska, North Central, Northeast, Pacific Islands, South Central, Southeast, and Southwest CSCs, and the NCCWSC**. The Northwest CSC has committed all available funds for FY 2015 and is not accepting proposals at this time.

Eligible Applicants: Only the following may submit Statements of Interest (SOI) or Proposals in response to this Funding Opportunity:

- Institutions that are either Host Institutions or Consortium Members for the *requesting* DOI Climate Science Center¹ and
- USGS centers, field stations, laboratories, Cooperative Research Units, etc.

¹ Exceptions are made for (1) projects spanning multiple CSC regions (these should be submitted to all CSCs of interest (See "[Additional Considerations](#)"), and (2) NCCWSC-sponsored projects (see the [NCCWSC Science Needs Section](#)).

Each proposal must have a Principal Investigator (PI) from an eligible institution. *Parties from other organizations (Federal, State, Tribal, or other) can participate and receive funds via sub-award from the Principal Investigator but the proposal submitter and PI must be from an eligible applicant, as described above.* Non-eligible applicants are encouraged to establish working partnerships with one of the recognized eligible applicants to seek participation as part of a project lead by a CSC/university consortium member or USGS facility.

If you have submitted a Statement of Interest (SOI) to a previous CSC Funding Opportunity but were not chosen for funding, you will *not* automatically be considered again for FY15 funds. *You must resubmit another SOI for this funding opportunity to be considered.*

Estimated Available Funds: Approximately \$3,900,000 to \$4,300,000 may be available to fund projects that support CSC/NCCWSC science priorities in Fiscal Year 2015 for the seven CSCs and NCCWSC. See individual CSC/NCCWSC sections for details ([Page 9](#)). Final funding opportunity is subject to the availability of funds and passage of a full Fiscal Year 2015 budget.

Funding Process: All funds will be transferred from a CSC or NCCWSC to either:

- A USGS entity through a change of allocation or
- A CSC host institution through a grant or cooperative agreement. These entities may then provide sub-awards to members of the CSC consortium or other parties. (Determinations as to whether a grant or a cooperative agreement will be utilized are made by USGS.)

Project funding amount: See individual CSC/NCCWSC sections for details ([Page 9](#)).

Project duration: See individual CSC/NCCWSC sections for details ([Page 9](#)).

Scientific topics to be funded: See individual CSC/NCCWSC sections for details ([Page 9](#)).

Schedule for Submission, Review, Awards:

Note: Submission deadlines for Statements of Interest and Proposals are
5:00 PM Mountain Daylight Time

Deadline for submission of Statements of Interest.....**June 17, 2014**
Applicants Notified and Full Proposals Requested.....**August 1, 2014**
Deadline for Invited Full Proposals.....**October 1, 2014**
Applicants Notified of Intent to Award.....**December 15, 2014**

(“Intent to Award” means a CSC has selected the project for funding, pending completion of all administrative reviews and processing to complete formal awards. See below for additional details.)

Funding Timetable

CSC/NCCWSC technical and administrative reviews of projects will be completed by approximately December 2014. **However, delays in Congressional budget action have in the past and may again in this year delay receipt of funds.** Investigators should take this into account when planning activities.

- **USGS Projects:** Changes of Allocation should be expected no sooner than January 1, 2015. If Congressional budget action is delayed, there will be a delay in funding of a minimum of 60 days after passage of a full year budget.
- **Consortium Projects:** Grants or cooperative agreements should be expected no sooner than February 2015. If Congressional budget action is delayed, there will be a delay of a minimum of 60 days after passage of a full year budget.

Application Process

1. Submission of Statements of Interest. All parties interested in responding to this Funding Opportunity must first submit a Statement of Interest (SOI). An SOI application template is available in [Appendix A](#). SOIs must be submitted via the Online Proposal Management System, which can be accessed via <HTTPS://NCCWSC.USGS.GOV/RESEARCHFUNDS>. Failure to follow these guidelines will result in an SOI being removed from consideration. The applicant will receive a confirmation email once the SOI has been submitted.

2. Evaluation of Statements of Interest. SOIs will be reviewed by the relevant CSC, with input from regional partners, and by the National Climate Change and Wildlife Science Center (NCCWSC). Applicants may be contacted to provide additional or clarifying information. SOIs will be considered according to the following general criteria. Please see individual CSC/NCCWSC Sections ([Page 9](#)) for specific criteria weightings and additional details.

- **Applicability to a high priority need identified by the relevant CSC or NCCWSC:** The project identified in the SOI should directly address a science need identified in this funding opportunity document (see [individual CSC/NCCWSC sections](#)). The project should address management decisions or questions important to one or more LCC or Federal, State, or Tribal resource management organization. The SOI should identify relevancy of the project results to land, fish, wildlife, habitat, or cultural heritage management issues. The SOI should clearly articulate the resource management decision being considered and how the project will bring value added to the decision making process.
- **Scientific merit and quality of the research:** SOI objectives should be robust and clearly delineated. The SOI should demonstrate sound scientific methodology, study design, and data management, and indicate how results have a broad geographic application or scientific inference. The SOI should indicate how project results will be generalizable.
- **Engagement of stakeholders, decision makers, and other research entities** (including LCCs, NOAA's Regional Integrated Sciences and Assessments (RISA) program, the USDA Climate Hubs, Tribal and Indigenous communities etc.): Preference will be given to investigators with either a strong history of partner engagement, or those demonstrating significant capacity for developing and maintaining these relationships, particularly as they may extend beyond the duration of project funding. The SOI should identify how partners will be engaged in project planning and administration and how expected results will be relevant to natural and cultural resource managers. Collaboration with partners should build upon existing work and capacity and where possible, investigators should leverage additional partner resources

to carry out the proposed project. The project described should include an outreach component to disseminate research findings and information.

- **Potential for cross-CSC collaboration (and National Program applicability):** The SOI should identify potential for extending research across CSC boundaries to enhance scientific objectives and inference. Where possible, the SOI should build upon existing work and capacity or complement related research underway in other climate science projects in the region. The SOI should identify how the project relates to or supports the broad national science themes of the NCCWSC and CSC network (<https://nccwsc.usgs.gov/content/science-approach>).

Individual CSC/NCCWSC sections ([Page 9](#)) include additional detail on how these criteria will be applied or may introduce additional criteria. Applicants will also be evaluated based on past performance on USGS funded projects, if applicable. Individuals or institutions with problems in timely or effective completion of projects will be eliminated from further consideration until the issues are addressed to the satisfaction of the CSC and NCCWSC.

3. Request for Full Proposal. Selected applicants will be invited by the CSC Director or NCCWSC Senior Scientist to develop full proposals (including a budget and data management plan). Proposals will not be accepted from investigators other than those invited as part of this process. Proposal format information is found in [Appendix B](#).

NOTE: This is a two-stage proposal process.

- All initial full proposals (invited after the SOI stage) will be submitted via the USGS Online Proposal Management System, which can be accessed via [HTTPS://NCCWSC.USGS.GOV/RESEARCHFUNDS](https://nccwsc.usgs.gov/researchfunds).
- If selected,
 - **CONSORTIUM final proposals** will be submitted through Grants.gov, following (1) informal discussions with the CSC Director or NCCWSC Senior Scientist, and (2) formal invitation from USGS to submit.
 - **USGS final proposals** will be requested by the CSC Director or NCCWSC Senior Scientist only if significant changes are made to the initial full proposal during the review phase. If requested, proposals will be submitted via the Online Proposal Management System.

USGS requires CSC 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 most strongly encouraged to conduct this consultation prior to submission.

The CSC Director or NCCWSC Senior Scientist reserves the right to contact applicants for clarification of technical elements of a proposal. Neither an invitation to submit a proposal, nor a contact from the CSC or NCCWSC concerning proposal details implies the project will be funded.

4. Evaluation of Full Proposals - Review Criteria: The criteria listed below will be applied to all proposals. See individual CSC/NCCWSC sections ([Page 9](#)) for specific criteria weightings and additional details.

- **Scientific merit and quality of the proposed research:** Projects should use a credible scientific approach that reflects the current state of the science, has project objectives, overall strategy, study design, methodology, and analyses that are well-reasoned, robust and appropriate to accomplish the specific scientific objectives of the project, and includes a credible data management plan. Project study objectives should be robust and clearly delineated. Project results should have a broad geographic application or scientific inference. Proposal should describe the desired outcomes and indicate the type of data to be collected and any special data

service needs. The proposal should indicate how the project will contribute to the training of young scientists.

- **Management Significance:** The proposal should describe the degree to which a project addresses high priority items for regional management partners, including Landscape Conservation Cooperatives (LCCs, <http://lccnetwork.org/>) and other Federal, State, or Tribal resource management organizations. Proposals should include a clear articulation of the resource management topic and decisions/management actions that are being considered which address important land, water, fish and wildlife, or cultural heritage resources in the region and/or Regional Tribal interests. Projects should be applicable to immediate, real-world planning and decision making needs as identified by resource management agencies in the relevant region. The proposal should demonstrate how the research to be conducted and scientific outcomes will bring value-added to resource questions and management decisions.
- **Coordination and Engagement with stakeholders, decision-makers, and science beneficiaries:** Intended users of the scientific output of the project (i.e., resource managers, decision makers) should be adequately engaged in the planning and administration of the proposed project. Proposals should include expressed strategies to inform and engage relevant members of the potentially affected communities and stakeholders in order to learn from their experience and on-the-ground observations and build understanding of climate change as it relates to resource conservation and use. Where possible, the project should be coordinated or leveraged with other resources (including leveraging additional resources and complementing/integrating with existing work of the study team members). The proposal should identify collaborative partnerships (Federal, State, Tribal, or other) that will participate in the project; include any outreach components to disseminate research findings and information; and include information on how scientific findings can be used to implement new management strategies or decision frameworks.
- **Study Team qualifications:** The proposing team should have appropriate interest, high-level training, and qualifications for complex research. The proposal should demonstrate, where appropriate, a commitment for end-to-end participation from an interdisciplinary, inclusive team (including resource managers, decision makers, and scientists from the necessary scientific and analytic disciplines). The CSCs and NCCWSC will evaluate applied and relevant past work, breadth of skill/knowledge to successfully perform the proposed research, and the integration, leadership, governance, and organizational approach of the investigator / study team. Collaborative projects (multi-PI) should include clear delineation of project responsibility across the team. Where possible, the proposed team should demonstrate evidence of successfully completing similar work in the past. (As noted previously, applicants with significant issues regarding timely or effective completion of projects will be eliminated from further consideration until the issues are addressed to the satisfaction of the CSC and NCCWSC.)
- **Budget/work plan:** The CSCs and NCCWSC will evaluate the project budget and work plan in relation to the proposed level of work, expected benefits, complexity and/or scope of effort, and practicality and achievability of the proposed project. Work plans should present a detailed schedule of milestones, workshops, or meetings needed to engage key stakeholders and integrate climate science into a decision framework, and specific plans for communicating the process and outcomes to decision makers and stakeholders (e.g. outreach). Projects should build upon or complement existing work and capacity and/or coordinate funding with collaborating partners and leverage additional resources to carry out the proposed project. The project work should provide opportunities for young researcher and post-doc participation. Where possible, the project study plan should include elements of capacity building through academic or technical educational programs associated with host consortium programs.
- **Data Management:** All proposals must include a credible data management plan and comply with NCCWSC requirements regarding data management, as specified in the NCCWSC/CSC Science Data Sharing Policy found at <https://nccwsc.usgs.gov/content/data-policies-and-guidance>.

5. Review and Selection Process for Full Proposals: Project proposals will be reviewed and selected as follows:

- Submissions will be screened by the relevant CSC or NCCWSC upon receipt for eligibility and for conformance to the announcement provisions.
- Screened proposals will be reviewed against the evaluation criteria by a group of individuals with relevant technical expertise, selected by the CSC Director or NCCWSC Senior Scientist. Confidential information will be restricted to these reviewers, and they will be bound by confidentiality assurances. Further, reviewers will follow standard conflict of interest approaches and will be excused from ranking proposals with which they are associated. The constituent members of the review team will be held anonymous; general information on agency or other representation may be shared.
- Reviewer rankings and comments will be provided to the CSC Director or NCCWSC Senior Scientist. The CSC Director or NCCWSC Senior Scientist will develop a final list of candidate projects, based on the review rankings, modified as appropriate to ensure an overall portfolio of science activities at the CSC or NCCWSC that is balanced with respect to the following: geographic distribution, project cost and duration, applicant type (USGS or consortium), subject matter and focus, need for scientific continuity versus establishing new work, funds management, and related factors. Reviewer comments and feedback for not-selected SOIs may be released to lead proposers at the discretion of the CSC Director or NCCWSC Senior Scientist.
- CSC Directors and/or the NCCWSC Senior Scientist will review all proposed CSC projects to identify opportunities for cross-CSC and cross-agency leveraging opportunities. As noted, this may involve consultations with the applicant and proposal revision. **Projects extending across multiple CSC regions are encouraged, and applicants considering such proposals should submit their SOI to all CSCs of interest. Applicants must state directly in their SOI and proposal if they are listed on additional CSC SOIs or proposals (please also indicate this in the Online Proposal Management System).**
- Selected applicants will be initially notified of USGS intent to award. This is an informal notification, provided to applicants as a courtesy. Final awards to CSC consortium members are contingent upon all appropriate legal and administrative reviews and processing through the USGS Office of Acquisition and Grants (OAG). Final discretion on funding decisions for specific projects remains with the CSC Director and NCCWSC Senior Scientist.
- **If your proposal is selected to receive funds/award:**
 - **CONSORTIUM PROPOSALS:** you will be contacted by the USGS Office of Acquisition and Grants Contracting Officer to submit the official final application through Grants.gov. Submittal of the Grants.gov application shall be coordinated with the University's Office of Sponsored Programs or equivalent. This office shall serve as the official point of contact for the USGS Contracting Officer.
 - **USGS PROPOSALS:** funds will be transferred to your Center/Program/Unit via USGS Change of Allocation Procedures. Project activities should not be initiated prior to receipt of funding by your organizational unit.

Additional Considerations

Cross CSC Collaboration: The regional CSCs are intended to operate as a network in which expertise at one CSC can/will be leveraged against expertise at other CSCs. Further, identification of projects that can be scaled up or combined with other projects to not only address the local science issue, but increase our understanding of regional and national implications of climate impacts will be important to assure we are making best use of our limited resources. To that end, we encourage projects to either form collaborations across CSCs in which expertise in each CSC is leveraged or develop projects that would have benefits beyond the local scale.

Multiple Project Submissions:

- 1) Proposers may submit multiple SOIs for *different* projects. Please refer to the Online Proposal Management System for instructions on multiple submissions.
- 2) CSCs and NCCWSC will not accept identical proposals to multiple CSCs unless the “footprint” of the research spans multiple CSC Regions.
- 3) Projects extending across multiple CSC regions are encouraged, and applicants considering such proposals should submit their SOI to all CSCs of interest.
- 4) Applicants must state directly in their SOI/proposal if they are listed on additional SOIs/proposals (please also indicate this in the Online Proposal Management System).

Matching / Leveraging: While matching funds are not required, projects providing matching funds or leveraging other funding sources will be viewed favorably. Formal cost share is NOT required, however.

Multi-year Funding (relevant especially to USGS proposers): To address issues related to carry-over of federal funds between fiscal years, and to deal with the fact that this solicitation can only provide funds for the first fiscal year of the project, the NCCWSC and CSCs will work with successful applicants to plan funding for multi-year projects in the fiscal years needed by the project, within the uncertainty about out-year funding.

Collaboration: Proposals with co-PIs from the USGS and a consortium member are encouraged and will be evaluated more favorably. Likewise, proposals involving collaborations with other organizations (Federal, State, Tribal, or other), demonstrating the involvement and benefits of a collaborative effort will be evaluated more favorably.

Deliverables for Invited Proposals: Principal Investigators for all invited full proposals are required to prepare and submit to the funding CSC or NCCWSC (via the Online Proposal Management System) a *General Public Summary* that is written for a general public audience, does not exceed 200 words, and is suitable for sharing on public websites and other outreach methods. Key points to include:

- Why is the project important?
- Why should the public care?
- How will the results of the project improve aspects of climate change management, well-being, economic or other issues that resonate with stakeholders?

Please see [Appendix B](#) for more information regarding proposal requirements.

Annual and Final Project Reports: In addition to the Federal Financial Report required for external agreement administration, Form SF-425, all funded projects are required to submit annual progress reports and a final project report according to the formats provided in [Appendix C](#) and [Appendix D](#). Annual progress reports are due sixty (60) days prior to the end of the budget period, and final reports are due ninety (90) days after the project completion date. Additional / more frequent reporting may be required by individual CSCs or NCCWSC.

Manuscripts Intended for Publication: All funded researchers are required to provide *advanced* notification to CSC Directors or the NCCWSC Senior Scientist of all anticipated manuscripts intended for publication that have been produced through the CSC/NCCWSC -funded project (or where staff received funding through a CSC/NCCWSC graduate fellowship). All manuscripts should also include appropriate funding acknowledgements. Acknowledgements for funding support from a CSC or NCCWSC should follow the guidelines in [Appendix E](#).

**USGS Submission Portal
For All Statements of Interest (SOIs) and
Invited Full Proposals
(Online Proposal Management System)**

Access the System via:

[HTTPS://NCCWSC.USGS.GOV/RESEARCHFUNDS](https://nccwsc.usgs.gov/researchfunds)

Technical Assistance Contacts
For Portal Issues:

Haylee Schweizer

schweizerh@usgs.gov

970-226-9160

Gail Montgomery

montgomeryg@usgs.gov

970-226-9253

For Substantive Issues Contact CSC/NCCWSC
Director/Staff (See CSC/NCCWSC-Specific Sections,
Next Page)

Science Needs & Details by CSC/NCCWSC

Alaska ([Page 10](#))

North Central ([Page 15](#))

Northeast ([Page 21](#))

Pacific Islands ([Page 28](#))

South Central ([Page 34](#))

Southeast ([Page 41](#))

Southwest ([Page 49](#))

National Climate Change and Wildlife Science Center ([Page 55](#))

Following the CSC/NCCWSC-specific sections are:

Format for Statements of Interest ([Appendix A, Page 59](#))

Format for Invited Proposals ([Appendix B, Page 61](#))

Annual Report Instructions for CSC-Funded Projects ([Appendix C, Page 68](#))

Final Report Instructions for CSC-Funded Projects ([Appendix D, Page 70](#))

Instructions for Manuscripts Intended for Publication ([Appendix E, Page 73](#))

ALASKA CLIMATE SCIENCE CENTER

FY 2015 Funding Opportunity

Eligible Applicants:	Only members of the Alaska CSC host institution (University of Alaska Fairbanks) and USGS centers, field stations and laboratories may submit proposals in response to this Funding Opportunity. Other parties may participate on funded projects via subawards.
Funds Flow:	All funds will be transferred from the Alaska CSC to either a USGS entity or the University of Alaska Fairbanks. These entities may then provide subawards to other parties.
Estimated Available Funds:	A total of approximately \$400,000 to \$500,000 may be available to fund projects that support Alaska CSC science priorities in Fiscal Year 2015.
Project Funding Amount:	Individual project awards are expected to vary from a total of \$30,000 to \$200,000 (inclusive of all indirect costs and overhead charges applied by all institutions involved).
Project Duration:	Negotiable, but not generally expected to exceed 24 months.
Alaska CSC Contact:	Dr. Stephen T. Gray, Director Alaska Climate Science Center 4210 University Dr. Anchorage, AK 99508 Office: 907-786-6780 Email: sgray@usgs.gov

Submission Portal: <HTTPS://NCCWSC.USGS.GOV/RESEARCHFUNDS>

Or directly:

https://my.usgs.gov/rfpManager/events/alaska_csc/Funding_Opportunity_2015

AK CSC Science Needs:

In Fiscal Year 2015, the Alaska CSC will continue to address topics included in the Center's Strategic Plan (<http://www.doi.gov/csc/alaska/upload/Alaska-CSC-Strategic-Plan.pdf>), which was developed in cooperation with the Alaska Climate Change Executive Roundtable (ACCER; <http://www.doi.gov/csc/alaska/Stakeholder-Advisory-Council.cfm>).

