National Park Service
U.S. Department of the Interior

NOTICE OF INTENT TO AWARD

This Funding Announcement is not a request for applications. This announcement is to provide public notice of the National Park Service's intention to fund the following project activities without full and open competition.

ABSTRACT	
Funding Announcement	P14AS00178
Project Title	SENSORY ECOLOGY AND THE EFFECTS OF NOISE AND LIGHT POLLUTION ON WILDLIFE
Recipient	Colorado State University
Principle Investigator / Program Manager	Dr. George Wittemyer
Total Anticipated Award Amount	502,251.80
Cost Share	None
New Award or Continuation?	Continuation
Anticipated Length of Agreement	From date of award until 08/30/2016
Anticipated Period of Performance	From date of award until 08/30/2016
Award Instrument	Cooperative Agreement
Statutory Authority	16 USC 1(g) 16 USC 1a-2(j) 16 USC 5933
CFDA # and Title	15.945 Cooperative Research & Training Program – Resources of NPS CESU's
Single Source Justification Criteria Cited	(2) Continuation
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OVERVIEW

Sensory ecology and the effects of noise and light pollution on wildlife

Noise is pervasive pollutant in protected natural areas. Data collected by CSU Research Associates in 22 National Park units (Lynch et al. 2011) show that noise is audible about one quarter of the time (hourly median value across all hours and sites), and some wilderness sites can have hourly noise audibility levels exceeding 50%. Chronic noise exposure can have many potential effects on wildlife behavior and ecology, and numerous scientific papers provide evidence of changes in wildlife behavior, fitness, distribution, and community structure (Patricelli and Blickley 2006; Slabbekoorn and Ripmeester 2008; Fahrig and Rytwinski 2009; Barber et al. 2010; Benítez-López et al. 2010, Brown et al. 2012). Noise has also been shown to affect plant communities, through its effects on wildlife (Francis et al. 2009). Although the broad outlines of noise impacts to wildlife are clear, more detailed understanding is needed to identify priorities for noise management in protected natural areas, and to devise efficient and effective mitigation. Although less is known about the effects of light on ecosystems, Longcore and Rich (2004) document numerous examples of the effects of ecological light pollution.

The primary goal of this task agreement is to stimulate observational and experimental research to address fundamental issues regarding the effects of noise (and potentially light) on wildlife behavior and ecology. Although many details of the research program will depend upon the particular talents of the personnel who are recruited, several broad areas of inquiry can be anticipated. This is not an exhaustive list.

- Document the effects of noise exposure on time and energy budgets for free-ranging animals.
- Explore laboratory systems in which behavioral effects of noise and light can be studied.
- Document the time courses of response and recovery in relation to noise (and light) exposure.
- Utilize noise broadcast systems to study the effects of noise in the absence of other anthropogenic stimuli (equipment design and development may be necessary).
- Evaluate the spatial coverage and information content of acoustical recordings for monitoring the activities of noise sources and wildlife. Wildlife studies may include other data collection systems for comparison with the acoustical data (e. g. camera trapping, video monitoring, point count or line transect sampling).
- Investigate devices for making recordings on free-ranging animals and recovering the data. Develop methods for processing and interpreting these data.
- Investigate options for modeling noise exposure on regional and continental scales, to evaluate current and future conditions around parks and to explore relationships between existing wildlife survey data and noise exposure levels.
- Explore alternative data collection and processing techniques for environmental acoustics and lightscapes.
- Conduct noise source monitoring exercises and develop methods to predict the benefits from reducing the output of noise sources. Plan controlled observational studies to measure the benefits of making habitats quieter or darker.
- Acoustical monitoring of two sites in Saint Croix National Scenic Riverway to document changes in conditions due to the operation of the Zavoral Gravel Mine just outside the park boundary (funding from an NPS Midwest Region Block Grant).

