U.S. Fish and Wildlife Service
Western Colorado Ecological Services Office
CFDA 15.660
Notice of Funding Availability and Application Instructions

I. Single Source Information

This is a Notice of Intent to award a Single Source Cooperative Agreement to Florida Gulf Coast University (FGCU) for the purpose of conducting boreal toad genetic analysis. FGCU is a member of the South Florida-Caribbean Cooperative Ecosystem Studies Unit (CESU) Agreement with the Fish and Wildlife Service and other agencies.

The tasks to be performed under this agreement are as follows:

1. Obtain nuclear gene sequence data from 25-40 samples representing all known species and divergent mtDNA lineages within the entire geographic distribution of the boreal toad species group. This limited analysis will be used primarily to identify divergence among known lineages and to identify the root (oldest) lineages in the group. Identifying a root is critical to reconstructing phylogenetic relationships. This limited preliminary data will also identify which genes are most phylogenetically informative within the Eastern Population, as well as between the Eastern Population and the other groups (Northwest and Southwest).
2. Obtain sequence data from the most informative nuclear genes from about 100 samples (already entirely or largely in-hand) representing the full known distribution of the Eastern Population and toads immediately surrounding the Eastern population in Wyoming, Idaho, Utah and Nevada. Samples will include both those at the internal edges and presumed outer edges of the zones of overlap between the three most divergent groups (Eastern, Northwest, and Southwest). These data will be used to estimate the geographic distribution of the Eastern Population with both mtDNA and multiple nuclear genes.
3. A third round of data collection and analyses from an estimated 100 samples will be conducted to refine the geographic boundaries of the major groups as needed, to confirm the divergence of specific groups of interest (e.g. SRM population, southern Utah), and to confirm divergence of any additional groups that may be discovered with the previous analyses in Objectives 1 and 2. The samples will be collected in the summer of 2015. Number and location of samples needed will be determined by the analyses completed in Objectives 1 and 2, which will be completed by spring 2015.

This Single Source Award is being awarded in accordance with Department of the Interior Policy 505 DM 2.14 B (4) Unique Qualifications, which allows for award without competition to an applicant. This recipient and project meet this criteria due to Dr. Anna Goebel, Associate Professor at FGCU, having experience with boreal toad genetics since 1992, conducting research and providing multiple reports to Colorado Parks and Wildlife, conducting research and publishing an article on mitochondrial DNA analysis of the boreal toad, collecting preliminary nuclear DNA on the toad, developing primers that allow for toad genetic analysis, having genetic data that can be compared with new

data analyzed in the proposed study, and having a large number of genetic samples already in hand. Furthermore, Wyoming Game and Fish has already set aside money and sent samples to Dr. Goebel to complement the analysis and it is highly likely that USGS will provide funding to Dr. Goebel to complement the analysis.

Award Information

Applications for renewal or supplementation of the proposed existing project are eligible to compete with applications for new awards. The funding will be awarded through a cooperative agreement. The Service will have substantial involvement through coordination of genetic sample collection with State and Federal personnel, collecting samples, review and editing of the genetic analysis report, and relaying interim and final results with interested parties.

Estimated Total Program Funding: $70,000
Expected Number of Awards: 1
Award Ceiling: $70,000
Award Floor: $70,000

II. Basic Eligibility Requirements

Cost Sharing or Matching:

There is no cost sharing requirement, nor pre-award documentation for cost-sharing requirements.

III. Agency Contact

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