Support for Ongoing Science Initiatives

The Alaska CSC will provide continuing support to previously funded projects that address the following topical science needs:

1. Development and application of downscaled climate projections.
2. Integration of climate projections and ecological process and/or impact models.
3. Facilitating the development of longer-term and sustainable monitoring programs to meet partner needs.

The Alaska CSC will also partner with the Northwest Boreal Landscape Conservation Cooperative (NWBLCC) and other Landscape Conservation Cooperatives (LCCs) operating in the Alaska Region to support projects that link information on climate change and climate change impacts to resource management, adaptation and planning. Of particular interest are projects that capitalize on output from the Integrated Ecosystem Model for Alaska and Northwest Canada Project (IEM; Please see <https://csc.alaska.edu/projects/integrated-ecosystem-model-for-an-in-depth-description-of-this-project>).

We anticipate that additional FY15 funds will be awarded based on a joint RFP process administered by the Alaska CSC and partner LCCs. As FY15 science priorities for the NWBLCC and other LCCs are still under development, more information on specific project opportunities will be available later this year.

In addition, for Fiscal Year 2015 the Alaska CSC invites Statements of Interest (SOIs) for new work to address the following topical science needs:

1. **Migratory Birds** (Expected funding \$30,000 to \$50,000 for one year). Migratory species pose a host of challenges for climate-change adaptation, management and planning. In short, underlying research approaches and accompanying decision support tools (e.g., vulnerability analysis) are often poorly suited for incorporating “migratory connectivity”, specifically the impacts of habitat variations and change across the full geographic range of a species. The resulting portrayals of migratory species ecology tend to be grossly oversimplified, thus making detection and evaluation of climate-change risks difficult to impossible. Migratory birds that spend some portion of their lives within the Alaska Region provide an excellent starting point for addressing these problems as they routinely travel thousands of miles in their annual movements between breeding, stopover and winter-use areas. As a result, we seek the development of a collaborative research strategy to address three overarching problems:
 - a) Lack of a research framework that allows us to disentangle the impacts of migratory bird habitat change in Alaska from changes in the various habitats utilized during a species’ entire life cycle/migratory range;
 - b) Lack of a research framework for parsing the impacts of climate versus non-climatic stressors;
 - c) Update and/or develop decision support tools to better incorporate migratory connectivity.

To the extent possible, strategy development should connect to existing efforts of the Alaska CSC and its partners (e.g., USGS Changing Arctic Ecosystems initiative, the Integrated Ecosystem Model, and/or work funded by Alaska LCCs). Efforts that focus on migratory birds generally or at the level of major taxonomic groups (e.g., shorebirds or waterfowl) will be given strong preference over work at the individual species level.

Expected products include:

- a) Summaries of existing research on migratory birds within the Alaska Region.
- b) Development of priority research needs and objectives related to the problems outlined above, where this prioritization is based on joint input from researchers and resources managers working in the Alaska region.
- c) Development of a collaborative research **framework** for addressing priority research within the Alaska region, while also linking to research on environmental change across the entire range of a migratory species.
- d) **Proposed next steps** towards addressing priority research needs, and both the within-region and cross-regional implementation of (c) above.

2. Impacts of Glaciers on Ecosystems (Expected funding up to \$200,000 total for two years). In Alaska, glaciers cover some 75,000 square kilometers of the state's land surface, and runoff from these glacier systems accounts for a significant portion of freshwater discharge within the region. In turn, runoff from glaciers is a key factor in controlling a host of freshwater, coastal, and marine ecosystem processes, as well as for determining the availability of numerous natural and cultural resources. Despite the importance of these glacier-runoff-ecosystem linkages, we have few tools for evaluating the impacts of climate change on discharge characteristics (e.g., water quantity or runoff timing). In response, the Alaska CSC seeks proposals for the development of **modeling tools** that allow for both a) *regional-scale* assessments of glacier change and discharge under climate change, and b) *watershed-specific* evaluations of climate-change impacts on glacier systems. Of particular interest are models that will allow us to address the implications of glacier change for water availability, geomorphic processes, flooding and natural hazards (e.g., ice damming events). Proposals should demonstrate direct linkages to the human communities and unique natural and cultural resources of Alaska. Models and tools with potential applications to a wide range of issues including the management of large natural areas (e.g., national parks and national forests), subsistence, community sustainability, tourism, and development are especially encouraged.

Expected products include:

- a. Model(s) and related output for use in quantifying and exploring potential changes in glacier systems and accompanying impacts on runoff. Model(s) should incorporate climate variables as primary system drivers, while also allowing for the examination of multiple climate variability and climate change scenarios.
- b. Tools (e.g., web resources, atlases, extensions of existing tools) that allow stakeholders to explore impacts for specific watersheds and/or resources, with an emphasis on providing information that can be used to guide resource management, planning and adaptation efforts.

When addressing both of the topical science needs outlined above, PIs will be expected to demonstrate their willingness and ability to work with Alaska CSC partners including state and federal resource management agencies and Alaska's Landscape Conservation Cooperatives.

Prospective investigators are strongly encouraged to contact the Alaska CSC Director (Dr. Steve Gray, sgray@usgs.gov) for additional information. Please contact University Director Dr. Scott Rupp (tsrupp@alaska.edu) with any questions regarding University of Alaska Fairbanks policies and overhead.

AK CSC Evaluation Criteria:

The Alaska CSC will employ project review procedures as detailed earlier in this document. Region-specific weighting of selection criteria and additional details follow (please also review the national standards and criteria on [Pages 3-5](#) of this document for more details about the review categories).

Statements of Interest will be evaluated by the Alaska CSC using the following criteria and relative weightings:

- **(30%) Engagement of stakeholders, decision makers, LCCs and other CSC partners.**
- **(40%) Applicability to high-priority regional needs identified by the Alaska CSC and/or the CSC's regional partners.** Projects that address needs across multiple partners are strongly encouraged. Additional information on scientific priorities and a list of partners can be found at:
 - <http://www.doi.gov/csc/alaska/science.cfm>
 - <http://www.doi.gov/csc/alaska/partners.cfm>

- (15%) Applicability to national, cross-cutting CSC program goals and the goals of the National Climate Change and Wildlife Science Center (<https://nccwsc.usgs.gov/content/science-approach>).
- (15%) Scientific merit and quality of the research

Full Proposals will be evaluated by the Alaska CSC using the following criteria and relative weightings:

- (25%) Scientific merit and quality of the proposed research.
- (20%) Management Significance (applicability to immediate, real-world planning and decision making needs as identified by resource management agencies in the Alaska Region.)
- (30%) Coordination and Engagement (capacity for engaging resource managers and decision makers during every phase of the project, and for a demonstrated commitment to continuing these relationships beyond the funded project’s duration).
- (15%) Study Team qualifications.
- (10%) Budget/work plan.

Additional Information:

- For additional information and updates on the Alaska CSC, please see:
 - <http://www.doi.gov/csc/alaska/index.cfm> and <https://csc.alaska.edu/>.
- Information Sessions:
 - **The Alaska CSC will host two call-in sessions to address questions related to this solicitation.** The first session will be held on **Tuesday, May 6 at 11:00 am AKDT**. The second session will be held on **Monday, May 12 at 10:00 am AKDT**. The call-in number for both sessions will be 703-648-4848, Code 15405#. Please RSVP to Steve Gray (sgray@usgs.gov) at least two days prior if you wish to participate in a call.
- Contact information for Alaska region LCCs:

LCC	Contact	Title	Email	Phone
Aleutian and Bering Sea Islands LCC	Doug Burn	Coordinator	douglas_burn@fws.gov	907-786-3807
	Aaron Poe	Science Coordinator	aaron_poe@fws.gov	907-786-3834
Arctic LCC	Greg Balogh	Coordinator	greg_balogh@fws.gov	907-786-3605
	Philip Martin	Science Coordinator	philip_martin@fws.gov	907-456-0327
Northwest Boreal LCC	John DeLapp	Coordinator	john_delapp@fws.gov	907-786-3925
	Amanda Robertson	Science Coordinator	amanda_robertson@fws.gov	907-456-0445
North Pacific LCC	John Mankowski	Coordinator	john_mankowski@fws.gov	360-534-9330
	Mary Mahaffy	Science Coordinator	mary_mahaffy@fws.gov	360-753-7763
Western Alaska LCC	Karen Murphy	Coordinator	karen_a_murphy@fws.gov	907-786-3501
	Joel Reynolds	Science Coordinator	joel_reynolds@fws.gov	907-786-3914

- NOTE REGARDING PASS-THROUGH INDIRECT COSTS: Applicants at academic institutions other than the University of Alaska Fairbanks must include an amount to cover pass-through costs at University of Alaska Fairbanks. It is the policy of University of Alaska Fairbanks to apply indirect charges in the amount of 49.5% to the first \$25,000 of any funds passed through to a third institution. Please include the appropriate charges on the budget sheets for your proposal. Contact University Director Dr. Scott Rupp (tsrupp@alaska.edu) for additional information.

NORTH CENTRAL CLIMATE SCIENCE CENTER

FY 2015 Funding Opportunity

This document provides the details pertaining to the North Central Climate Science Center's solicitation for land management, decision-focused applied research within the NC CSC domain.

- Eligible Applicants:** Only members of the NORTH CENTRAL CLIMATE SCIENCE CENTER (NC CSC) University Consortium (see table below) and USGS centers, field stations and laboratories may submit proposals in response to this Funding Opportunity. The University Consortium members and lead contacts are given below. It is not necessary for a university lead contact to be included on the proposal, but these contacts have a strong sense of the primary objectives of the NC CSC. As such, University PIs may wish to discuss proposal ideas with their respective lead. Consortium-initiated proposals must be submitted through Colorado State University (CSU). Other, non-USGS, non-University Consortium parties may participate on funded projects via subawards.
- Funds Flow:** All funds will be transferred from the NC CSC to either a USGS entity or CSU. These entities may then provide subawards to members of the CSC consortium or other parties.
- Estimated Available Funds:** Approximately \$850,000 may be available to fund projects that support NC CSC science priorities, with roughly half of these funds being distributed in each Fiscal Year 2015 and 2016.
- Project funding amount:** Total funding for individual projects will not exceed **\$425,000**.
- Project Duration:** Not to exceed 36 months
- NC CSC Contact:** **Dr. Jeffrey T. Morisette, Director**
NC Climate Science Center
Natural Resource Ecology Lab
Dept. 1499
Colorado State University
Ft. Collins, CO 80523-1499
Office: 303-968-8986
Email: morisettej@usgs.gov
- Submission Portal:** <HTTPS://NCCWSC.USGS.GOV/RESEARCHFUNDS>
- Or directly:**
https://my.usgs.gov/rfpManager/events/north_central_csc/Funding_Opportunity_2015

NC CSC University consortium (listed alphabetically):

University	Last Name	Email
Colorado School of Mines	Reed Maxwell	rmaxwell@mines.edu
Colorado State University	Dennis Ojima	Dennis.ojima@colostate.edu
Iowa State University	Diane Debinski	debinski@iastate.edu
Kansas State University	Charles Rice	cwrice@ksu.edu
Montana State University	Cathy Whitlock	whitlock@exchange.montana.edu
University of Colorado	Kristen Averyt	Kristen.averyt@colorado.edu
University of Montana	Steve Running	swr@ntsg.umt.edu
University of Nebraska-Lincoln	Bob Oglesby	roglesby2@unl.edu
University of Wyoming	Bill Lauenroth	wlauenro@uwyo.edu

Background:

The North Central Climate Science Center (NC CSC) believes there is a strong need to demonstrate how climate science can be integrated into resource management decision-making². This solicitation builds on the experience of previous solicitations, comments from the NC CSC’s Stakeholder Advisory Committee, and follows the recommendations of the National Research Council (National Research Council, 2009) to focus on user’s needs and give priority to developing the process by which climate science can assist in land management decisions.

Vulnerability Assessments

The NC CSC is seeking teams and projects that can successfully demonstrate at least one iteration through the process of 1) identifying a conservation target, 2) assessing its vulnerability to climate change, 3) identifying management options and, to the extent possible, 4) evaluating the implementation of management actions (see Glick et al. 2011, Figure 1 and related text for more information on this process).

Proposal teams are encouraged to utilize a process that incorporates co-production of knowledge with stakeholders. Glick et al. 2011 provides an example, and similar frameworks to incorporate climate science into a management decision process (see Cross et al, 2012, or IPCC, 2007) may also be used. Proposal teams are encouraged to make the management framework they intend to use explicit in their proposal.

² Throughout this solicitation, the term decision and decision-making is used in a general sense pertaining more to managers’ allocation of their resources than to any specific or legally-binding decision.

Social, Economic and Human Dimensions in Management Decisions

Because land management decisions are imbedded in social, as well as ecological, systems the NC CSC is seeking proposals that incorporate social, economic, or other human-dimension components. Such research that enhances the understanding of vulnerability and adaptive capacity in the context of climate change will be favorably viewed. Research that examines the social and economic connections between climate change, land management decisions, and human communities is essential in order to understand the context within which climate change adaptation strategies are implemented and the opportunities and barriers for implementing such strategies (see Figure 1 in Marshall et al. 2014).

Additionally, the NC CSC is open to consideration of potential positive opportunities that may be presented by future climate changes. Swapping “Assess vulnerability to climate change” with “Assess opportunities from climate change” would be a novel line of research that would be considered for funding by the NC CSC.

Integration with the North Central Climate Science Center:

Building on the NC CSC five year plan [<http://pubs.usgs.gov/of/2012/1265/>], the NC CSC has established two main themes: 1) three foundational science areas (see <http://revampclimate.colostate.edu/foundational-science-areas>) as its overarching science themes and 2) the Resource for Vulnerability Assessment, Adaptation and Mitigation Planning (ReVAMP, <http://revampclimate.colostate.edu/revamp>) as its primary science delivery tool.

The objective of ReVAMP is to develop a regionally focused approach to synthesize results from the foundational science areas in a way that can provide useful and useable information for natural resource strategic planning and management decisions.

Proposals invited through the solicitation are for teams that will follow the ReVAMP approach by conducting synthesis science across the three foundational areas (physical climate, ecological impacts, and adaptation) to contribute to a specific management decision.

Proposal teams should a) focus on assembling a team that has a very strong connection to the management issue(s) and related decision process, and b) include collaborators on the proposal team with expertise in relevant climate, ecological, and social-economic science as such connections and collaborators are available to the PI/(s). Proposing teams are encouraged to contact the NC CSC director if they wish to discuss how the NC CSC capacity could be utilized by a proposed project.

Connecting to Stakeholders Needs:

Proposing teams are encouraged to focus on resource management issue(s) that are a priority for one or more Landscape Conservation Cooperative (LCCs) or Tribes in the region. Proposal teams that can provide such a connection will be evaluated favorably. The LCCs provide an excellent resource to identify specific resource managers as well as a clearinghouse on regional resource issues. Proposers are encouraged to contact LCCs to understand the critical conservation targets and managers associated with those particular targets.

LCC Contacts and Information:

LCC	Contact	E-mail	Website
Great Plains	James Broska	James_Broska@fws.gov	http://www.greatplainslcc.org/
Great Northern	Tom Olliff	Tom_olliff@nps.gov	http://greatnorthernlcc.org/
Plains and Prairie Potholes	Rick Nelson	Richard_D_Nelson@fws.gov	http://www.plainsandprairiepotholeslcc.org/
Southern Rockies	Kevin Johnson	Kevin_M_Johnson@fws.gov	http://southernrockieslcc.org/

Essentially, the NC CSC is looking to “solicit for the clients” (that is, requesting teams that can apply and explore the integration of climate-ecological-management systems analysis in a decision-making context or process). The efforts solicited here should focus on collaboration between the science and management community to work together throughout the entire project to generate new knowledge that will be useful in the management of a specific conservation target.

Example of climate-related decisions that would be appropriate for this solicitation:

- Management plans or actions pertaining to fish, rivers, or riparian habitats, such as those contributing to the impacts assessment of the West-wide Climate Risk Assessments program (<http://www.usbr.gov/WaterSMART/wcra/>).
- Integration of natural resource management and climate science into state water management plans.
- Integration of climate knowledge into State Wildlife Action Plans for states within the North Central domain.
- Integration of a rigorous climate change component to the Great Northern LCC’s Landscape Integrity Index.
- Analysis of landowner decision making that will help federal and state partnerships improve and/or incentivize conservation.
- Management plans or actions pertaining to maintaining and improving playas.
- More generically, any biological planning, conservation design, or inventory and monitoring programs engaging with DOI managers and LCC stakeholders.

This solicitation does not anticipate funding activities to collect new data. However, if within the decision framework there is research involving any animal or human subjects, proper procedures must be followed as detailed in [Appendix B](#) of this document.

NC CSC Evaluation Criteria:

Please also review the national standards and criteria on [Pages 3-5](#) of this document for more details about the review categories.

Evaluation of Statements of Interest

The NC CSC will instruct the review panel to use the following criteria to evaluate SOIs, according to specific weights (in parentheses):

- **(20%) An explicit description of how the project is connected to a resource management concern.**
- **(20%) A clear description of how the management target may be impacted by climate.**
- **(25%) A project team that is actively engaged with the intended users of the scientific output** (e.g., inclusion of managers on study teams, periodic “check-in” meetings with stakeholders, creation of practitioner advisory teams, etc.).
- **(20%) A project team with qualifications to understand complex social-ecological-climatological issues related to the management target(s).**
- **(15%) A project that provides leveraging opportunities** (e.g., collaborating, building on existing work, or leveraging resources with LCCs, CSCs, NCCWSC, NOAA’s RISAs or USDA Climate Hubs etc.).

Evaluation of Invited Proposals

The following is a list of the criteria for full proposals (with specific weights in parentheses). Please see [Pages 3-5](#) of this document for more details about each category.

1. Management Significance (20%)

2. Scientific merit and quality of the proposed research (20%)

3. Coordination and Engagement (25%) (e.g. engagement with resource managers for length of project and willingness to work with NC CSC to use and help define the ReVAMP)

4. Study Team qualifications (20%) (team should have appropriate interest, high-level training and qualifications; team should include scientists as well as members of the resource management community).