The research activity is intended to address several public interests: expanding the scientific basis for evaluating the effects of noise exposure on wildlife, promoting collaborative conservation working groups consisting of academic professionals and natural resource managers, furthering the education and career development of undergraduate and graduate students, postdoctoral researchers, and other research associates while expanding their command of acoustical monitoring and understanding of auditory perception, providing opportunities for project participants to produce peer-reviewed papers and outputs for scientific conferences reporting these research results, stimulating interdisciplinary research and education at CSU by promoting interactions between the Warner College and the College of Engineering. This promotion of interdisciplinary activity may extend to hosting scientific workshops or conferences, though none is planned at this time.

The NPS Subject Matter Expert (SME), will partner with the CSU research team in all aspects of this cooperative agreement: identification of overall research priorities, development of specific research and monitoring projects, identification or development of appropriate instrumentation, selection of study organisms and field sites, design and execution of data analyses, preparation of reports and publications. The SME and the staff of the Natural Sounds and Night Skies Division (NSNSD) will regularly participate in meetings with the CSU research team; some CSU personnel may have desk space in the NSNSD office suite. The SME will also help coordinate the activities and findings of this project in relation to several other NPS funded research projects. NPS will provide specialized equipment for many project tasks. The NPS ATR will ensure that the CSU performance conforms to the terms of this task agreement, and approve any significant changes to the scope or the budget.

RECIPIENT INVOLVEMENT

1. Collaboratively undertake the project titled: “Sensory ecology and the effects of noise and light pollution on wildlife,”
2. Appoint the Principal Investigator (PI),
3. Enable post-doctorate researchers. to participate in the cooperative research project,
4. Enable PI to oversee this project and coordinate activity by the faculty research team to execute the following tasks:
    i. Work with the NPS SME to identify research tasks and develop a schedule for their execution,
    ii. Work with the NPS SME to recruit postdoctoral associates, research associates, temporary hourly, and student hourly personnel to fill vacancies,
    iii. Serve as the supervisor for CSU research associates on this project, working with the NPS technical expert to coordinate their efforts,
    iv. Oversee education of and research by CSU students,
    v. Organize regular meetings with the NPS SME and CSU project participants to discuss ongoing research and development efforts, evaluate progress, and develop plans for the next phase of work,
    vi. Prepare and submit Investigator’s Annual Report to the NPS ATR and Awarding Officer,
    vii. Optionally present results at scientific conferences,

viii. Oversee translation of research results into peer-reviewed papers,

5. Provide permanent office space for postdoctoral researchers,
6. Provide permanent office space and hire research associates who can oversee an undergraduate research lab,
7. Fully acknowledge the NPS in any published or formally presented material developed or derived from this Task Agreement. NPS will not necessarily participate in authoring scientific papers; this decision will emerge from the collaborative effort by a consensus conclusion that NPS personnel have made substantive intellectual contributions to the results,
8. Submit a project final report, and collaborate with the NPS, in a thirty-day wrap-up period to close out the agreement.

NATIONAL PARK SERVICE INVOLVEMENT

Substantial involvement on the part the National Park Service is anticipated for the successful completion of the objectives to be funded by this award. In particular, the National Park Service will be responsible for the following:

1. Provide financial assistance to Colorado State University as provided in Article VI. The budget, which is also included as part of Attachment A, is incorporated in this Task Agreement.
2. Assign the NPS ATR.
3. Assign the NPS SME.
4. NPS will enable the SME to perform the following tasks:
   i. Work with the PI to identify research tasks and develop a schedule for their execution.
   ii. Offer routine opportunities for discussion and technical consultation with the CSU postdoctoral and research associates.
   iii. Provide acoustical data and NPS equipment as appropriate for research.
   iv. Participate in regular meetings to discuss project results and plans.
   v. Participate in data analyses as appropriate.
   vi. Participate in drafting scientific manuscripts, as appropriate. Provide scientific reviews of draft scientific papers that are produced.
5. Fully acknowledge the PI and Colorado State University in any publication or formal presentation that refers to material developed or derived from this Task Agreement.
6. Collaborate with Colorado State University, as appropriate, in a thirty-day wrap-up period following submission of the final report.
7. Inform the PI of the specific activities required to comply with the NPS "Interim Guidance Document Governing Code of Conduct, Peer Review, and Information Quality Correction for National Park Service Cultural and Natural Resource Disciplines," and with any and all subsequent guidance issued by the NPS Director to replace this interim document.

