Ph.D. Assistantship in Coastal Ecological Modeling and Geospatial Application Development

(Strategic Conservation Assessment of Gulf Coast Landscapes Project)

AGENCY/INSTITUTION

Mississippi State University

LOCATION

Starkville, MS

PROJECT DESCRIPTION

The Gulf of Mexico coast is an ecologically, socially, and economically valuable region of the U.S., with deeply-rooted human history, thriving seafood and coastal recreation industries, and some of the most ecologically important coastal landscapes in the nation. However, susceptibility of coastal resources in this region to both natural and manmade disturbance has increased over time, and was particularly affected by the Deepwater Horizon disaster in 2010. The Gulf Coast Ecosystem Restoration Council (Restore Council) was founded in 2012 to manage a portion of the funds available through the Gulf Restoration Trust Fund as established by the RESTORE Act to recover Gulf Coast ecosystems and economies following the Deepwater Horizon oil spill. The Strategic Conservation Assessment of Gulf Coast Landscapes project was included in the Council's first Funded Priorities List and aims to develop a suite of conservation planning tools that provide science-based decision support for Restore Council members in prioritizing voluntary land conservation strategies, opportunities, and projects in the Gulf Coast Region.

The Strategic Conservation Assessment has three main objectives: 1) collation of shared multi-scale priorities and objectives across the broader conservation community from existing conservation planning efforts; 2) use of multi-criteria decision analysis (MCDA) to translate these priorities into a conservation planning tool that supports Restore Council land conservation decisions and incorporates partner and stakeholder-based valuations on ecological, social, and economic criteria into a flexible decision support framework; and, 3) development and distribution of a spatial prioritization layer incorporating conservation planning tool valuations and future threats of sea-level rise and urbanization in a geospatial environment to aid the Restore Council and Gulf coast stakeholders in identifying high priority lands for voluntary conservation efforts. The Strategic Conservation Assessment will provide the Restore Council with a process and product-based mechanism to support future decisions.

SUMMARY OF POSITION

We are seeking a Ph.D. student to develop a suite of ecological models and associated geospatial applications predicting ecosystem, species, and/or socioeconomic response to potential Gulf Coast system stressors and planned coastal restoration activities. Model outputs will contribute to development of an optimized geospatial tool that will support funding allocation decisions of the Restore Council and coastal stakeholders. The student will work closely with an interdisciplinary team of

scientists, including personnel from the U.S. Fish and Wildlife Service (USFWS) Gulf Restoration Team and Mississippi State University (MSU) faculty, and other project staff. The student will have flexibility to pursue their degree program in either the Department of Agricultural and Biological Engineering or the Department of Wildlife, Fisheries, and Aquaculture at Mississippi State University.

QUALIFICATIONS

Master's degree in geography, geosciences, ecology, environmental science/management, biological/environmental engineering, coastal or marine ecology, wildlife and fisheries science, or other related fields with competitive GPA and GRE scores. Research experience with predictive ecological modeling and geographic information systems (GIS), and a demonstrated publication record are preferred.

APPLICATION

To apply please email the following materials to Kristine Evans (kristine.evans@msstate.edu): 1) cover letter describing interest and professional goals; 2) curriculum vitae or resume; 3) contact information for five references; 4) copy of academic transcripts, GRE scores, and TOEFL or IELTS scores (if the candidate's native language is not English).

Position includes $23,000/yr stipend, tuition waiver and health insurance.

Application review will begin June 7, 2017 and continue until a suitable candidate is identified. Expected start date is August 1, 2017.

For more information contact Dr. Kristine Evans (kristine.evans@msstate.edu) (Department of Wildlife, Fisheries and Aquaculture) or Dr. Anna Linhoss (alinhoss@abe.msstate.edu) (Department of Agricultural and Biological Engineering) at Mississippi State University.