5. Budget/work plan (15%)

Additional Information:

Example of successful proposals from the 2013 solicitation

The 2013 solicitation was very similar to the 2015-2016 solicitation. Proposal teams might wish to review successful proposals from the previous solicitation. These are posted at

<http://revampclimate.colostate.edu/revamp/funded-projects>

Additional background information

Background information on the North Central Climate Science Center can be found at

revampclimate.colostate.edu

The North Central Climate Science Center will host two question and answer sessions pertaining to this solicitation:

Tuesday, May 6, 2014 9:00am Mountain time:

Teleconference: 703-648-4848, passcode: 67416#

At the time of the session, please also join the webex:

<https://usgs.webex.com/usgs/j.php?ED=279502437&UID=482885877&RT=MiM2>

Friday, May 9, 2014, 1:00pm Mountain time:

Teleconference: 703-648-4848, passcode: 67416#

At the time of the session, please also join the webex:

<https://usgs.webex.com/usgs/j.php?ED=279502587&UID=482885877&RT=MiM2>

Notes on Proposal Budget

Each proposal team invited to submit a full proposal must contact the lead accounting contact for the university consortium to ensure the proposal budget has the proper overhead and subcontract details:

Neil Shropshire

Colorado State University,

Research Coordinator, Natural Resource Ecology Lab

(970) 491-4933

Neil.Shropshire@ColoState.EDU

PASS THROUGH INDIRECT COSTS: All proposals submitted by non-USGS entities will be funded through a grant or cooperative agreement with the host institution. For the NC CSC, this is Colorado State University. It is the agreement with CSU as the host institution to apply indirect charges (in the amount of 31.3% to be applied to the

first \$25,000) to any funds passed through to a third institution. Please include the appropriate indirect charges on the budget sheets for your proposal.

Letters of Support for Full Invited Proposals

All resource managers involved with the project should provide a letter of support that clearly demonstrates their understanding of how the proposed research can help inform their decisions, and how a better understanding of climate is needed in that decision process. This letter should demonstrate some level of understanding of the climate science issues and limitations described previously.

References Cited

- Cross, M. S., Zavaleta, E. S., Bachelet, D., Brooks, M. L., Enquist, C. a F., Fleishman, E., Graumlich, L. J., et al. (2012). The Adaptation for Conservation Targets (ACT) framework: a tool for incorporating climate change into natural resource management. *Environmental management*, 50(3), 341–51. doi:10.1007/s00267-012-9893-7
- Glick, P., Stein, B.A., and Edelson, N.A., eds., 2011, Scanning the conservation horizon: A guide to climate change vulnerability assessment: Washington, D.C., National Wildlife Federation, 176 p.
- IPCC. (2007). *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. (M. L. Parry, O. F. Canziani, J. P. Palutikof, P. J. van der Linden, & C. E. Hanson, Eds.). Cambridge, U.K.: Cambridge University Press. Retrieved from <http://www.ipcc.ch/ipccreports/ar4-wg2.htm>
- Marshall, N.A., Stokes, C.J., Webb, N.P., Marshall, P.A., Lankester, A.J., 2014. Social vulnerability to climate change in primary producers: A typology approach. *Agriculture, Ecosystems & Environment*, 186:86–93. <http://dx.doi.org/10.1016/j.agee.2014.01.004>
- National Research Council, 2009. Informing Decisions in a Changing Climate. Panel on Strategies and Methods for Climate-Relate Decision Support, Committee on the Human Dimensions of Global Change. Division of Behavioral and Social Sciences and Education. Washington, DC: the National Academies Press. 188pp.

NORTHEAST CLIMATE SCIENCE CENTER

FY 2015 Funding Opportunity

- Eligible Applicants:** Only members of the Northeast Climate Science Center (NE CSC) Consortium [see table below] and USGS centers, field stations and laboratories may submit proposals in response to this Funding Opportunity. Other parties may participate on funded projects via subawards.
- Funds Flow:** All funds will be transferred from the NE CSC to either a USGS entity or University of Massachusetts Amherst (UMass Amherst). These entities may then provide subawards to members of the NE CSC Consortium or other parties.
- Estimated Available Funds:** Approximately \$450,000 - \$500,000 may be available to fund projects that support NE CSC science priorities in Fiscal Year 2015.
- Project Funding Amount:** Individual project funds will not exceed a total of \$150,000.
- Project Duration:** Not to exceed 24 months
- NE CSC Contacts:** **Dr. Mary J. Ratnaswamy**
Director, DOI Northeast Climate Science Center
233 Morrill Science Center
611 North Pleasant Street
University of Massachusetts
Amherst, MA 01003-9297
Office: (413) 545-3424
Email: mratnaswamy@usgs.gov
- Submission Portal:** <HTTPS://NCCWSC.USGS.GOV/RESEARCHFUNDS>
- Or directly:**
https://my.usgs.gov/rfpManager/events/northeast_csc/Funding_Opportunity_2015

NE CSC Consortium Members and Lead Contacts:

NE CSC Consortium Member	Lead Contact
University of Massachusetts (Amherst)- host institution	Richard Palmer; (palmer@ecs.umass.edu) http://necsc.umass.edu/people/richard-palmer
College of Menominee Nation	Chris Caldwell; (ccaldwell@menominee.edu) http://necsc.umass.edu/people/chris-caldwell
Columbia University	Radley Horton; (rh142@columbia.edu) http://necsc.umass.edu/people/radley-horton

NE CSC Consortium Member	Lead Contact
Marine Biological Laboratory	Linda Deegan, (contact Chris Neill at cneill@mbl.edu); http://necsc.umass.edu/people/linda-deegan
University of Minnesota (Twin Cities)	Anthony D'Amato; (damato@umn.edu) http://necsc.umass.edu/people/anthony-damato
University of Missouri (Columbia)	Frank Thompson; (frthompson@fs.fed.us) http://necsc.umass.edu/people/frank-thompson
University of Wisconsin (Madison)	Kenneth Potter; (kwpotter@wisc.edu) http://necsc.umass.edu/people/kenneth-potter

Background:

The DOI Northeast Climate Science Center (**NE CSC**) was established in 2012 to address the regional challenges presented by climate change and variability in the NE CSC region. As such, the focus of the NE CSC is to identify climate science needs that apply across the entirety of the NE CSC region and provide regional-scale science products that inform conservation management. The NE CSC actively engages with regional LCCs and other partners in translating science into management decisions. The NE CSC, as are all regional CSCs, is managed by the National Climate Change and Wildlife Science Center (**NCCWSC**), a national program of the U.S. Geological Survey Climate and Land Use (CLU) mission area.

The NE CSC region encompasses a large geographic area covering 22 states (https://nccwsc.usgs.gov/sites/default/files/files/CSC_consortia_and_regions.pdf) and as such, poses many unique challenges for understanding, adapting to, and mitigating the effects of climate change, including: extreme environmental gradients and threats manifested over relatively small spatial scales; interactions between land use and climate change adaptation and mitigation; a complex history of species extirpations, invasions, range extensions; intensive land use practices and restorations; and predictions of regional climate change and associated responses of species and natural communities. The need for good climate science to inform critical management decisions is imperative in this highly populated and diverse region that includes a human population of 131,000,000, multiple ecoregions, some portion of seven of the 22 regions established for the LCC Program (<http://www.fws.gov/landscape-conservation/lcc.html>), and a wide array of stakeholders and decision makers.

The **Strategic Science Agenda (2013-2018)** was finalized in February 2014 and is posted at <http://necsc.umass.edu/>. The **Science Themes** are as follows: (1) climate projections and assessments, (2) climate impacts on land-use and land-cover, (3) climate impacts on freshwater resources and ecosystems, (4) climate impacts on Atlantic and Great Lakes coastal and nearshore environments, (5) ecosystem vulnerability and species response to climate variability and change, (6) impacts of climate variability and change on cultural resources, and (7) decision frameworks for evaluating risk and managing natural resources under climate change. The seven overarching science themes are broad and will be progressively addressed through the sequential implementation of Annual Science Work Plans (RFPs) and other activities designed to enhance, leverage, and coordinate the collective contribution of individual projects to management-relevant climate science.

FY15 NE CSC Science Needs/Priorities:

The NE CSCs objective is to address the regional challenges presented by climate change and variability in the NE CSC region. As such, the NE CSCs focus is to identify climate science needs that apply across the entirety of the NE CSC region and provide regional-scale science products that inform conservation management. The NE CSC will also build on previously funded research (<https://nccwsc.usgs.gov/csc/northeast>), complementary research efforts across the CSC and LCC network, and relevant climate science programs ongoing in the region.

Science Theme 3: Climate impacts on freshwater resources and ecosystems

Climate induced changes in snowpack, temperature, and precipitation (type, frequency, and extremes) are causing seasonal shifts in the timing and volume of runoff, and transitions in peak and base stream flows throughout aquatic ecosystems in the Northeast and Midwest U.S. These environmental changes have important consequences for aquatic resources and connectivity and will be further complicated by human activities (e.g., dams, water use).

Priority 1.—*Effects of Climate Change on Hydrologic Regimes, Ecological Flows, and Aquatic Connectivity*

Proposals using integrative approaches that consider the combined influences of climate change and anthropogenic stressors will be considered under this theme. Of particular interest are evaluations of impacts on flow and hydrologic regimes, projections of climate-induced changes in flow regimes, relationships between altered hydrological regimes and aquatic connectivity, changes in seasonal water availability on ecological flows, and the impacts of increased frequency and magnitude of extreme events (including flooding, storms, and drought) on aquatic systems and ecosystem services.

Science Theme 5: Ecosystem vulnerability and species response to climate variability and change

Natural resource managers are currently challenged with identifying which fish and wildlife populations, communities, and habitats are vulnerable to climate change and what management actions are needed to sustain these resources as environmental conditions continue to change. Of the three components of vulnerability (exposure, sensitivity and adaptive capacity), adaptive capacity has been the most difficult to evaluate, leading to a limited understanding of the intrinsic abilities of species or communities to cope (or inability to cope) with climate change.

Priority 2.—*Species Intrinsic Adaptive Capacity to Climate Change.*

Of particular interest are proposals that assess how elements of adaptive capacity, including evolutionary potential, phenotypic plasticity, genetic diversity, and dispersal capabilities, help species and communities adjust to the potentially negative impacts of climate change, or provide evaluations of how adaptive capacity can be enhanced through management actions to decrease the vulnerability of valued resources in the region.

Studies considered under this theme may employ genetic techniques and other laboratory methods, modeling studies, comparative analyses, historical datasets, on-going broad-scale monitoring efforts by both management and research agencies, as well as targeted field experiments, and restoration/adaptation studies. We are especially interested in studies that focus on trust resources, species or communities of special concern, or those listed as critically threatened or endangered.

Science Theme 6: Impacts of climate variability and change on cultural resources

The NE CSC region includes many cultural resources that are increasingly vulnerable in a changing climate, including National Parks, National Wildlife Refuges, National Forests, other state or federally managed lands, and tribal lands. Managing these lands under the impacts of climate change poses a grand challenge to managers who are entrusted to preserve a variety of resources that are often place-based, for the education, enjoyment, and livelihood of future generations.

Priority 3. —*Effects of climate change on the sustainability of cultural resources, including approaches that utilize traditional ecological knowledge (TEK), human dimensions, and adaptation strategies.*

Cultural resources are valued components of landscapes from urban areas to remote wildlands (e.g., archeological and historic sites, cultural landscapes, ethnographic resources, tribal knowledge). Management approaches that are increasingly flexible, take into consideration uncertain futures as well as historical reference points, and emphasize landscape-scale conservation and connectivity among protected areas and lands are needed to inform planning and climate change adaptation strategies for regional cultural resources. Priority will go to projects that build awareness, integrate natural/cultural data, assess the vulnerability of cultural and/or tribal resources, and explore potential mechanisms and strategies for adaptation and management responses to climate impacts on federal/state/tribal managed lands, traditional ecological knowledge, and other regional cultural resources.

NE CSC Evaluation Criteria:

Statement of Interest Evaluation Criteria: Weighting for the Statement of Interest (SOI) evaluation criteria for the NE CSC are given here. More details about each category can be found earlier in the document on [Page 3](#).

1. **Applicability to one or more NE CSC science priority need (relevance/applicability): 30%** (SOI articulates the resource management decisions it addresses and is relevant to land, fish, wildlife, habitat, or cultural heritage management issues).
2. **Scientific merit and quality of the research (scientific design): 30%**
3. **Engagement of stakeholders, decision makers, and research entities (partnerships): 30%**
4. **Potential for cross CSC collaboration (national program applicability): 10%**

Additional SOI Evaluation Considerations: In addition to the evaluation criteria listed above, SOIs that include one or more of the elements listed below will be evaluated more favorably.

- **Leveraging of science needs, funds, and/or science capacity and collaboration**
Projects that extend across multiple CSC and/or LCC regions are encouraged and applicants considering such projects should consult with the relevant CSC Directors. While matching funds are not required, projects providing matching funds or leveraging other funding sources from organizations (Federal, State, Tribal, or other) will be viewed more favorably. SOIs with co-PIs from the USGS and a University consortium member are encouraged and will be evaluated more favorably. Likewise, collaborations with other organizations are encouraged.

Full Proposal (by invitation only following SOI evaluation by the NE CSC) Review Criteria: Review criteria for full proposals submitted to the NE CSC are listed below along with detailed weighting that the NE CSC will apply to each criterion for all proposals. Specific factors that will be evaluated by the NE CSC are discussed in this section and in the previous “Application Process” section on [Page 4](#).

1. **Scientific Merit and Quality of Proposed Research (Scientific Design): 30%**
2. **Management Significance (Relevance/Applicability to Management Needs): 30%**
3. **Coordination and Engagement (Working Partnerships and Knowledge Transfer): 20%**
4. **Study Team Qualifications (Scientific Expertise): 10%**
5. **Budget/Work Plan (Leveraging & Capacity Building): 10%**

Additional Proposal Review Considerations: In addition to the review criteria listed above, proposals that include one or more of the elements listed below will be evaluated more favorably.

- **Leveraging Science Needs:** Projects that extend across multiple CSC and/or LCC regions are encouraged where an expanded geographic range would enhance the scientific objective and scope of inference. Applicants considering such proposals should consult with the relevant CSC Directors. Applicants must state if they are listed on additional CSC proposals. CSCs and NCCWSC discourage applicants from submitting identical proposals to multiple CSCs.
- **Leveraging Funds:** While matching funds are not required, projects providing matching funds or leveraging other funding sources from organizations (Federal, State, Tribal, or other) will be viewed more favorably.
- **Leveraging Science Capacity and Collaboration:** Proposals with co-PIs from the USGS and a University consortium member are encouraged and will be evaluated more favorably. Likewise, proposals involving collaborations with other organizations (Federal, State, Tribal, or other), demonstrating the involvement and benefits of a collaborative effort are encouraged.

Additional Information:

- Background information on the NE CSC can be found at <http://www.doi.gov/csc/northeast>, <https://nccwsc.usgs.gov>, or at <http://necsc.umass.edu>.

- The NE CSC will host a Question-and-Answer Session pertaining to this solicitation on:

- **Friday, May 9th at 1pm ET**

- Teleconference: 703-648-4848

Toll Free: 1-855-547-8255

Access code 17236#

- At the time of the call, please also join the Webex:

<https://usgs.webex.com/usgs/j.php?ED=280751572&UID=498188377&RT=MjMxMQ%3D%3D>

Additional webinar instructions: Click on the meeting link provided. Once registration has been submitted, your name will be added to the registry for the webinar and you will receive an email with instructions on how to join the webinar via the WebEx platform. If you are having problems with the link, go to <https://usgs.webex.com> and search for the meeting by name and time. For questions or problems with the WebEx, please contact Michelle Staudinger (mstaudinger@usgs.gov).

- NOTE RE: PASS THROUGH INDIRECT COSTS (FOR CONSORTIUM SUBMISSIONS ONLY): All proposals submitted by the NE CSC Consortium must be submitted by UMass Amherst. Applicants at other consortium institutions must include an amount to cover indirect costs at UMass Amherst for this pass through. It is the policy of UMass Amherst to apply indirect charges (in the amount of 51.5% to be applied to the first \$25,000 any funds passed through to a third institution). Please include the appropriate indirect charges on the budget sheets for your proposal.
- NOTE RE: MULTI-YEAR FUNDING (FOR CONSORTIUM SUBMISSIONS ONLY): To address issues related to carry-over of federal funds between fiscal years, and to deal with the fact that this solicitation can only provide funds for the first fiscal year of the project, CSCs will work with successful applicants to plan funding for multi-year projects in the fiscal years needed by the project, within the limitations of knowledge about out-year funding.
- Proposing teams are encouraged to consult or collaborate with one or more LCC in the NE CSC region in defining the problems and decisions to be addressed. For more information on LCCs in the NE CSC region, go to <http://www.fws.gov/landscape-conservation/lcc.html> or visit <https://nccwsc.usgs.gov/content/landscape-conservation-cooperatives-lccs> for an explanation of how CSCs are related to LCCs.

- **Landscape Conservation Cooperative partners in the NECSC Region (listed alphabetically)**

Landscape Conservation Cooperative	Science Coordinator	Coordinator
Appalachian; http://www.applcc.org	TBD	Jean Brennan; jean_brennan@fws.gov
Eastern Tallgrass Prairie and Big Rivers; http://www.tallgrassprairielcc.org	Gwen White; gwen_white@fws.gov	Glen Salmon; glen_salmon@fws.gov
Gulf Coastal Plains and Ozarks; http://gcpolcc.org	John Tirpak; john_tirpak@fws.gov	Greg Wathen; greg.wathen@tn.gov
North Atlantic; http://www.northatlanticlcc.org	Scott Schwenk; william_schwenk@fws.gov	Andrew Milliken; andrew_milliken@fws.gov
Plains and Prairie Potholes; http://www.plainsandprairiepotholeslcc.org	Mike Olson; michael_olson@fws.gov	Rick D. Nelson; rick_d_nelson@fws.gov
South Atlantic; http://www.southatlanticlcc.org	Rua Mordecai; rua_mordecai@fws.gov	Ken McDermond; kenneth_mcderrmond@fws.gov
Upper Midwest and Great Lakes; http://www.greatlakeslcc.org	Bradly Potter; bradly_potter@fws.gov	John Rogner; john_rogner@fws.gov

- Proposing teams are encouraged to consult or collaborate with other Federal agencies having climate variability and change programs. These agencies include among others: U.S. Geological Survey (http://www.usgs.gov/climate_landuse); National Oceanic and Atmospheric Administration (<http://www.climate.noaa.gov>); U.S. Environmental Protection Agency (<http://www.epa.gov/climatechange>); and U.S. Fish and Wildlife Service (<http://www.fws.gov/home/climatechange>).

- The U.S. Geological Survey and the NE CSC are currently developing consultation strategies with Native American Tribes in the NE CSC region. If interested in collaboration with Tribe(s) in the NE CSC region, please contact the NE CSC Director.

Pacific Islands Climate Science Center

FY 2015 Funding Opportunity

Eligible Applicants: Only members of the Pacific Islands Climate Science Center (PI CSC) consortium, its institutional partners*, and USGS centers, field stations and laboratories may submit proposals in response to this Funding Opportunity. Consortium-initiated proposals must be submitted through the University of Hawai'i (UH), the PI CSC host university. Other parties may participate on funded projects via subawards.

*The PI CSC academic consortium includes the University of Guam, University of Hawai'i – Hilo, and University of Hawai'i – Mānoa; institutional partners include Carnegie Institution for Science, Pacific Regional Integrated Science and Assessment (Pacific RISA), Stanford University, University of California – Santa Barbara, Yale University, USDA Forest Service.