SINGLE-SOURCE JUSTIFICATION

DEPARTMENT OF THE INTERIOR
SINGLE SOURCE POLICY REQUIREMENTS

Department of the Interior Policy (505 DM 2) requires a written justification which explains why competition is not practicable for each single-source award. The justification must address one or more of the following criteria as well as discussion of the program legislative history, unique capabilities of the proposed recipient, and cost-sharing contribution offered by the proposed recipient, as applicable.

In order for an assistance award to be made without competition, the award must satisfy one or more of the following criteria:

(1) Unsolicited Proposal – The proposed award is the result of an unsolicited assistance application which represents a unique or innovative idea, method, or approach which is not the subject of a current or planned contract or assistance award, but which is deemed advantageous to the program objectives;

(2) Continuation – The activity to be funded is necessary to the satisfactory completion of, or is a continuation of an activity presently being funded, and for which competition would have a significant adverse effect on the continuity or completion of the activity;

(3) Legislative intent – The language in the applicable authorizing legislation or legislative history clearly indicates Congress' intent to restrict the award to a particular recipient of purpose;

(4) Unique Qualifications – The applicant is uniquely qualified to perform the activity based upon a variety of demonstrable factors such as location, property ownership, voluntary support capacity, cost-sharing ability if applicable, technical expertise, or other such unique qualifications;

(5) Emergencies – Program/award where there is insufficient time available (due to a compelling and unusual urgency, or substantial danger to health or safety) for adequate competitive procedures to be followed.

The National Park Service did not solicit full and open competition for this award based the following criteria:

(2) CONTINUATION

SINGLE SOURCE JUSTIFICATION DESCRIPTION:

THIS IS A NOTICE OF INTENT TO AWARD

This is a Task Agreement (P14AC01198) under Cooperative Agreement (P14AC00728) in the amount of $502,251.80 with a period of performance from date of award until 8/30/2016.

"This proposed project between Colorado State University and the NPS is authorized to go through the Rocky Mountains CESU at the negotiated overhead rate of 17.5% because it passes the test of substantial involvement by the NPS, public purpose and consistency with the mission of the CESU Network".
Also, on the SF 424 forms that the partner sponsored programs office fills out for each project, requires a CFDA number - 15.945, which is the number associated with the CFDA Title: COOPERATIVE RESEARCH AND TRAINING PROGRAMS - RESOURCES OF THE NATIONAL PARK SERVICE (CESU).

STATUTORY AUTHORITY

A. 16 U.S.C. §1g authorizes the NPS to enter into cooperative agreements that involve the transfer of NPS appropriated funds to state, local and tribal governments, other public entities, educational institutions, and private nonprofit organizations for the public purpose of carrying out National Park Service programs.

B. 16 U.S.C. §1a-2(j) Cooperative research and training programs authorizes the NPS to enter into cooperative agreements with public or private educational institutions, states, and their political subdivisions, for the purpose of developing adequate, coordinated, cooperative research and training programs concerning the resources of the national park system. Pursuant to such agreements, the cooperator may accept from or make available to the NPS technical and support staff, financial assistance for mutually agreed upon research projects, supplies and equipment, facilities, and administrative services relating to cooperative research units as the Secretary deems appropriate (research projects subject to Federal Acquisition Regulation excluded).
Modified 5/31/05 – Agreement Handbook Memorandum Number 2

C. 16 U.S.C. §5933 Cooperative agreements. The Secretary is authorized and directed to enter into cooperative agreements with colleges and universities, including but not limited to land grant schools, in partnership with other Federal and State agencies, to establish cooperative study units to conduct multi-disciplinary research and develop integrated information products on the resources of the National Park System, or the larger region of which parks are a part.