Funding Process: All funds will be transferred from the PI CSC to either a USGS entity or UH. These entities may then provide subawards to members of the PI CSC consortium or other parties.

Estimated Available Funds: The PI CSC budget depends on Congressional funding, making it difficult to anticipate the funds available to support PI CSC science priorities in FY 2015. Our best estimate at this time is that these funds may reach approximately \$600,000.

Project Funding Amount: Individual project funds will not exceed a total of \$250,000 (inclusive of all indirect costs and overhead charges applied by all institutions involved).

Project Duration: Not to exceed 24 months.

PI CSC Contact: **Dr. David Helweg, Director**
Pacific Islands Climate Science Center
Phone: (808) 342-7606
Email: dhelweg@usgs.gov

Submission Portal: <HTTPS://NCCWSC.USGS.GOV/RESEARCHFUNDS>

Or directly:

https://my.usgs.gov/rfpManager/events/pacific_islands_csc/Funding_Opportunity_2015

PI CSC Partners:

PI CSC Consortium Members and Lead Contacts	
University of Hawai'i at Mānoa - host institution	Kevin Hamilton Email: kph@hawaii.edu
University of Hawai'i at Hilo	Sharon Ziegler-Chong Email: ziegler@hawaii.edu
University of Guam	John Peterson Email: jpeterson@uguam.uog.edu
Institutional Partners and Lead Contacts	
Stanford University	Peter Vitousek Email: vitousek@stanford.edu
Carnegie Institution for Science	Gregory Asner Email: gpa@stanford.edu
University of California – Santa Barbara	Oliver Chadwick Email: oac@geog.ucsb.edu
Yale University	Marian Chertow Email: marian.chertow@yale.edu
Pacific Regional Integrated Science and Assessment	Victoria Keener Email: keener@eastwestcenter.org
USDA Forest Service	Ricardo Lopez Email: rdlopez@fs.fed.us
Landscape Conservation Cooperative Partners in the PI CSC Region	
Pacific Islands Climate Change Cooperative	Jeff Burgett, PICCC Science Coordinator Email: jeff.burgett@piccc.net

PI CSC Science:

Research funded by the Pacific Islands Climate Science Center (PI CSC) focuses on the climate science needs of its partner Landscape Conservation Cooperative (the Pacific Islands Climate Change Cooperative, PICCC), federal, state, and other natural and cultural resource managers, and other stakeholders in the region. Science and management needs vary greatly across the region, as the PI CSC area extends across the Hawai'i, U.S. Affiliated Pacific Islands (American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Federated States of Micronesia, Republic of Palau, and Republic of the Marshall Islands), and Hawaiian and Pacific Island National Wildlife Refuge Complex, and includes terrestrial, freshwater, and nearshore marine ecosystems and their interwoven human communities.

With guidance from its Stakeholder Advisory Committee (SAC), the PI CSC is addressing climate science needs described in the Science Agenda for 2014-2018 ("Agenda") (<http://www.doi.gov/csc/pacific/science.cfm>). The PI CSC invites Statements of Interest (SOI) that address one or more of the scientific topics below, which have been determined by the SAC to be the highest priority research needs for the Pacific Islands region. Projects that aim to produce resource management-relevant information and products and/or actively engage with the intended users of the scientific output are highly encouraged and will be ranked higher in the SOI and proposal review process.

PI CSC FY 2015 Science Needs:

Guidance for Anticipated Intermediate-Term Climate Changes [Science Agenda Theme 1]

Focus: Improve regional modeling capability for high islands by quantifying and simulating cloudwater intercept and associated soil moisture regimes. [Theme 1, Objective 1]

Scientists at the International Pacific Research Center (IPRC) at the University of Hawai'i at Mānoa have used dynamical downscaled models to make climate projections for Hawai'i Island and Maui Island. To date, precipitation has been modeled as vertical rainfall only, and modelers plan to expand the capability by including wet deposition from clouds onto surfaces (fog and dew) in the precipitation input, and to reflect that additional input in associated soil moisture estimates. To accomplish this, simulation capabilities and *in situ* measurement are needed for important ecological factors. One, we are seeking proposals on the influence of vegetation stand structure and composition on rainfall and wet deposition for major biomes or land cover types characteristic of the main Hawaiian islands. Two, we seek proposals for the same suite of biomes or land cover types, the influence of vegetation community, rainfall, and wet deposition on soil moisture. The focus in this work initially will be on Hawai'i Island and/or Maui Island, for which dynamical downscaled projections and datasets already are available. Simulation results should be validated against measured environmental parameters. Interested parties should develop proposals in collaboration with the modelers, and it is recommended to contact Kevin Hamilton (email kph@hawaii.edu) or Yuqing Wang (email yuqing@hawaii.edu) at IPRC in early stages of proposal development.

Potential Effects of Changing Climate on Freshwater Resources [Science Agenda Theme 2]

Focus: Generate decadal rainfall and drought/drying predictions for Hawai'i or other Pacific Island subregions. [Theme 2, Objective 2]

In the Pacific, global drivers of precipitation interact over longer timescales with shorter-interval phenomena such as the Pacific Decadal Oscillation and El Niño Southern Oscillation. Resource management planning and execution tends to occur on seasonal and multi-annual timeframes, thus it is desired to develop estimates of anticipated precipitation changes for shorter-term (multi-annual and decadal) windows. The PI CSC seeks proposals to generate gridded or other geospatial statistics for multiannual spatiotemporal patterns of rainfall and drought/drying. These products will help inform resource managers of likelihoods of precipitation and drying patterns both over the landscape and over time. Emphasis is on predictions for near-term time windows (e.g., current decade and mid-21st century) and measures that reflect typical conditions along with variability including extremes. Proposed studies should include robust assessments of uncertainty that reflect real errors and unknowns in methodology, with models validated against measured environmental parameters. There are many potential users of these types of geospatial analyses, and proposals should ensure clear linkages with existing regulatory and/or management plans, programs, or offices in order to develop actionable metrics and products.

Anticipating and Addressing Change in Coastal and Low-Lying Areas [Science Agenda Theme 3]

Focus: Develop regionwide baselines and projections of oceanic incursion (factors including but not limited to sea-level rise, tidal regimes, wave regimes, storm-surge, wave overwash, and groundwater inundation) [Theme 3, Objective 1]

Changing climate is predicted to deliver multiple impacts to coastal and low-lying areas, including impacts to habitat, weakening of infrastructure, and threats from inundation and wave impact (and resulting coastal erosion), as well as from flooding, pollution, and sedimentation from runoff. PI CSC is seeking proposals to develop baselines and projections that (1) analyze/model the multivariate interactive effects of a suite of factors related to oceanic incursion; (2) establish coverage of coastal areas within a region that is as complete as possible. Baselines should include at least mean and median measures of incursion relative to a stated shoreline metric, plus probabilistic envelopes of variation including extremes. Results should include robust assessments of uncertainty that reflect real errors and unknowns in methodology, and validation against measured environmental parameters should be provided with model results. For this RFP, regions of interest are (1) the Main Hawaiian Islands and (2) centers of population and/or infrastructure in (i) American Samoa; (ii) Guam or the Commonwealth of the Northern Mariana Islands; (iii) the Republic of the Marshall Islands; (iv) the Federated States of Micronesia; or (v) the Republic of Palau. These are not in priority order. Individual science proposals do not necessarily need to address all regions. There are many potential users of these types of geospatial analyses, and proposals should ensure clear linkages with existing regulatory and/or management plans, programs, or offices in order to develop actionable metrics and products.

Forecasting Sustainability for Resource Management and Planning [Science Agenda Theme 4]

Focus: Develop capabilities to forecast sustainability for culturally-important species, sites, landscapes, or seascapes in Hawai'i and/or U.S. Affiliated Pacific Islands

To best incorporate climate predictions into decision-making and management, we are faced with the significant challenge of understanding what key cultural resources are valued by communities, and if their continuation into the future is threatened by climate change or variability. Identifying culturally important resources is an important step for resource stewards and community leaders to gain a sense of the potential degree of impact, how much time is available, and potential ways to respond. To address this challenge, PI CSC seeks proposals to forecast sustainability for culturally-important species, sites, landscapes, or seascapes in Hawai'i and/or U.S. Affiliated Pacific Islands. Proposed research should include a baseline for forecasts by utilizing traditional, historical, and/or local ecological knowledge systems, as well as existing biophysical data. Forecasts should consider indicators such as "typical" conditions (e.g., average or median conditions), plus indicators of the range of conditions that might be predicted including extremes and degree of variability. Factors related to environmental tolerances, such as thresholds or zones of suitable versus unsuitable conditions, should be identified and incorporated in creating envelopes of forecasts. Forecasts should include robust assessments of uncertainty that reflect real errors and unknowns in methodology. Importantly, the Climate Science Centers share results and datasets created by projects via online databases. We understand that some aspects of cultural stewardship may involve privileged or sensitive information. Thus, proposals should work with the PI CSC to develop a plan for data sharing that addresses any such concerns.

PI CSC Evaluation Criteria:

Evaluation of Statements of Interest: the PI CSC will instruct the Expert Review Team to use the following criteria to evaluate SOIs, according to specific weights (in parentheses). Please refer to [Page 3](#) of this document for additional details about each category.

- **(30%) Applicability to PI CSC Science Agenda and science needs:** Project clearly demonstrates its applicability to addressing the PI CSC Climate Science Agenda (<http://www.doi.gov/csc/pacific/science.cfm>) and helps us understand the interactions between climate and the physical, biological, and anthropogenic forces that influence structure and functioning of ecosystems and the goods and services they provide. Where possible, it makes connections to human dimensions of the project topic to help us understand the bio-cultural implications of climate change.
- **(30%) Management Relevance:** Project identifies relevancy of expected results to natural and cultural resource managers. Project plans actively engage with the intended users of the scientific output (e.g., inclusion of managers or cultural stewards on study teams, periodic “check-in” meetings with stakeholders, creation of practitioner advisory teams, etc.) in order to provide resource management-relevant information and products.
- **(20%) Scientific soundness of overall methodological approach of the project.**
- **(20%) Project builds upon existing work and capacity or complements related climate research underway in the Pacific Islands and/or in other CSC regions.** Project establishes collaborations beyond local scales and leverages expertise across CSCs, to help us understand regional and national implications of climate impacts.

Evaluation of Invited Proposals: The information that follows provides details and weightings for the five proposal review criteria that will be applied by the PI CSC Expert Review Team to each of the proposals. Please refer to [Page 4](#) of this document for additional details about each category.

1. **(30%) Scientific Merit and Quality of Proposed Research (Scientific Design)**
2. **(30%) Management Significance (Relevance/Applicability to Management Needs)**
3. **(20%) Coordination and Engagement with science beneficiaries (Working Partnerships and Knowledge Transfer)**
4. **(10%) Study Team Qualifications (Scientific Expertise)**
5. **(10%) Budget/Work Plan (Leveraging & Capacity Building)**

In addition to national standards discussed previously, this evaluation criterion will also consider the following elements:

- Where possible, project study plan includes elements of capacity building through academic or technical educational programs associated with host consortium programs;
- Project work provides opportunities to young researchers and/or includes post-doctoral research participation.

Additional Information:

Background information on the PI CSC can be found at <http://www.doi.gov/csc/pacific> or <https://nccwsc.usgs.gov>.

NOTE RE: INDIRECT COSTS – FOR CONSORTIUM SUBMISSIONS ONLY: Other than the University of Hawai‘i, all proposals submitted by the CSC Consortium must be submitted by the University of Hawai‘i at Mānoa (UHM). Applicants at other consortium institutions must include an amount to cover indirect costs at UHM for this pass through. It is the policy of UHM to apply indirect charges (in the amount of 41.5% to be applied to the first \$25,000 any funds passed through) to a third institution. Please include the appropriate indirect charges on the budget sheets for your proposal. Importantly, this funding opportunity is linked to Federal 2015 funds, thus all proposals should use 2015 as the start year and include the appropriate institutional indirect rates for the duration of the proposed work.

The PI CSC will host two Question-and-Answer Sessions pertaining to this solicitation on:

- **Thursday, May 1, 2014 at 12:00pm (noon) Hawaii time:**

To attend this meeting, you must first register for it. Please click this link to see more information, and register for this meeting.

<https://usgs.webex.com/usgs/j.php?ED=283660187&RG=1&UID=0&RT=MiMy>

Teleconference: (703) 648-4848, passcode 71487#. For non-DOI attendees, dial toll-free 855.547.8255, plus conference code

- **Wednesday, May 7, 2014 at 12:00pm (noon) Hawaii time:**

To attend this meeting, you must first register for it. Please click this link to see more information, and register for this meeting.

<https://usgs.webex.com/usgs/j.php?ED=283660807&RG=1&UID=0&RT=MiMy>

Teleconference: (703) 648-4848, passcode 71487#. For non-DOI attendees, dial toll-free 855.547.8255, plus conference passcode.

Additional webinar instructions: Click on the meeting link provided. Once registration has been submitted, your name will be added to the registry for the webinar and you will receive an email with instructions on how to join the webinar via the WebEx platform. If you are having problems with the link, go to <https://usgs.webex.com> and search for the meeting by name and time. For questions or problems with the WebEx, please contact Sarah Nash (snash@hawaii.edu).

SOUTH CENTRAL CLIMATE SCIENCE CENTER

FY 2015 Funding Opportunity

Eligible Applicants:	<p>Federal funds administered by the South Central Climate Science Center (SC CSC) are only available to institutions participating in the affiliated academic consortium (i.e. University of Oklahoma, Texas Tech University, Louisiana State University, The Chickasaw Nation, The Choctaw Nation of Oklahoma, Oklahoma State University, and NOAA's Geophysical Fluid Dynamic Laboratory), and USGS centers, field stations and laboratories. Partnering with, and across these groups is strongly encouraged. Also, partnering across CSCs is encouraged.</p> <p>Each proposal must have a Principal Investigator (PI) from an eligible entity. Partnerships between University consortium scientists and USGS researchers are strongly encouraged. Other partners may receive funds via subawards, but they must have a PI that is eligible. It is not necessary for a university lead contact to be included on the proposal, but these contacts have a strong sense of the primary objectives of the SC CSC. As such, University PIs are advised to discuss proposal ideas with their respective institutional lead contact (see table below).</p> <p>Prospective PIs are advised to seek out and establish working partnerships with local or regional stakeholders from relevant organizations concerned with management of natural and/or cultural resources. Proposals that demonstrate clear engagement with natural and cultural resource management stakeholders, showing clear benefits through a collaborative process, will be evaluated more favorably.</p> <p>Consortium-initiated proposals must be submitted through University of Oklahoma. Other parties may participate on funded projects via subawards. USGS researchers may receive funds directly.</p>
Estimated Available Funds:	Approximately \$350,000 to \$600,000 may be available to fund projects that support SC CSC science priorities in Fiscal Year 2015.
Project funding amount:	Individual project funds will not exceed a total of \$150,000 per year.
Project Duration:	Not to exceed 24 months.
SC CSC Contact:	<p>Dr. Kim Winton, Director South Central Climate Science Center 301 David L. Boren Blvd, Suite 3030 Norman, OK 73072 Office: 405-325-1272 Cell: 405-833-5091 Email: kwinton@usgs.gov</p>

Submission Portal: [HTTPS://NCCWSC.USGS.GOV/RESEARCHFUNDS](https://NCCWSC.USGS.GOV/RESEARCHFUNDS)

Or directly:

[https://my.usgs.gov/rfpManager/events/south_central_csc/Funding Opportunity 2015](https://my.usgs.gov/rfpManager/events/south_central_csc/Funding_Opportunity_2015)

SC CSC Consortium Members and Lead Contacts:

Consortium Member	Principal Investigator / Contact
University of Oklahoma	Dr. Berrien Moore, III (contact Aparna Bamzai, aparna@ou.edu)
Texas Tech University	Dr. John Zak john.zak@ttu.edu
Louisiana State University	Dr. Chris D’Elia cdelia@lsu.edu
Chickasaw Nation	Mr. Wayne Kellogg, P.E. wayne.kellogg@chickasaw.net
Choctaw Nation	Mr. Brian McClain bmcclain@choctawnation.com
Oklahoma State University	Dr. M. Keith Owens keith.owens@okstate.edu
NOAA’s Geophysical Fluid Dynamic Laboratory	Dr. Keith Dixon Keith.Dixon@noaa.gov

Science Needs:

In Fiscal Year 2015, the SC CSC is interested in inviting Statement of Interest (SOIs) that address the following topical science needs:

The over-arching theme of this funding opportunity for the SC CSC is “Precipitation Variability.” The South Central region exists in a zone of dramatic transition both in terms of eco-climate system diversity and occurrence of extreme events. This transition zone is the perfect natural laboratory for the development of climate and ecological models and other decision support tools for natural and cultural resource managers. Precipitation variability should be a component of consideration in the proposals along with the science priorities listed below.

Also, the projects funded should provide relevant tools, data sets, models, etc. that help natural and cultural resource managers make decisions at a landscape scale. We will consider funding basic research projects, but it should be justified in the SOI (and proposal) with an explanation of how it could be used in the development of more applied tools and models. (Example: Understanding soil microbiology may not help one make an immediate land management decision. However, it may be a critical component to build into ecosystem models to help predict whether a drought is of intensity and length to lead to desertification.)

The science priorities for the 2015 SC CSC funding opportunity are:

1. Regional Physical Climate Variability and Trends

a. We are seeking proposals to develop tools to comprehensively assess strengths, weaknesses, and gaps in the understanding of the drivers of regional physical climate variability and trends across the South Central CSC Region. Proposals should incorporate observations, modeling and development of new methods and techniques that enhance adaptive management strategies.

Within the SC CSC Region, areas of New Mexico and West Texas have suffered extreme droughts in recent years. Specifically proposals will develop technology transfer tools to evaluate scenarios of climate change on water management, groundwater and surface water availability, economics and potential land use changes. Technology transfer tools could include models that show the change predicted (i.e. groundwater and surface water maps under various climate scenarios and water management strategies).

Additionally, proposals should develop a critical analysis of what is known about, and what are the key information gaps related to controls on precipitation variability. (For example: summarize the state of knowledge from studies done at intermediate time and geographic scales).

Example for over-arching theme: Develop a decision support system that utilizes information on precipitation variability to model landscape management decisions (e.g., rangeland/wetland/water-resources models or web tools).

b. Drought Monitoring

At present, the drought information that is available is typically not developed with stakeholders/managers in mind and, therefore, is often not responsive to their needs. Proposals focused on drought monitoring would identify the drought information needs of stakeholders in the South Central region and the most effective methods of communicating drought information. Further, these proposals would evaluate the drought indices that are used for monitoring and predicting meteorological, agricultural, and hydrological drought and evaluate their effectiveness in the South Central region.

Additionally, successful proposals will develop new drought monitoring products that are responsive to user needs (e.g., soil moisture-based drought indices) and evaluate their effectiveness and tools that effectively communicate drought information and the associated uncertainty to stakeholders.

2. Ecosystems and Landscapes

a. We are seeking proposals that identify major ecosystem drivers and disturbances across the South Central Region with a focus on fire and drought. Proposals will be considered that develop products that assess the impacts of fire or drought on land use change on ecosystem recovery or change, and assess the current level of understanding of each. (Example: What is the state of the science in the South Central Region for fire science?)

b. We are also seeking proposals that develop a methodology for compiling, organizing and assessing available data on fire and drought in the South Central CSC Region, and for integrating results across varying scales (spatial, species, time, etc.). (Example: Identify linkages between qualitative scenario narratives and quantitative models for management applications at an intermediate time scale).

c. We are also seeking proposals that explore the gradient from the west to east where we see desertification. For example, what are the ecologic drivers for that tipping point? Proposals focused on this gradient would develop tools or datasets that would enhance the understanding of desertification across the SC CSC Region.

d. Proposals that use existing data and climate projections to generate products (namely maps) demonstrating change in range or disturbance regimes as related to climate change and precipitation variability will be entertained.

e. Successful proposals will develop a product (or generate the science needed to develop a product) such as an Alien Plant Ranking System (e.g., <http://www.npwrc.usgs.gov/resource/literatr/aprs/index.htm>) applied throughout SC CSC Region that incorporates climate change. These products could define plants, animals, insects or diseases whose distribution may be affected by ecosystem changes.

f. Protocols exist for development of vulnerability assessments: (e.g., <https://connect.natureserve.org/science/climate-change/ccvi> (Glick et al. 2011)). These tend to be state based on priority species in state wildlife action plans. The need exists to complete more vulnerability assessments as well as develop synthesis products that allow evaluation of vulnerability across regional scale.

3. Human Dimensions

a. As They Relate to Landscape-Scale Climate Change and Precipitation Variability

Private land holdings make up the majority of the land in the SC CSC Region. We are seeking proposals that develop models, tool or processes that help the CSC frame the science needs or articulate the science questions that land owners need answered, which include processes that help the scientists package the science planning, research activities, and translation to the private landowner in a way that the landowners can understand it and find it beneficial enough to use it in their own land management strategies.

Specifically these proposals will develop methods that will allow the SC CSC to:

1. Understand how private land owners and agronomists make decisions related to landscape-scale climate change
2. How do they perceive risk (drought, fire, flood, etc.)?
3. What shapes their understanding of that risk (news, weather forecasts, agricultural extension personnel...etc.?)
4. How should the SC CSC frame the science questions and package the results so that it is useful to a private land owner or agricultural industry?
5. Develop an inventory of the social science tools in the SC CSC Region that exist in various communities. And define what tools are available, what do they do, what are the strengths and limitations, define the geographic scale, and determine if the tools are site specific or transferable?

b. Native Americans and Cultural Resources

The SC CSC region includes many cultural resources that are increasingly vulnerable in a changing climate, including National Parks, National Wildlife Refuges, National Forests, other federally managed lands, and tribal lands. Managing these lands under the impacts of climate change poses a grand challenge to managers who are entrusted to preserve a variety of resources for the education, enjoyment, and

livelihood of future generations. Federally recognized Indian Tribes have a tremendous interest in building capacity for resilience to the impacts of climate change on their lands and communities. We are seeking projects that build awareness, assess the vulnerability of cultural and/or subsistence resources and explore potential adaptation actions or mechanisms for resiliency, utilize traditional ecological knowledge, and develop research networks to improve the understanding of how climate change impacts cultural resources.

c. Understanding Organizational Systems and Governance in Conservation Decision Making as it Relates to Climate Change, and Precipitation Variability

Landscape Conservation Cooperatives and the Southeast Conservation Adaptation Strategy (SECAS) have identified conservation governance systems as a priority knowledge gap in the successful implementation of conservation initiatives in response to global changes like climate change. SECAS defines the problem in the following way: “Define and assess the institutional setting within which the conservation community and other communities of practice (e.g., community planning organizations) make conservation decisions.” Within the context of this definition of the problem, the conservation community, which includes federal, state, and non-governmental organizations, often fails to effectively consider the following challenges in implementing their conservation priorities: **1)** understanding the institutional/governance context (including hierarchical governance structures) within which decisions affecting conservation are made, and; **2)** understanding how to effectively translate science information and tools into the decision making process. In order to more effectively address these knowledge gaps, the SC CSC is seeking proposals that can effectively answer one or more of the following objectives:

1. Case studies of conservation governance systems in the SC CSC region that demonstrate effective integration of conservation outcomes (targets), economic indicators, ecosystem services, and adaptive learning into decision making.
2. Pilot projects which demonstrate effective establishment of governance systems that successfully integrate conservation objectives into decision making processes at the local scale (i.e., city/municipality/county/community, watershed, private lands cooperatives, etc.). Pilot projects should demonstrate scalability and applicability at larger landscape and/or regional scales, such that landscape-scale conservation objectives can be successfully implemented through effective conservation governance systems. Pilot projects should demonstrate the relationship and integration of conservation outcomes (targets), economic indicators, and ecosystem services into an adaptive decision making process that is resilient to changing economic and political conditions.

SC CSC Evaluation Criteria:

Evaluation of Statements of Interest:

SOIs will be reviewed by the SC CSC, with input from regional partners, and by the National Climate Change and Wildlife Science Center (NCCWSC). Applicants may be contacted to provide additional or clarifying information. SOIs will be considered according to the following criteria. Please refer to [Page 3](#) of this document for detailed descriptions of the criteria.

- **30% Applicability to a high priority need identified by the relevant CSC**
- **30% Scientific merit and quality of the research**
- **30% Engagement of stakeholders, decision makers, and other research entities**
- **10% Potential for cross CSC collaboration**

Review Criteria for Invited Full Proposals: In addition to the criteria listed above, this solicitation will add or subtract from proposal scores for the following factors (Please refer to [Page 4](#) of this document for detailed descriptions of the criteria.):

1. 25% Scientific merit and quality of the proposed research:

2. 25% Management Significance: In addition to details provided on Page 4, does this project help land managers make decisions regarding climate change and adaptation strategies?

- Also: Knowledge Transfer
 - Engages targeted users in the study design and describes outreach components to disseminate research findings and information; identifies human dimension of project topic (i.e., safety, health, social, economic, etc.); and identifies collaborative partners that will participate in the project.
- Also: Applicability to Management Needs
 - Clearly demonstrates a connection to the SC CSC Climate Science Priorities listed above; identifies relevancy of project results to fish, wildlife, or habitat management needs; and implements the shared science mission of the SC CSC across University and Federal Research agencies.

3. 25% Coordination and Engagement: In addition to details provided on Page 4:

- Proposals with co-PIs from the USGS and a University consortium member are encouraged and will be evaluated more favorably.
- Builds upon existing work and capacity or complements related research underway in other climate science projects in the region.
- Reaches across multiple LCCs to build upon common needs using a standard format for data and products.
- Provides opportunities for students, young researchers, and post-docs to participate.

4. 15% Study Team qualifications

5. 10% Budget/work plan

Additional Information:

Additional information and background on the SC CSC may be found at:

<http://www.doi.gov/csc/southcentral/index.cfm>

- SC CSC will hold a question and answer conference on:
 - **Tuesday, May 6, 2014**
 - **10:00 a.m. Central Standard Time**
 - Call in information: 703-648-4848, Pass Code 74401 #
- A second call will be available on:
 - **Thursday, May 15, 2014**
 - **2:00 p.m. Central Standard Time**
 - Call in information: 703-648-4848, Pass Code 74401 #
- Evaluation of SOI. Applicants may be contacted to provide additional or clarifying information. The evaluation of SOIs will be conducted with the assistance of an Evaluation Team comprised of LCC coordinators and independent experts who are not applying for funds.

- The SC CSC process has identified annual science priorities in consultation with, and taking into consideration comments from, the following sources:
 - USGS Leadership headquartered at the National Climate Change and Wildlife Science Center (NCCWSC) in Reston, Virginia;
 - Coordinators for the Desert, Eastern Tallgrass Prairie and Big Rivers, Great Plains, Gulf Coastal Plains and Ozarks, Gulf Coastal Prairie, and Southern Rockies LCC's:
 - Other USGS Climate Science Center Directors.
 - Other agencies and experts
- Proposing teams are encouraged to consult with one or more Landscape Conservation Cooperatives (LCCs) or Tribes in the SC CSC region in defining the problems and decisions to be addressed.

Primary LCCs and LCC Science Coordinators in the SC CSC Domain:

LCC	LCC Coordinator LCC Science Coordinator	Contact email address
<u>Desert</u>	Genevieve Johnson Aimee Roberson	gjohnson@usbr.gov aimee_roberson@fws.gov
<u>Eastern Tallgrass Prairie and Big Rivers</u>	Glen Salmon Gwen White	glen_salmon@fws.gov gwen_white@fws.gov
<u>Great Plains</u>	Nicole Athern James Broska	Nicole_Athearn@fws.gov james_broska@fws.gov
<u>Gulf Coastal Plains and Ozarks</u>	Greg Wathen John Tirpac	Greg.wathen@tn.gov john_tirpak@fws.gov
<u>Gulf Coast Prairie</u>	Bill Bartush, Cynthia Edwards	Bill_Bartush@fws.gov c.kallio.edwards@gmail.com
<u>Southern Rockies</u>	Kevin Johnson John Rice	Kevin_m_johnson@fws.gov jrice@usbr.gov

- NOTE RE: PASS THROUGH INDIRECT COSTS: All proposals submitted by non-USGS entities must be submitted by University of Oklahoma. Full proposals that are invited will get further instruction on how to address indirect costs per their partnering institution so that the appropriate indirect charges on the budget sheets may be applied.
- Multi-year Funding (relevant to USGS proposers): To address issues related to carry-over of federal funds between fiscal years, and to deal with the fact that this solicitation can only provide funds for the first fiscal year of the project, CSCs will work with successful applicants to plan funding for multi-year projects in the fiscal years needed by the project, within the limitations of knowledge about out-year funding.
- It is strongly suggested that multi-year proposals have milestones for the end of each year with a product available for each year (i.e. year 1 literature review and data set compiled, year 2 model developed, year 3 model tested and published).

SOUTHEAST CLIMATE SCIENCE CENTER

FY 2015 Funding Opportunity

- Eligible Applicants:** Only investigators from North Carolina State University and USGS science centers, Cooperative Research Units, field stations and laboratories may submit proposals in response to this Funding Opportunity. Other parties may participate on funded projects via subawards from proposals with NCSU or USGS principal investigators.
- Funds Flow:** All funds will be transferred from the Southeast Climate Science Center to either a USGS entity or North Carolina State University. These entities may then provide subawards to other parties.
- Estimated Funds:** Approximately \$450,000 may be available to fund multiple projects identified in this funding opportunity in Fiscal Year 2015.
- Project Duration:** Not to exceed 36 months.
- SE CSC Contact:** **Dr. Gerard McMahon, Director**
Southeast Climate Science Center
127 David Clark Labs, Department of Applied Ecology
North Carolina State University
Raleigh, NC 27695-7617
Office: 919-515-2229
Email: gmcmahon@usgs.gov
- Submission Portal:** <HTTPS://NCCWSC.USGS.GOV/RESEARCHFUNDS>
- Or directly:**
[https://my.usgs.gov/rfpManager/events/southeast_csc/Funding Opportunity 2015](https://my.usgs.gov/rfpManager/events/southeast_csc/Funding_Opportunity_2015)

Background:

The U.S. Department of the Interior (DOI) established the Southeast Climate Science Center (SE CSC) in 2010 to address the challenges presented by climate and land use change in the Southeastern United States (<http://globalchange.ncsu.edu/secsc/>). The SE CSC's mission is to provide essential decision-focused scientific knowledge and tools that resource managers and other partners interested in land, water, wildlife, and cultural resources can use to anticipate, monitor, and adapt to a changing climate. The geographic scope, mission, goals, guiding principles, and research priorities of the SE CSC are described in a strategic Science and Operational Plan (<http://pubs.usgs.gov/of/2012/1034/>). The research priorities delineated in this RFP are consistent with strategic Science Plan priorities, as well as the more immediate management priorities of LCC partners.

FY15 Science Needs:

The Southeast Climate Science Center (SE CSC) is soliciting Statements of Interest (SOI) for two projects that support development and implementation of a Southeast Conservation Adaptation Strategy (SECAS). Additional details about these FY15 science needs are available and should be reviewed before submitting a statement of interest or proposal (http://globalchange.ncsu.edu/secsc/wp-content/uploads/SECSC_FY15_call_description_041414.pdf)

1. SECAS framework development: The lands and waters of the southeastern United States have experienced tremendous change, particularly during the 20th Century, and yet have remained remarkably resilient in their capacity to sustain some of the most diverse natural resources found on the North American continent (Master et al. 1998, White et al. 1998).

Serious unanswered questions exist about the degree to which past successful conservation strategies can sustain all aspects of these diverse, natural resources in the face of unprecedented changes (and interactions) broadly expected to occur as a result of both climate and land use change.

Those whose decisions shape the SE landscape and the status of these natural resources will need to account for at least three challenges: (1) the unprecedented degree of change in large scale stressors (climate and land use change) and the impacts of these stressors on services provided by these resources at multiple scales; (2) the potential mismatch between the scales at which changing physical and biological processes affect valued natural resources and scales at which governance of these resources is exercised; and (3) articulation of objectives that adequately reflect the values and priorities of multiple stakeholders who have an interest in these resources at a variety of spatial and temporal scales.

Recognizing these challenges and needs, in 2011 the Directors of the Southeastern Association of Fish & Wildlife Agencies (SEAFWA; <http://www.seafwa.org/index.php>) initiated a process to develop a Southeast Conservation Adaptation Strategy (SECAS) that will define a “future conservation landscape in the Southeast United States”. This element of the FY15 SE CSC science needs contributes directly to this initiative.

The **overall goal of this “SECAS Framework Development”** effort is to **produce a report and a website that will support this initiative**. We are seeking proposals for research efforts that accomplish the following goals:

(1) Reviews and summarizes the objectives and management actions contained in existing federal, state, and local plans and other strategic documents that guide management decisions about three key dimensions of SE natural resources: species (such as fish, wildlife, and plants); priority ecosystems (including, at least, coastal and upland wetlands, and forests); and landscape-scale systems (such as open space and corridors, the interface between urban and non-urban areas, and water quantity and quality associated with meeting conservation objectives). At minimum, reviewed plans should include: state wildlife action plans and open space and habitat connectivity plans for all member states of SEAFWA; open space plans for large metropolitan areas in each SEAFWA state; and forest plans.

(2) Using existing climate and land use change-related impact assessment products, assess the impacts of expected climate and land use change on the objectives and priorities associated with these key resources. Examples of such an assessment are contained in Dunlop and others (2012 a&b); and,

(3) In collaboration with LCCs, develop and articulate a small number (3-5) of high-level guiding principles or propositions to guide natural resource decisions in the SE in the face of changing climate and land use. Examples of such broad propositions are contained in Dunlop and others (2013).

Specific objectives of this project include:

- (a) Increase the understanding, for both the general public and those whose decisions shape the SE landscape, about the scientifically complex and politically charged set of topics that include: what matters to the public and decision-makers about these key natural resources, as reflected in planning documents and other resources? and how are the things that matter about these resources threatened by climate and land use change?;
- (b) provide a one-stop place to get introductory and more advanced information about natural resources-related planning objectives and priorities, and climate and land use change-related impacts, including impacts on attaining these resource objectives;
- (c) enable users of the report and web site to visualize the trajectory of climate and land use change and risks to natural resources in the Southeast, where risks are expressed in terms of the vulnerability of the resource-related objectives and priorities;
- (d) use information about current objectives and values placed on natural resources as a context to advance the conversation about defining the desired conservation landscape of the future.

Audience: The primary audiences for these products are those whose decisions shape the SE landscape now and in the future and the technical staff that support the decision-makers.

The proposed **report** should include sections that accomplish the following three tasks:

(a) Review objectives and management actions that underlie natural resource decisions that will be affected by climate and land use change in the SE:

This review should identify natural resources objectives and the menu of management actions contained in existing planning documents and present these objectives and actions organized by three key dimensions of these natural resources: (species/assemblages (fish, wildlife, and plants); ecosystems; and landscapes).

In choosing natural resource plans for review place a priority on: (a) state wildlife action plans; (b) open space and habitat connectivity plans for all member states of SEAFWA; (c) open space plans for large metropolitan areas in each SEAFWA state; (d) forest plans at federal, state, and private levels. Work with LCCs to identify plans and build on existing summaries prepared by LCCs.

Identify and discuss any scale mismatches between the objectives and priorities related to the management of these natural resources and the scale of governance activities that currently can be brought to bear to achieve these priorities.

Analyze and assess the apparent challenge that despite the awareness that conservation frameworks will need to account for the impacts of broad-scale climate and land use change processes, very little has been articulated about how these broad scale processes affect the definition of local and broad scale objectives, values, and priorities related to these resources.

In addition to this review of objectives and management actions over a broad range of resources and plans, a more detailed assessment will be completed on the objectives found in a sample of legislation, plans, and regulatory documents associated with a few key resources in the SEAFWA region.

Proposals should suggest 2-3 types of natural resources that will be the focus of this more in-depth analysis (from among important SE resources such as open pine systems; black bears; coastal wetland; migratory waterbirds; open space/habitat connectivity, etc.) and, using a sample of legislation, planning documents, and promulgated regulations, propose an approach for assessing the quality of the objectives indicated in these documents, using properties for “good” objectives such as those described in Gregory and others (2012; e.g., complete, concise,

sensitive, understandable, independent). This analysis should improve understanding of the ways in which the development, articulation, and use of objectives can promote or provide barriers to accomplishing what matters to those who value natural resources in the SE, and ways to surmount these barriers. Final selection of natural resources and a list of document analysis objectives will be done in cooperation with a project steering committee (see below).

Examples of the types of documents that may be useful for understanding and framing a proposal for this element of the SECAS project:

[Florida Forever Conservation Needs Assessment](#)

[Range-Wide Conservation Plan for Longleaf Pine](#)

[Connectivity Approaches in State Wildlife Action Plans](#)

[Considering Climate Change in Florida's Wildlife Action Planning A Spatial Resilience Planning Approach](#)

[National, state, and other forest plans](#)

(b) Use available scientific literature to understand and describe the impacts of climate and land use change on these existing objectives and priorities:

Provide an overview of climate and land use change impacts in the SE, by LCC boundaries, reflected in temperature, precipitation, extreme climatic conditions, hydrology, soil moisture, and land use/cover. For the natural resources identified in part one of this project, use existing assessment literature to summarize expected impacts of climate and land use changes on the ability to achieve objectives. In collaboration with the project steering committee, identify resource types (e.g., long leaf pine; mangroves) where more detailed impact studies have been accomplished, and synthesize these study findings. Identify important knowledge gaps to understand the impacts of global change scenarios on SE natural resources objectives.

Potential documents that may be useful for understanding and framing a proposal for this element of the SECAS project:

[The implications of climate change for biodiversity conservation and the National Reserve System: Final Synthesis](#)

[Implications for policymakers: Climate change, biodiversity conservation and the National Reserve System](#)

[National Climate Assessment](#)

[Climate of the Southeast United States: Variability, Change, Impacts, and Vulnerability](#)

[Regional Climate Trends and Scenarios for the US National Climate Assessment: Part 2. Climate of the Southeast US](#)

[Intergovernmental Panel on Climate Change Assessment Reports](#)

[A Multi-disciplinary Assessment of the Southeastern United States Climate](#)

[Integrating climate change vulnerability assessments into adaptation planning, Florida, 2011](#)

(c) Articulate broad SECAS conservation principles and propositions:

A fundamental challenge is to develop high-level principles to guide the formulation of more detailed objectives and plans for adapting to climate change in coming decades. Using what is known about how climate change will affect (at least broadly) the key SE natural resources listed above, and in consultation with LCCs, develop climate

and land use ready, broad scale principles to guide management of natural resources in the Southeast (Dunlop and others, 2013).

Potential documents that may be useful for understanding and framing a proposal for this element of the SECAS project:

[Climate-ready conservation objectives: a scoping study](#)

[National Fish, Wildlife and Plants Climate Adaptation Strategy](#)

The proposed **companion website** developed as part of this proposal should enable users to visualize the trajectory of climate and land use change and other threats and risks associated with global change. This site might integrate some existing LCC GIS data and capabilities, along with new data (e.g., climate-related scenarios that can be portrayed on user selected geographies). One example of such a web resource is the Cal Adapt website (<http://cal-adapt.org/>), which enables members of the public to examine and explore the impacts of climate change on things that matter to them.

Additional information: We anticipate that project funding will begin in late 2014, or as soon as the FY15 USGS appropriation is complete, and that the project may take 2-3 years to complete, in an iterative manner. A first iteration of the report and website should be prepared by January 2016. Project team members should be prepared to use the draft framework to assist in the planning of a SECAS summit planned for summer 2016. We anticipate that the summit planning process and the summit will produce information that can inform a second iteration of some or all of the project products. The final project report and website should be completed by no later than June 2017.

SE CSC and LCCs will provide assistance in identifying members of an advisory group for the project. Full proposals should indicate how an advisory group would be used in scoping, reviewing, and finalizing all project-related products. Teams invited to submit proposals are encouraged to identify and include as project team members scientists that have experience in developing large scale natural resource climate adaptation plans (e.g., Dunlop and others, 2012 a and b) as well as scientists with expertise in decision analysis approaches such as structured decision making.

Dunlop M., Hilbert D.W., Ferrier S., House A., Liedloff A., Prober S.M., Smyth A., Martin T.G., Harwood T., Williams K.J., Fletcher C., and Murphy H. (2012a) *The Implications of Climate Change for Biodiversity Conservation and the National Reserve System: Final Synthesis*. A report prepared for the Department of Sustainability, Environment, Water, Population and Communities, and the Department of Climate Change and Energy Efficiency. CSIRO Climate Adaptation Flagship, Canberra.

Dunlop M., Hilbert D.W., Stafford Smith M., Davies R., James, C.D., Ferrier S., House A., Liedloff A., Prober S.M., Smyth A., Martin T.G., Harwood T., Williams K.J., Fletcher C. & Murphy H. 2012b *Implications for policymakers: climate change, biodiversity conservation and the National Reserve System*. CSIRO Climate Adaptation Flagship, Canberra.

Dunlop M, Parris, H, Ryan, P & Kroon, F 2013, *Climate-ready conservation objectives: A scoping study*, National Climate Change Adaptation Research Facility, Gold Coast, 102 pp.

Gregory, R., Failing, L., Harstone, M., Long, G., McDaniels, T., & Ohlson, D. (2012). *Structured decision making: A practical guide to environmental management choices*. Chichester, West Sussex, UK: [Wiley-Blackwell](#).

2. Cultural resources. Climate and land use change are already having a broad set of adverse impacts on cultural resources. Sea level rise, extreme storms, and coastal flooding threaten coastal resources like shell middens and historic structures. The combined stressors of climate and land use change can create substantial problems for maintaining the values associated with cultural resources.

Three key features of cultural resources in the Southeast are of particular value: significance, association, and integrity. To be significant, a cultural resource must have important historical, cultural, scientific, or technological meaning and this meaning must be connected or associated with a physical place or form. For purposes of this project, every cultural resource must have a connection with the history or prehistory of the United States, or it must have value for a particular ethnic group. Integrity addresses the degree to which socially valued behavior and ideas are manifested in the form and substance of a resource. A cultural resource has integrity if it retains material attributes connected with its social values.

Managers are seeking objective, replicable, and transparent ways to make wise decisions that will protect important values and objectives associated with cultural resources. Management options for protecting and preserving societal values associated with cultural resources have narrowed due to the stresses associated with climate and land use change and constraints associated with limited budgets, and increasing urgency for managing threatened resources. In these complex cultural resource decision making settings, decision analytic approaches, such as structured decision making, can be useful in providing a "...formalization of common sense for decision problems which are too complex for informal use of common sense (Keeney, 1982)."

The overall goal of this project is to utilize a decision-analysis based approach to strengthen the ability of the agencies and organizations in the Southeast to make wise management choices about cultural resources, accounting for the stresses associated with climate and land use change (Thompson and others, 2013). This 1-2 year long project will be done as a collaboration between staff at agencies responsible for managing the cultural resources and, as appropriate, collaborators from academia and elsewhere. The project will focus on three goals: (1) define an overall conceptual framework that articulates what cultural resources in the Southeast are important (significance, association, integrity) and why; (2) use this conceptual framework to define an overall decision context (in a decision analytic sense) applicable for cultural resource conservation decisions by an agency/organization; and (3) implement a decision analysis-based pilot project focused on an actual cultural resource management decision.

Conceptual framework: A theory-based conceptual framework will be developed that provides the rationale for understanding the significance, association, and integrity of cultural resources in the SE that are under the purview of the agencies and organizations that range from the National Park Service (NPS) to a local historic preservation organization. The framework may be informed by and build on documents developed by the National Park Service (NPS), considered to be one of the pre-eminent national organization for management of cultural resources. Among these documents are: Climate Change Response Strategy (2010), Climate Change Action Plan (2012), and a recently released policy memo, Climate Change and Stewardship of Cultural Resources (2014).

Decision context: A decision context for cultural resource management decisions in the Southeast will be defined using the conceptual framework and an articulation of: the key cultural resource decision problems facing organizations that manage cultural resources in the next 20-50 years; an articulation of the objectives of both decision-makers and stakeholders in these cultural resource management decisions; an overall rationale for the key cultural resource management objectives in the SE of these decision-makers and stakeholders, including their attitudes toward risk; and an articulation of an innovative portfolio of potential management strategies and actions.

Pilot project: Proposals should also define how structured decision-making will be used to frame a *specific* cultural resource-related decision problem. The proposal should describe how decision-makers and other stakeholders will frame a relevant decision problem, develop conservation objectives, identify possible mitigation or adaptation actions that are within the purview of the decision-maker(s), evaluate these potential strategies and make a

decision, and design or re-design monitoring programs to assess the effectiveness of management actions (figure 1). The research should be focused on a problem shared by multiple cultural resource locations and result in information (including the process of conducting such a study) that is informative and transferable for addressing similar management questions across the Southeast.

It is expected that the team of investigators for a proposal will include cultural resource experts from the resource management organization, researchers in fields such as cultural anthropology and geography, and experts in the field of decision analysis.

Matthew P. Thompson, Bruce G. Marcot, Frank R. Thompson, III, Steven McNulty, Larry A. Fisher, Michael C. Runge, David Cleaves, and Monica Tomosy, 2013, **The Science of Decisionmaking: Applications for Sustainable Forest and Grassland Management in the National Forest System**, USDA General Technical Report WO-88. July 2013

SE CSC Evaluation Criteria:

Statement of Interest Evaluation Criteria:

Statements of Interest for the SE CSC will be ranked and evaluated according to the following criteria. Please see [Page 3](#) of this document for additional information about each category.

1. **Management Significance (30%)**
 - Responsiveness to the FY15 science needs as described in the SE CSC science needs document at http://globalchange.ncsu.edu/secsc/wp-content/uploads/SECSC_FY15_call_description_041414.pdf
2. **Scientific merit and quality of the proposed research (30%)**
3. **Study Team qualifications (15%)**
4. **Coordination and engagement with stakeholders and decision-makers, including leveraging funding from other sources (15%)**
5. **Potential for cross-CSC collaboration (10%)**

FULL PROPOSAL (by invitation only, following SOI evaluation)

Proposal Review Criteria: Overall review criteria for full proposals submitted to the SE CSC are listed below along with weighting that will apply to each criterion for all proposals. Please see [Page 4](#) of this document for additional details about each category. Additional factors that will be evaluated by the SE CSC may be communicated at the time a full proposal is invited.

1. **Management Significance (30%)**

In addition to details on Page 4 for this category, a proposal will be evaluated based on how well it uses a decision analysis/structured decision-making framework and includes evidence of project staff expertise in decision analysis.
2. **Scientific merit and quality of the proposed research (30%)**
3. **Study Team qualifications (15%)**
4. **Coordination and Engagement (Working Partnerships and Knowledge Transfer) (15%)**
5. **Budget/Work Plan (10%)**

Additional Information:

- Complete details on the SE CSC Proposal Specifications and Criteria can be found at this URL: http://globalchange.ncsu.edu/secsc/wp-content/uploads/SECSC_FY15_call_description_041414.pdf
- It is expected that proposed project teams will include PIs with experience and expertise with decision analysis approaches, including structured decision-making. A roster of potential decision analysis colleagues will be available from the SE CSC director, Jerry McMahon (gmcMahon@usgs.gov).
- When appropriate to meet objectives described in this solicitation, projects that extend across multiple CSC and/or LCC regions are encouraged and applicants considering such projects should consult with the relevant CSC Directors and LCC coordinators. While matching funds are not required, projects providing matching funds or leveraging other funding sources from organizations (Federal, State, Tribal, or other) will be viewed more favorably. SOIs with co-PIs from the USGS and a University consortium member are encouraged and will be evaluated more favorably. Likewise, collaborations with other organizations are encouraged.
- The Southeast Climate Science Center will host a question and answer session pertaining to this solicitation:
 - **Wednesday, April 30, 2014 at 11:00 AM EDT**
 - **Tuesday, May 13, 2014 at 11:00 AM EDT**
 - Call in number will be 703-648-4848, 62240#
- NOTE ON SUBMISSIONS THAT INCLUDE PI'S FROM UNIVERSITIES OTHER THAN NC STATE: All proposals that include investigators at a university other than NC State must be submitted by a faculty member at NC State University who is a PI on the proposal. Applicants from other academic institutions must include an amount to cover indirect costs at NC State for this pass through. It is the policy of NC State to apply indirect charges to the first \$25,000 of any funds passed through to another institution. Please include the appropriate indirect charges on the budget sheets for your proposal.

LCCs in the SE CSC Domain and LCC Coordinators:

LCC	Coordinator	Email address
Appalachian http://applcc.org/	Jean Brennan	jean_brennan@fws.gov
Caribbean http://caribbeanlcc.org/	Bill Gould	wgould@fs.fed.us
Gulf Coast Prairie http://gulfcoastprairielcc.org/	Bill Bartush	bill_bartush@fws.gov
Gulf Coastal Plains and Ozarks http://gcpolcc.org/	Greg Wathen	greg.wathen@tn.gov
Peninsular Florida http://peninsularfloridalcc.org/	Tim Breault	timothy_breault@fws.gov
South Atlantic http://www.southatlanticlcc.org/	Ken McDermond	kenneth_mcderrmond@fws.gov

SOUTHWEST CLIMATE SCIENCE CENTER

FY 2015 Funding Opportunity

Eligible Applicants:	<p>Scientists and scholars affiliated with the SOUTHWEST CLIMATE SCIENCE CENTER (SW CSC) University Consortium (see table below) and USGS centers, field stations and laboratories may submit proposals in response to this Funding Opportunity. The University Consortium members and lead contacts are provided in Table 1. It is not necessary for a university lead contact to be included on the proposal, but these contacts have a strong sense of the primary objectives of the SW CSC. As such, University PIs are advised to discuss proposal ideas with their respective institutional lead contact.</p> <p>Each proposal must have a Principal Investigator (PI) from either a SW CSC University Consortium member institution or from USGS. Partnerships between University consortium scientists and USGS researchers are strongly encouraged. Scientists and scholars at other institutions may participate as collaborators and subcontractors.</p> <p>Prospective PIs are advised to seek out and establish working partnerships with local or regional stakeholders from relevant organizations concerned with management of natural resources. These organizations may include agencies within the federal Department of the Interior, other federal agencies, state agencies, tribes, and private or non-governmental entities. Proposals that demonstrate clear engagement with stakeholders from such organizations, showing clear benefits through a collaborative process, will be evaluated more favorably. The Landscape Conservation Cooperatives (LCCs) in the region are good portals for establishing partnerships with management agencies. Contact information for relevant LCCs is provided in Table 2.</p> <p>Consortium-initiated proposals must be submitted through University of Arizona (UA). Other parties may participate on funded projects via subawards. USGS researchers may receive funds directly.</p>
Funding Stream:	<p>All funds will be transferred from SW CSC to either a USGS entity or UA. These entities may then provide subawards to members of the CSC consortium or other parties.</p>
Estimated Available Funds:	<p>Approximately \$400,000 may be available to fund FY15-start projects that support SW CSC research priorities.</p>
Project Funding Guidance:	<p>The SW CSC intends to fund 2 to 3 projects through this RFP with budgets that collectively sum to approximately \$400,000 (including both years of any two-year projects).</p>
Project Duration:	<p>Not to exceed 24 months.</p>

SW CSC Contact: **Dr. Stephen Jackson, Director**
SW Climate Science Center
1955 E. Sixth Street
Tucson, AZ 85721

Office: 520-670-5591
Email: stjackson@usgs.gov

Submission Portal: [HTTPS://NCCWSC.USGS.GOV/RESEARCHFUNDS](https://NCCWSC.USGS.GOV/RESEARCHFUNDS)

Or directly:

https://my.usgs.gov/rfpManager/events/southwest_csc/Funding_Opportunity_2015

Background:

The U.S. Department of the Interior (DOI) established the Southwest Climate Science Center (SW CSC) in 2010 to address the challenges presented by climate change and variability in the Southwestern United States (<http://www.doi.gov/csc/southwest>). The SW CSC's mission is to provide essential scientific knowledge and tools that resource managers and other partners interested in land, water, wildlife, and cultural resources can use to anticipate, monitor, and adapt to a changing climate. The SW CSC operates using advice and guidance from a Stakeholder Advisory Committee (SAC). The SAC is chaired by the U.S. Geological Survey (USGS) Regional Director for the Pacific Region. The SW CSC also works closely with Landscape Conservation Cooperatives located wholly or partially within the SWCSC boundaries.

The SW CSC maintains two key documents that describe its geographic scope, mission, goals, guiding principles, and research priorities – a 3 to 5 year Strategic Agenda and an annual Workplan. The research priorities delineated in this RFP have been guided by the long-term and annual plans in the Strategic Agenda and 2015 Workplan. Proposal authors are encouraged to review these documents, available at the SW CSC website: <http://www.doi.gov/csc/southwest>.

In keeping with its mission, the SW CSC identifies research priorities that are tied closely to the needs of natural-resource managers. Proposals developed in response to this RFP should focus on developing knowledge that can be directly applied to specific management challenges, either locally or broadly across the landscape. Each project should target one or more issues faced by stakeholders, generate knowledge to address that challenge, and communicate the results to stakeholders in actionable ways. The FY15 research priorities are described in the next section.

SW CSC Research Priorities:

For FY 2015, the SW CSC identifies six research priorities, as outlined below. These priorities are largely unchanged from the FY 2014 RFP, and the SW CSC welcomes statements of interest (SOIs) addressing these priorities, including revised SOIs submitted for FY 2014. Particular attention will be paid to proposals involving partnerships with tribes, or direct relevance to tribes. PIs are encouraged to include participation by 'next-generation' scientists (graduate students and post-docs) in their proposals. Potential exists for cross-cutting proposals addressing multiple priorities, old and new, and we particularly encourage SOIs that effectively and convincingly speak to more than one priority. *SOIs and proposals should indicate clearly which SW CSC priorities they intend to address.*

- 1. Anticipating climate change and variability at intermediate timescales.** Current forecasting ability is concentrated on short time spans of weeks to months, and long time spans of a few decades, with a major gap at intermediate time spans. Yet the strong variability and changes that occur at annual to decadal frequencies in the Southwest will modulate longer-term trends, and profoundly affect hydrological and ecological realizations in the coming decades. Intermediate-scale climate variability poses challenges and opportunities for resource managers. Assessments of how annual to decadal climate variability might influence climate extremes, including prolonged droughts, and long-term trends are needed. These assessments may include original research or reviews of the state of the science and prospects for intermediate-scale forecasting.

- 2. Linking climatic, hydrological and ecological changes at intermediate timescales.** Climate variation at annual to decadal timescales has a large influence on hydrological and ecological systems. Hydrological extremes, both high and low, pose challenges for managers of water and other natural resources. Composition and structure of terrestrial ecosystems are strongly influenced by annual to decadal variability in spatially extensive disturbances (wildfires, mass mortality of trees) and recruitment, which in turn reflect climatic variability. Effects of such variation in disturbances and recruitment can persist for decades or longer in terrestrial ecosystems across the Southwest. Furthermore, geographic ranges and population sizes of many species are highly sensitive to interannual to decadal climate variability, which will affect their responses to longer-term climate trends. Hydrological and ecological responses to intermediate-scale climate variability need careful study. These dynamics will occur regardless of climate change, and they will influence ecological trajectories during the longer-term changes in climate over the next century. An important scientific challenge is to anticipate the array of intermediate-scale hydrological and ecological outcomes. That will in turn help resource managers identify threats and opportunities posed by alternative intermediate-scale scenarios.

- 3. Hydrological effects of climate change in the Southwest.** Projections of 21st-century hydrological changes represent a critical need for stakeholders in the Southwest. The most recent results from the Coupled Model Intercomparison Project (CMIP5) provide an opportunity to update and improve forecasts of long-term trends in precipitation, snowpack, runoff, soil moisture, and groundwater in the region. The long-term projections (circa 2035 – 2100 CE) can be integrated and validated using observational and paleohydrological data. Projections of future hydroclimate and hydrology, with accompanying specifications of uncertainties, will be invaluable for stakeholder planning and decision-making, particularly if closely coordinated with one or more groups of stakeholders.

- 4. Effects of climate change on coastlines, estuaries, and wetlands.** Coastal regions and estuaries will be affected by sea-level rise, which will interact with changes in ocean and atmospheric circulation to alter land cover and species habitats along the California coast. The recent identification of transient ‘atmospheric rivers’ highlights the potential vulnerability of coastal regions and freshwater wetlands to extreme events. The most recent generation of climate projections (e.g., CMIP5), sea-level assessments, and research on climate extremes can be brought to bear in determining vulnerability of coastal, estuarine, and freshwater-wetland ecosystems, and developing effective management strategies.

5. **Design and implementation of monitoring strategies.** Multiple arrays of monitoring programs and networks exist in the Southwest and adjacent regions. These networks are useful for diagnosing trends, identifying emerging threats and opportunities, determining success of past and ongoing management initiatives, and assessing accuracy of past projections. Many networks have developed haphazardly or opportunistically, and systematic assessment of existing monitoring networks and their utility for current decision-making is timely. Such assessment should be closely coordinated with stakeholders to determine how monitoring data are used, whether existing networks and data streams are adequate for decision-making, and ways in which monitoring can be improved. Emphasis will not be on supporting monitoring programs *per se*, but on determining how monitoring strategies can best meet the needs of stakeholders.

6. **Hydroclimatic change and terrestrial ecosystems.** Changes in hydroclimate are expected to cause substantial changes in terrestrial ecosystem properties, ranging from fundamental attributes of land cover and species habitats (e.g., vegetation composition and structure) to ecosystem functions (carbon storage, primary productivity, runoff and infiltration, forage, fuel accumulation, local to regional climate *via* albedo, evapotranspiration, and latent heat flux). Such changes can be assessed using a variety of approaches, including field observation, remote sensing, state-and-transition models, and simulations. In some settings, paleoecological and paleoclimatic studies can contribute to sensitivity assessment and model validation. Local to regional studies of terrestrial ecosystem responses to hydroclimatic change, developed in close coordination with stakeholders, will provide valuable information for decision-making and planning.

SW CSC Evaluation Criteria:

Statement of Interest Review Criteria:

Statements of Interest will be ranked and evaluated according to the following criteria (see [Page 3](#) of this document for more detailed descriptions of the criteria):

1. **Engagement of stakeholders, decision-makers, LCCs, or other SW CSC partners (30%)**
2. **Applicability to regional scientific priorities as described above (40%)**
3. **Applicability to national, cross-cutting CSC program goals and the goals of the National Climate Change and Wildlife Science Center (<https://nccwsc.usgs.gov/content/science-approach>) (10%)**
4. **Scientific merit and quality of the proposed research (20%)**

Invited Proposal Review Criteria:

The Director of the SW CSC will assemble a Scientific Review Team (SRT) to assist in the evaluation of invited proposal submissions. With advice from the SRT, the Director will review and rank proposals according to the criteria described on [Page 4](#) and summarized below.

1. **Scientific Merit and Quality of Proposed Research (Scientific Design) (35%)**
2. **Management Significance (Relevance/Applicability to Management Needs) (20%)**
3. **Coordination and Engagement (Working Partnerships and Knowledge Transfer) (20%)**
4. **Study Team Qualifications (Scientific Expertise) (15%)**
5. **Budget/Work Plan (Leveraging & Capacity Building) (10%)**

Additional Information:

- Background information on the Southwest Climate Science Center can be found at <http://www.doi.gov/csc/southwest/index.cfm>

The Southwest Climate Science Center will host two questions and answer sessions pertaining to this solicitation via teleconference:

Wednesday, 30 April, 1:00 PM Mountain Standard Time/Pacific Daylight Time (= 2:00 PM Mountain Daylight Time):

Call in number: 703-648-4848
Access code: **59252 #**

Friday, 2 May, 10:00 AM Mountain Standard Time/Pacific Daylight Time (= 11:00 AM Mountain Daylight Time):

Call in number: 703-648-4848
Access code: **59252 #**

- NOTE RE: PASS-THROUGH INDIRECT COSTS: All proposals submitted by non-USGS entities will be funded through a cooperative agreement with the host institution, which, for the SW CSC, is the University of Arizona (UA). UA applies indirect charges (51.5% of total direct costs) to the first \$25,000 of any funds passed through to another institution. Accordingly, the maximum UA indirect charge amounts to \$12,875. Please include the appropriate indirect charges, for both UA and other institutions, on the budget sheets for your proposal.
- All proposals are expected to have a clear breakdown of annual costs requested of the SW CSC for each participating institution for the duration of the project. Matching funds, in-kind contributions, and other sources beyond the request to the SW CSC should also be summarized.
- Multi-year Funding (relevant to USGS proposers): To address issues related to carry-over of federal funds between fiscal years, and to deal with the fact that this solicitation can only provide funds for the first fiscal year of the project, CSCs will work with successful applicants to plan funding for multi-year projects in the fiscal years needed by the project, within the limitations of knowledge about out-year funding.

Table 1. SW CSC University consortium members and lead contacts:

University	Lead Contact
University of Arizona	Jonathan T. Overpeck
Desert Research Institute	Kelly Redmond
Scripps Institution of Oceanography	Alexander Gershunov
University of California – Davis	Mark W. Schwartz
University of California – Los Angeles	Glen M. MacDonald
University of Colorado	Bradley H. Udall

Table 2. Southwestern Landscape Conservation Cooperatives and Contacts:

LCC	Name	Title	Email
California LCC	Debra Schlafmann	Coordinator	debra_schlafmann@fws.gov
	Rebecca Fris	Science Coordinator	Rebecca_Fris@fws.gov
Desert LCC	Genevieve Johnson	Coordinator	gjohnson@usbr.gov
	Aimee Roberson	Science Coordinator	Aimee_Roberson@fws.gov
Great Basin LCC	Linda Kelly	Coordinator	ljkelly@blm.gov
	Todd Hopkins	Science Coordinator	Todd_Hopkins@fws.gov
North Pacific LCC	John Mankowski	Coordinator	John_Mankowski@fws.gov
	Mary Mahaffy	Science Coordinator	Mary_Mahaffy@fws.gov
Southern Rockies LCC	Kevin Johnson	Coordinator	kevin_m_johnson@fws.gov
	John Rice	Science Coordinator	JRice@usbr.gov

THE NATIONAL CLIMATE CHANGE AND WILDLIFE SCIENCE CENTER

FY 2015 Funding Opportunity

- Eligible Applicants:** Only investigators from regional Climate Science Center (CSC) academic institutions and USGS science centers, Cooperative Research Units, field stations, and laboratories may submit proposals in response to this Funding Opportunity. Other parties may participate on funded projects via subawards from proposals with CSC or USGS principal investigators.
- Funds Flow:** All funds will be transferred from the National Climate Change and Wildlife Science Center (NCCWSC) to either a USGS entity or CSC academic institution. These entities may then provide subawards to other parties.
- Estimated Available Funds:** Approximately \$400,000 may be available to fund projects that support NCCWSC ecological drought priorities in Fiscal Year 2015.
- Project Funding Amount:** Individual project funds will not exceed a total of \$150,000 per year.
- Project Duration:** Not to exceed 24 months.
- NCCWSC Contact:** **Dr. Shawn Carter, Chief Scientist**
National Climate Change and Wildlife Science Center
12201 Sunrise Valley Drive, MS-400
Reston, VA 20192
Office: 703-648-4085
Email: scarter@usgs.gov
- Submission Portal:** [HTTPS://NCCWSC.USGS.GOV/RESEARCHFUNDS](https://NCCWSC.USGS.GOV/RESEARCHFUNDS)
- Or directly:** https://my.usgs.gov/rfpManager/events/nccwsc/Funding_Opportunity_2015

Background:

The mission of the Department of the Interior National Climate Change and Wildlife Science Center (NCCWSC) is to coordinate regional Climate Science Centers (CSCs) and provide scientific information, tools, and techniques that managers and other parties interested in land, water, fish, wildlife, and cultural resources can use to anticipate, monitor, and adapt to climate change. Ecological drought, persistent and abnormal deficiency in biologically available water to terrestrial and aquatic ecosystems, has only recently been recognized as an

important climate stressor for fish and wildlife species. Ecological drought currently lacks a comprehensive definition as well as specific indices to quantify it.

NCCWSC is soliciting proposals for research to examine the impacts of drought on fish and wildlife resources to **inform the definition of ecological drought** and **identify large-scale information gaps** for fish and wildlife managers. Statements of interest and proposals should address science needs to improve the sustainability of fish, wildlife, and other natural and cultural resources in the face of ecological drought. All proposals should specifically address the need to establish and advance a working definition of ecological drought from a natural resource management perspective.

NCCWSC Science Needs:

NCCWSC has identified understanding of *transformational* ecological drought as a priority science need for FY 2015. Transformational ecological drought is a drought event that can lead to an ecological response that takes a population, community, or ecosystem beyond a threshold to a new, potentially persistent state. Understanding threshold dynamics is very important for mitigation and adaptation planning for natural resource management. Decision-support tools can assist in synthesizing this research into a format which can inform management and educate the public on the importance of ecological drought.

NCCWSC seeks research projects which integrate existing data on the impacts of ecological drought and use decision-support methodologies to inform natural resource management on a national scale. Research proposals may take the form of:

1. Development of novel national or regional-scale assessment tools customized to improve upon existing efforts to characterize, model (assess), and manage for ecological drought risk to plants, animals, and/or ecosystems.
2. Synthesis of existing data (field, remote sensing, monitoring, etc.), studies of ecological impacts, legacies, resistance, and recovery that involve comparisons across different sites, spatial scales, and biomes for a single drought, or comparisons of different droughts at the same site.
3. Development of ecosystem models of drought impacts and cascading effects using existing data from drought-vulnerable ecosystems, such as wetlands, rivers, grasslands, and forests.

NCCWSC Evaluation Criteria:

The following information provides the weightings for the evaluation criteria for statement of interests (SOIs) and full proposals (*by invitation only*, following SOI). Please see [Pages 3-5](#) of this document for additional details about each evaluation category.

Evaluation Criteria for Statements of Interest:

The required statement of interest “Project Summary” (more SOI format details in [Appendix A](#)) will be evaluated based on:

- **Applicability to the identified science needs in this section (30%)**
- **Scientific merit and quality of the proposed research (30%)**
- **Coordination and collaboration (20%)**
- **Outreach and engagement (20%)**

Evaluation Criteria for Full Invited Proposals:

1. Scientific merit and quality of the proposed research (30%)

2. Coordination and collaboration (20%): In addition to the criteria details described on Page 4, proposals will be evaluated on leveraging science needs from previous and ongoing NCCWSC projects and utilizing existing regional and/or data sources. Proposals that extend across multiple CSC regions to enhance the scientific objective and scope will be viewed favorably. As will proposals which are collaborative efforts between PIs from USGS and CSC university consortiums. Projects that include inter- and intra-agency collaborations (e.g., Bureau of Reclamation/ U.S. Geological Survey’s [WaterSMART](#), Department of the Interior’s [Landscape Conservation Cooperatives](#), DOI’s [Remote Sensing Working Group](#), [Multi-Resolution Land Characteristics Consortium](#), National Aeronautics and Space Administration’s [Earth Science Division](#), [National Integrated Drought Information System](#), National Oceanic and Atmospheric Administration’s [Regional Integrated Sciences & Assessments Program](#), U.S. Department of Agriculture’s [Regional Climate Hubs](#), USGS [Landsat](#), USGS [National Water-Quality Assessment Program](#)) are strongly encouraged.

3. Outreach and Engagement (20%): In addition to the criteria details described on Page 4, proposals should identify opportunities to communicate with key stakeholders and the public and how study team members will engage these audiences in their research. Proposals are highly encouraged to produce decision-support tools and interactive products that can be used for education purposes. Proposed work should include information on how scientific findings will be presented as outreach products (i.e., decision-support tools, interactive maps).

4. Study Team qualifications (15%)

5. Budget/work plan (15%)

Notes on proposal budget:

Each proposal team invited to submit a full proposal must contact the lead accounting contact for the appropriate CSC university consortium to ensure the proposal budget has the proper overhead and subcontract details.

PASS THROUGH INDIRECT COSTS: All proposals submitted by non-USGS entities will be funded through a grant or cooperative agreement with the host institution. It is the agreement with the host institution to apply indirect charges to any funds passed through to a third institution. Please include the appropriate indirect charges on the budget sheets for your proposal.

Additional Information:

- Background information on the National Climate Change and Wildlife Science Center can be found at <https://nccwsc.usgs.gov/>.
- The National Climate Change and Wildlife Science Center will host a question and answer session pertaining to this solicitation on:
 - **Tuesday, May 6th, 2014, 3pm Eastern time:**
 - At the time of the session, please join the webex: <https://usgs.webex.com/usgs/j.php?ED=280259467&UID=512904527&RT=MIMxMQ%3D%3D>
 - Teleconference: 703-648-4848; passcode: 94688

APPENDIX A FORMAT FOR STATEMENTS OF INTEREST

Statement of Interest Structure:

Section 1. Project Administration Information (1/2 page)

Section 2. Partnerships & Communication (1/2 page)

Section 3. Project Summary (1 page)

Section 4. Estimated Budget

Two pages maximum with a standard font at 10 point or larger with one-inch margins (two page maximum *does not* include Estimated Budget Table). Statements of Interest (SOIs) must be submitted to the Online Proposal Management System [<HTTPS://NCCWSC.USGS.GOV/RESEARCHFUNDS>] in Portable Document Format (**PDF**).

In addition to submitting the PDF document, please also complete any questions that appear within the Online Proposal Management System.

If you are submitting an SOI for a project that extends multiple CSCs, please submit the SOI to each CSC of interest and state directly in the SOI PDF document that you plan to do so.

SECTION 1. PROJECT ADMINISTRATIVE INFORMATION (½ page)

- Project title
- Short description (generally one sentence)
- CSC to which the proposal is responding (or NCCWSC)
- Name of Lead Agency/Institution/Organization requesting funding
- Project Lead Contact or Principal Investigator
- Mailing Address
- City, State, Zip
- Telephone, Fax, and E-mail

SECTION 2. PARTNERSHIPS & COMMUNICATION (½ page)

- Description of any collaborative partnerships involved in this project.
- List of additional investigators & affiliations involved in project.
- Potential links to the strategic science needs of Landscape Conservation Cooperatives (LCCs) and other natural and cultural resource managers.
- Opportunities provided to young researchers and post-doctoral researchers.

SECTION 3. PROJECT SUMMARY (1 page)

Please provide a brief narrative summary of the project based on the needs and evaluation criteria described on [Page 3](#) and within the [CSC/NCCWSC-specific sections](#) of this document for the region to which the proposal applies.

SECTION 4: ESTIMATED BUDGET

Provide an estimated budget, including relevant indirect costs (including pass through costs, if any, at the CSC host institution). Use the following format for an estimated budget table, and include it as the last page in the SOI PDF document (does not count towards the two page maximum limit):

Institution Name	FY 2015	FY 2016 (if applicable)	FY 2017 (if applicable)	FY 2018 (if applicable)	Total
Institution 1					
Institution 2					
Institution 3					
Institution 4					
ADD ADDITIONAL LINES AS NEEDED					
Total					

In addition to including this budget table in the SOI PDF document, please also enter FY budget totals directly into the Online Proposal Management System.

- The Budget Template “years” are FISCAL YEARS (FY, October 1 – September 30) in which USGS will disburse funds.

APPENDIX B
FORMAT for INVITED PROPOSALS

Initial Invited Full Proposals must be submitted through the USGS Online Proposal Management System. If selected, official final proposals

- **from Consortium investigators** will be submitted via Grants.gov after formal request from USGS.
- **from USGS investigators** will be submitted via USGS the Proposal Management System ONLY if there have been significant changes to the budget or work program from the initial full proposal.

Proposals with involvement from multiple institutions should be submitted as a single proposal into the Online Proposal Management System.

PROPOSAL STRUCTURE: Proposers must submit three separate documents (see additional guidance below for each item):

1) **Single PDF document** with:

- A. Proposal cover page and project summary (max. 1 page)
- B. General Public Summary (not to exceed 200 words; submitted on a separate page and in the Online Proposal Management System)
- C. Proposal body (max. 7 pages)
- D. Budget justification (max. 2 pages)
- E. Curriculum vitae (max. 2 pages per investigator)
- F. Literature cited (no page limit)
- G. Letters of support (optional, as needed)

2) **Budget form** using the Excel template available in the Online Proposal Management system

3) **Data management plan** submitted via a web-form in the Online Proposal Management System)

In addition to the PDF document components, some information will be collected within the Online Proposal Management System. Please follow instructions within the system and below.

1) SINGLE PDF DOCUMENT WITH:

A. Proposal Cover Page and Project Summary (max. 1 page)

Project title: Brief but descriptive title of proposed project

Principal investigator (PI): List the name of the Principal Investigator. All communications and notifications will be directed to this individual and to the Fiscal Contact (see below). Other participants should be listed below.

Phone number of PI:

Email of PI:

Name and number of PI's cost center (only if USGS PI):

Project Contacts:

- *Consortium Proposals:* provide **name, title, and email** of a "sponsored research office" (e.g. Sponsored Programs Office) contact -- the individual who can legally bind the University. All contractual and fiscal communications and notifications will be directed to this individual.

- *USGS Proposals*: provide **name, title, and email** of the person in your Center/program who handles changes of allocation.

Names/Affiliations of other cooperators and partners (no contact information required):

Proposed start date and estimated duration of project period (e.g., Start Date: 1 January 2015, 12 months):

Please note that official project start date is determined by the effective date specified in the Grant or Cooperative Agreement Award executed by the USGS Contracting Officer (for University Consortium Proposals) or the date of the Change of Allocation (for USGS Proposals). Researchers should not start work on a project until the Award document (for University Consortium proposals, through FedConnect) or Change of Allocation (USGS) has been received by the recipient institution.

- *Consortium Proposals*: For planning purposes, assume that funds will be made available to the Host Institution in approximately January-February 2015 and to sub-awardees after that.
- *USGS Proposals*: For planning purposes, assume that Changes of Allocation will be made in January 2015.

Total project funding requested from the CSC or NCCWSC:

Funding from other sources to be applied to this project: List additional funding sources.

Keywords: (list three *general* keywords that best characterize the proposed project; it is unnecessary to include climate or climate change as a keyword).

Project Summary: The project summary should provide a synopsis of the overall proposal. Key sections from the full proposal that *must* be summarized are: (1) Objectives/Justification, (2) Background, (3) Procedures/Methods, (4) Expected Products and Information/Technology Transfer, and (5) Personnel/Cooperators/Partners. The project summary should be included in the proposal PDF and should also be submitted separately in the Online Proposal Management System. **NOTE: this summary does not replace the required “general public summary”, as noted on [Page 7](#) and below.**

B. General Public Summary (max. 200 words)

Provide a synopsis of the overall project that is written for a general public audience, does not exceed 200 words, and is suitable for sharing on public websites and other outreach methods. Key points to include:

- Why is the project important?
- Why should the public care?
- How will the results of the project improve aspects of climate change management, well-being, economic or other issues that resonate with stakeholders?

The General Public Summary should be submitted on a separate page within the proposal PDF document and should also be submitted separately in the Online Proposal Management System.

C. Proposal Body (max. 7 pages)

Note: The proposal body must be limited to seven pages, single-spaced with one-inch margins and 12-point font, and formatted for standard 8.5x11-inch paper.

Objectives/Justification: Explain the objective of the proposed project (or need for continuation of existing project). Describe the significance and priority of the issue to be addressed and explain how the project relates to that issue. Identify instances in which the issue or question has been cited as a national or regional conservation priority.

Background: Describe the scientific or technical issues that underlie the proposed activity, including available relevant findings, related ongoing activities, problems to be addressed, and scientific value of anticipated results. The results of related projects supported by USGS or LCCs should be described, including their relation to the currently proposed work.

Procedures/Methods: Describe the procedures and methods to be followed in sufficient detail to permit evaluation by peer reviewers of likely success. If applicable, the following topics should be addressed: hypotheses to be tested; modeling approach to be used; model validation procedures; acceptance and rejection criteria; statistical analysis approaches; other methods used in research efforts, sampling, or surveying. If standard methods are used, a reference for the methods is sufficient.

Geographic Scope: Please describe the scope of the project. Unless otherwise noted, proposals should address information needs of the CSC region or NCCWSC-identified region they are applying to.

Expected Results And Products: Describe expected products to be generated from the project (e.g., models, data sets, associated products and metadata, written reports, scientific publications, maps, software, etc.). Specifically identify products to be developed within a period of one to three years and key milestones for producing those products.

Technology/Information Transfer: Identify intended users of project results or products and describe how results or products will be made available for application by clients and customers (e.g., DOI resource- and land-management agencies, other federal agencies, tribes, state and local governments, universities, and non-government organizations). Describe plans for digital integration and dissemination of data and products resulting from the project.

Documentation of Management Application / Relevance: Describe what will be done at the start of the project to ensure project deliverables will respond to management information needs in the CSC or NCCWSC-identified region, including how LCCs will be involved in planning and implementing the project. Describe how project approach will ensure that expected products meet the needs of resource managers, including LCCs. Describe the interactions between investigators and the intended users of the scientific output of the project.

Cooperators/Partners: Indicate all cooperators or partners making significant contributions to the success of the proposed project. Provide brief summaries of the respective roles and types of contributions (e.g., financial, in-kind, technical) to the achievement of the project objectives. Include names, addresses, affiliations, phone, and email addresses. Indicate arrangements and mechanisms for establishment and execution of partnerships. Describe any arrangements to include natural and cultural resource managers in the study design team. Summarize how this project will rely upon, build upon, or otherwise leverage either (1) existing USGS funding or projects or (2) the funding and resources of partners and collaborators.

Facilities/Equipment/Study Area(s): Describe facilities, major equipment, computing infrastructure and field-study areas utilized in the project.

Work and Reporting Schedule: Provide a timetable for achievement of milestones, other accomplishments, and completion of the project.

Qualifications of Project Personnel: Summarize briefly the qualifications of each principal investigator, co-investigator, and any other personnel with primary responsibilities and making significant contributions to the success of the proposed project. Refer to CVs as appropriate.

Legal and Policy-Sensitive Aspects: Address any issues related to legal or policy mandates. Include any necessity for state or federal permits (e.g., the need for permits to collect or hold wild animals, to access federal or private lands, or any restrictions on the dissemination of data or products). If field work will be completed on federal lands, identify and indicate whether arrangements have already been made for access to the land.

Animal Use or Human Subjects: Any research on animals must go through the investigators' Institutional Animal Care and Use Committee (IACUC) and get formal approval by their Institutional Review Board or similar entity. Any research working with human subjects must go through the investigators' institutional Human Subjects Review process and get formal approval by their Institutional Review Board or similar entity.

Tables and Figures: Tables and figures may be included in the proposal body, as necessary, but they must be within the seven-page limit.

D. Budget Justification (max. 2 pages)

A budget justification must be included to explain project costs in the budget categories. Detail should be sufficient to allow evaluation by reviewers of the costs proposed. The categories below align with categories required in the Excel Budget Form (see section 2, below). Explain requests in each category:

1. Salaries and Wages: Identify individuals (e.g. the PI) or categories (e.g. graduate student) and for each include salaries and wages, estimated hours or percent of time, and the rate of compensation proposed. Include an explanation of the amounts included for projected increases if the rate of pay shown is higher than the current rate of pay. Identify each person with a task in the project.

2. Fringe Benefits/Labor Overhead: Indicate the rates/amounts in conformance with normal accounting procedures. Explain what costs are covered in this category and the basis of the rate computations. Indicate whether rates are used for proposal purposes only or whether they are also fixed or provisional rates for billing purposes.

3. Tuition for Graduate and Undergraduate Students: Tuition remission and other forms of compensation paid as, or in lieu of, wages to students performing necessary work are allowable; provided that the tuition or other payments are reasonable compensation for the work performed and are conditioned explicitly upon the performance of the work.

4. Supplies: Enter the cost for all tangible property. Include the cost of office, laboratory, computing, and field supplies separately. Provide detail on any specific item, which represents a significant portion of the proposed amount. If fabrication of equipment is proposed, list parts and materials required for each and show costs separately from the other items.

5. Equipment: Show the cost of all special purpose equipment necessary for achieving the objectives of the project. "Special purpose equipment" means scientific equipment having a useful life of more than 1 year and having an acquisition cost of \$5,000 or more per item. Each item should be itemized and include a full justification and a dealer or manufacturer quote, if available. General purpose equipment must be purchased

from the applicant's operating funds. Title to non-expendable personal property shall be vested solely with the Recipient. Under no circumstances shall property title be vested in a sub-tier recipient.

6. Services or Consultants: Identify the tasks or problems for which such services would be used. List the contemplated sub-recipients by name (including consultants), the estimated amount of time required, and the quoted rate per day or hour. If known, state whether the consultant's rate is the same as she/he has received for similar services or under Government contracts or assistance awards.

7. Travel: State the purpose of the trip and itemize the estimated travel costs to show the number of trips required, the destinations, the number of people traveling, the per diem rates, the cost of transportation, and any miscellaneous expenses for each trip. For travel requested to meetings or conferences, include a description of the benefit to the proposed project. Failure to provide this information may result in a determination of the cost as unallowable. Calculations of other special transportation costs (such as charges for use of applicant owned vehicles or vehicle rental costs) should also be shown.

8. Other direct costs: Itemize the different types of costs not included elsewhere; such as, publication, shipping, computing, equipment use charges, or other services. Provide breakdowns showing how the cost was estimated; for example, computer time should show the type of computer, estimated time of use, and the established rates.

9. Indirect Costs/General and Administrative (G&A) Costs: Show the proposed rate, cost base, and proposed amount for allowable indirect costs based on the cost principles applicable to the Applicant's organization. G&A should not be calculated for any tuition remission. If the Applicant has separate rates for recovery of labor overhead and G&A costs, each charge should be shown. Explain the distinction between items included in the two cost pools. The Applicant should propose rates for evaluation purposes, which they are also willing to establish as fixed or ceiling rates in any resulting award. NOTE: A copy of the indirect negotiated cost agreement with the Federal Government will be requested from all applicants recommended for an award. This request will be made at the time of recommendation notification. In the absence of a negotiated cost agreement or CPA certification, the applicant will be required to provide financial documentation to support the calculation of the proposed rates. If no documentation to support the calculation of indirect cost rates is provided, no award will be made.

10. Partner Contributions: Provide summary of any financial contributions from partners or match from your institution. Any contributions from partners should be documented in a letter of support.

E. Curriculum Vitae (max. 2 pages per investigator)

F. Literature Cited (no page limit)

Include full citations at the end of the proposal body.

G. Letters Of Support (optional as needed, max. 1 page each)

2) BUDGET FORM:

Proposers are required to use the Budget Form Template (Excel) provided in the Online Proposal Management System. Additional information about costs should be provided in the Budget Justification within the proposal PDF (see [Section D. Budget Justification](#) above).

Below is a listing of the categories of budget information that will be required in the template. This information will be broken out by institution and by fiscal year. Insert additional lines or columns as needed. **Please include separate “institution” columns for:**

- The CSC Host institution (if the project has a university component)
- Any CSC Consortium institutions
- Any USGS unit receiving funding. Thus, a project involving two consortium universities and a USGS lab would have THREE “institution” columns.
- Any other participant (e.g. a non-consortium university) whose activities are “major” in terms of the project budget or responsibility for completion. (As noted below, smaller partners and minor contracts, e.g. sample analysis, should be included under Contractual or Consultant Services)

Budget Information:

- A. Salaries and Wages**
- B. Fringe Benefits**
- C. Tuition**
- D. Supplies**
- E. Equipment**
- F. Services or Consultants**
- G. Travel**
- H. Other Direct Costs (i.e. Publication costs, IT services, Facilities, Lab Fees)**
- I. Total Direct Charges (*automatically calculated in template*)**
- J. Indirect Charges Collected by Recipient Institution (overhead/burden)**
- K. Indirect Charges Collected by HOST institution (Project Total Costs)**
- L. Total Indirect Charges (*automatically calculated in template*)**
- M. GRAND TOTAL REQUESTED FUNDS (Total Direct + Host Indirect + Recipient Indirect Costs) (*automatically calculated in template*)**

NOTE RE: NON-FEDERAL FUNDING CONTRIBUTIONS: For the categories described above, please total all additional NON-FEDERAL funding sources in COLUMN B of the Budget Form Template (Excel). This column will not be added to the “GRAND TOTAL REQUESTED FUNDS” for the project, but is necessary information for USGS.

NOTE RE: INDIRECT COSTS COLLECTED BY HOST INSTITUTION – FOR CONSORTIUM PROPOSALS ONLY: All proposals by the CSC Consortium must be submitted through a CSC Host University. Applicants at other consortium institutions may be required to include an amount to cover indirect costs at the Host University for this pass through process. Please include the appropriate indirect charges on the budget sheet for your proposal. Please review carefully the [specific CSC/NCCWSC section](#) describing required indirect charges that must be included in such proposals. Proposers are strongly encouraged (and in some cases required by the CSC or Host institution) to consult with the CSC University Director concerning indirect cost policies for funds passed through the host institution.

- The Budget Template “years” are FISCAL YEARS (FY, October 1 – September 30) in which USGS will disburse funds.

3) DATA MANAGEMENT PLAN:

Please see (<https://nccwsc.usgs.gov/content/data-policies-and-guidance>) for guidance and instructions on how to develop the required Data Management Plan (DMP). The Data Management Plan will be submitted via a web-form in the Online Proposal Management System. *(PDF documents will not be accepted for the DMP. Please insert information directly into the web-form.)*

If the proposal is selected for funding, the Data Management Plan *must* be updated within one month of project initiation and reviewed periodically until project completion. A CSC Data Steward will work with research teams to answer any questions and assist in the development and review of the Data Management Plan for funded projects. If there are any questions, please contact Emily Fort (efort@usgs.gov), the Data and Information Coordinator for the National Climate Change and Wildlife Science Center.

APPENDIX C
ANNUAL REPORT INSTRUCTIONS FOR CSC/NCCWSC-FUNDED PROJECTS

Annual reports are due sixty (60) days prior to the end of the budget period. Failure to provide the required information may delay payments to your project and may jeopardize your ability to participate in future CSC/NCCWSC funding opportunities. Please submit completed reports electronically to the CSC Director or NCCWSC Senior Scientist from which funds were received. Additional questions, comments, and supplemental information may also be sent to the Director.

The CSCs and NCCWSC acknowledge that the first annual report for a project may be short with only start-up activities. PIs should still complete the report to their best ability.

Additional / more frequent reporting (e.g. quarterly) may be required by individual CSCs or the NCCWSC.

This document contains instructions for completing an **annual report** for projects funded by a Climate Science Center (CSC) or the National Climate Change and Wildlife Science Center (NCCWSC). Annual reports of your project activities provide a record of your study and preliminary results. Annual reports serve several important functions to the NCCWSC/CSC and are used as:

- An essential component of the NCCWSC/CSC due diligence activities;
- A means for PIs to communicate significant preliminary research findings or reasons for project delays;
- A metric for gauging the impact of NCCWSC/CSC funding programs;
- A method for PIs to provide advanced notice to CSC Directors or the NCCWSC Senior Scientist about upcoming publications in order to ensure effective communication efforts (e.g. press releases, website announcements etc.);

Annual reports do not need to be lengthy, but we ask that you include the following information:

1. ADMINISTRATIVE: Please include name and contact information of the award recipient, agency or institution, project title, agreement number, date of report, and period of time covered by the report.

2. PURPOSE AND OBJECTIVES: Describe the project goals and objectives, with particular emphasis on changes made to the objectives as stated in the original proposal. If the objectives have been added to, eliminated, or modified, please explain why these changes have been made.

3. ORGANIZATION AND APPROACH: Explain how each research task is being conducted. Briefly list which research methods are being used to achieve results, including new methods that were not described in the original proposal. Please also discuss any problems or delays encountered in conducting the research during the reporting period.

4. RESULTS: Present your preliminary project results if possible. Both quantitative (numerical and/or statistical data) and qualitative results (descriptions of how well or poorly something worked) are useful. Of particular interest are major discoveries, innovative approaches and solutions, and accomplishments made by the project team to date.

5. NEXT STEPS: State and describe the next steps in the research, including an updated project timeline and anticipated completion date.

6. OUTREACH: Describe all project-related outreach opportunities to date. Include a list of:

- Articles that are in preparation, under review, accepted, or published in peer reviewed journals and other non-peer reviewed journals.
- Project-related conference presentations, seminars, webinars, workshops, or other presentations to the public made by research team members.
- Communications with decision-makers, including their name and agency and the date(s) and frequency of your communications. Information on whether the decision-makers were involved in the design of the project plan or if the research has been tailored to address a specifically-stated management need is also helpful.
- Websites created for the project and/or containing project information, data etc.
- Other products, such as data or databases, audio/video productions, fact sheets etc.

7. BUDGET: Briefly provide a summary of expenditures incurred during the year, and any unspent balance of funds and why funds have not been spent as expected.

APPENDIX D
FINAL REPORT INSTRUCTIONS FOR CSC/NCCWSC-FUNDED PROJECTS

Final reports are due ninety (90) days after the close of the performance period for the project. Failure to provide the required information may delay payments to your project and may jeopardize your ability to participate in future NCCWSC/CSC funding opportunities. Please submit completed reports electronically to the NCCWSC Senior Scientist or Director of the CSC from which funds were received. Additional questions, comments, and supplemental information may also be sent to the CSC Director or NCCWSC Senior Scientist.

Additional / more frequent reporting may be required by individual CSCs.

This document contains information and instructions necessary to complete the **final report** for projects funded by a Climate Science Center (CSC) or the National Climate Change and Wildlife Science Center. The final report of your NCCWSC/CSC-funded research project provides a record of your study and its results. Your report will serve as a resource for others: copies of project reports are available to the public upon request. The final report serves several important functions to the CSC and is used as:

- An essential component of NCCWSC/CSC due diligence activities;
- A metric for gauging the impact of NCCWSC/CSC funding programs;
- An opportunity for Principal Investigators (PIs) to suggest areas for improvement in the NCCWSC/CSC funding program;
- A tool for the NCCWSC/CSCs to gather information about publications, products, presentations and data to advance communications to resource managers, stakeholders and the general public;

The final report shall include the following sections:

SECTION 1. ADMINISTRATIVE INFORMATION: Please include:

- Name and contact information of the award recipient
- Agency or Institution of the recipient
- Project title
- Agreement number
- Date of the report
- Period of time covered by the report
- Actual total cost of the project

SECTION 2. PUBLIC SUMMARY: The public summary should be concise and informative, and should be self-contained and intelligible to a layperson. In *less than 300 words* please describe your major scientific achievements to a non-scientific community (i.e., in non-scientific language) including major benefits of your research to society at large. Highlight the findings and significance of your research to expanding general knowledge in your scientific discipline, and the application of the results of your research to address significant societal problems. The CSC may use the public summary in publicly-distributed documents and other materials.

SECTION 3. PROJECT SUMMARY: The project summary should provide a synopsis of the overall project. This section should summarize information from the following sections of the report body: Purpose and Objectives, Organization and Approach, Project Results, Analysis and Findings, and Conclusions and Recommendations. The project summary should be more technical than the “Public Summary” (described above).

SECTION 4. REPORT BODY (Please Include the Following Sections):

Purpose and Objectives: This section should include information about the issue(s) the project addressed, and the community it serves. Please describe the original objectives and goals identified during project initiation and explain how these goals were or were not met, highlighting specific achievements. This section should also describe if original objectives were eliminated, added to, or modified from the original proposal, and why these changes were made. This information is valuable for others who are studying the same topic and essential for our evaluation of the project.

Organization and Approach: This section of the report should explain in task orientated terms how the research activities of the project were conducted. Briefly list which research methods were used to achieve results and why they were chosen by the team.

Project Results, Analysis and Findings: Present your project results. Quantitative results (numerical and/or statistical data) and qualitative results (descriptions of how well or poorly something worked) are both important. Tables, graphs and other figures representing your data are excellent ways to summarize data and present them in an accessible way. Describe your research findings and list major discoveries, innovative approaches and solutions, and research accomplishments of the project team made possible by receiving CSC/NCCWSC funding.

Conclusions and Recommendations: Did you encounter any problems during the project? What project tasks were not completed and why? What would you do differently if you did this project again? Also state and describe the recommended next steps. Based on what you've learned, what do you think should be studied next? Please indicate how your research results contributed to the advancement of scientific knowledge regionally and/or nationally. Please describe how the results from this project are relevant to natural and/or cultural resource managers (including Landscape Conservation Cooperatives, if applicable).

Outreach and Products: List the type of outreach that you did, or expect to do, including any publications or other presentations of your project to the public. Include a description of if/how the results from this project are accessible to the resource management community. Include a list of products that emerged from this research. The list should include:

- Articles in preparation, under review, accepted, or published in peer reviewed journals and other non-peer reviewed journals
- Project-related conference presentations, seminars, webinars, workshops, or other presentations to the public made by research team members.
- Communications with decision-makers, including their name and agency and the date(s) and frequency of your communications. Information on whether the decision-makers were involved in the design of the project plan or if the research has been tailored to address a specifically-stated management need is also helpful.
- Websites created for the project and/or containing project information, data etc.
- Other products, such as data or databases, audio/video productions, fact sheets etc.

NOTE: The PI is expected to produce a written final report within ninety (90) days of the end of the performance period even if the project is still in a "wrapping up" phase (and even if all manuscripts have not yet been completed or published). These reports are necessary to advance the CSC mission of providing tools and information to resource managers in a timely and efficient manner.

CSC/NCCWSC-funded projects will not be considered complete until all data/products have been delivered to the CSC/NCCWSC and the Data Management Plan has been updated. All projects with a USGS-affiliated researcher must comply with the [USGS Fundamental Science Practices](#) policy.

APPENDIX E INSTRUCTIONS FOR MANUSCRIPTS INTENDED FOR PUBLICATION

Advanced Notice to CSC of Publications:

Funded researchers must provide *advanced* notification to CSC Directors or the NCCWSC Senior Scientist of all anticipated manuscripts, videos, web tools, educational tools, etc. (any type of deliverable that will be made public) intended for publication/distribution that have been produced through the NCCWSC or CSC-funded project (or where staff received funding through a NCCWSC or CSC graduate fellowship). This early notice allows the NCCWSC and CSCs to accurately account for NCCWSC or CSC-derived products and assist as needed in any press announcements. Investigators should notify the NCCWSC or CSC at the time a manuscript has been accepted for publication, and if possible when it has moved to “in press” status.

USGS investigators should provide notice to the CSC Director or NCCWSC Senior Scientist at the time of Bureau approval under the USGS Fundamental Science Practice (FSP) system (Information Products Data System, IPDS).

Funding Acknowledgement in Publications:

When acknowledging funding support from a Climate Science Center (CSC), please use the full official name of the CSC: The Department of the Interior [insert CSC region] Climate Science Center (e.g. for the NE CSC, please use The Department of the Interior Northeast Climate Science Center).

Non-federal PIs are contractually required to include the following statements (usually in the acknowledgements section) in all manuscripts intended for publications: “The project described in this publication was supported by Grant or Cooperative Agreement No. [add number, and include appropriate designation of award] from the United States Geological Survey. Its contents are solely the responsibility of the authors and do not necessarily represent the views of the [insert CSC region Climate Science Center or the National Climate Change and Wildlife Science Center] or the USGS. This manuscript is submitted for publication with the understanding that the United States Government is authorized to reproduce and distribute reprints for Governmental purposes.”

Federal PIs should use the following statement of acknowledgement: "This research was funded by the Department of the Interior [insert CSC region] Climate Science Center" OR "This research was funded by the U.S. Geological Survey National Climate Change and Wildlife Science Center".

Acknowledgement of graduate fellowships may be referenced as follows: “Funding for this work was provided by a [insert CSC region] Climate Science Center graduate fellowship awarded to [Name].”