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7. Title Revealed Preferences and Their Use in Estimation of Ecosystem Service Values					
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10. Multistate Project No.				11. Cooperating States MS Mississippi	
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Goals/Objectives/Expected Outputs					
<p>The overall goal of this project is to determine the revealed preferences (RP), or market-based values, for various ecosystem services provided by critical wetland habitats in the northern Gulf of Mexico and to identify the dimensions on which those values hinge, including geographic location, habitat type, population from which values are obtained, and valuation method. In addition, the project will examine the extent to which RP can be used along with stated preferences (SP) to provide joint estimation of the value of ecosystem services. Specific objectives include: 1. Estimate the important RP ecosystem service values provided by critical habitat in ecologically significant estuaries of the Northern Gulf of Mexico. 2. Determine how the RP economic values of ecosystem services values vary by geographic location, habitat type, population from which the values are obtained, and valuation method. 3. Compare the magnitude of RP estimates with SP estimates from contemporaneous research conducted by other scientists. 4. Develop a method for combining the RP estimates of this study with SP to provide a realistic estimate of overall ecosystem service values. The project will generate aggregate datasets that cover the market values of wetland properties in the coastal zone of the Northern Gulf of Mexico, along with the physical characteristics of the properties. These data will be used to produce current RP values for ecosystem goods and services in the Northern Gulf of Mexico, and this information will be compiled into written and web-based products for use by policy makers in the southeast.</p>					
Methods					
<p>Objective 1: The proposed project focuses on ecosystem services provided by habitats in the Barataria-Terrebonne National Estuary Basin in coastal Louisiana and Mobile Bay National Estuary Basin in coastal Alabama, but attempts will also be made to collect information from other estuary systems. The services examined will include, but are not limited to, hazard mitigation, erosion mitigation, water quality improvement, commercial fisheries support, recreational fisheries support, and bird habitat. A mix of secondary and primary data will be collected. Wetland property transactions will be collected from records (conveyance deeds) in the relevant county/parishes in the study areas. The boundaries associated with each property will be mapped into GIS (Geographic Information Systems) by converting the text boundary descriptions from the conveyance deeds (with or without manual paper maps) into digital GIS maps. The maps associated with each property will be merged with other datasets and GIS</p>					

basic maps to generate relevant property characteristics. Objective 2: Hedonic price functions will be specified and estimated, yielding market-based value estimates of various ecosystem types that can be related to their associated services. One of the major issues associated with estimation of the hedonic model is the appropriate functional form, and thus alternatives will be explored. Parameters from the estimated models will be used to calculate the relevant valuations and expected price responses to changes in a property's characteristics. Objective 3: Although this study will solely generate ecosystem service values using RP methods, a contemporaneous study being conducted by researchers at Mississippi State University will be generating information on SP for the same types of property parcels (i.e., habitat types) in the same geographic locations. This provides the opportunity to compare the estimated values generated from the two different methods. Researchers from Mississippi State University have agreed to cooperate with this project and provide the data necessary to make these comparisons. Objective 4: A combined RP/SP approach requires that data collection focus on a sub-panel of respondents that are both resource owners and resource users. Attempts will be made to elicit SP responses from all individuals who are included in the sample used for this proposed RP study. Combining the SP data with the hedonic analysis will allow us to separate use and non-use values using survey participants who are not only intimately familiar with the resource, but who have recently been actively engaged in the private market for the resource.

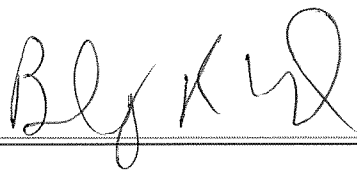
23. Non-Technical Summary

The development and funding of ecosystem policy objectives often depends on a clear demonstration of the economic value associated with both public and private actions. Determining the economic value of the market-based goods and services provided by ecosystems is complicated by the fact that many of them are public in nature and their value is inaccurately reflected in markets (or, as is often the case, not reflected at all). Understanding both the market and non-market values of ecosystems is critical to efficient policy development, but the current state of science is such that this understanding is limited. In addition, system complexity and the way in which they vary over geographic and temporal dimensions pose significant challenges to both valuing ecosystem resources and developing appropriate policy responses. Thus, the only means to determine if and to what degree benefits transfer may be utilized is to first understand the sensitivity of ecosystem service values to the ways in which they vary across geography, habitat, and valuation method. This study will address this knowledge deficit for the Northern Gulf of Mexico through an integrated valuation approach that relies on both RP measurement (market-based) and the development of methods for combining RP with SP in order to more accurately estimate the social value of critical habitats located in and adjacent to National Estuaries Program sites in the Northern Gulf of Mexico. The results of this project will help researchers and other stakeholders understand the sensitivity of ecosystem service valuations to estimation methods and the degree to which estimates are portable to other locations and habitats.

24. Keywords

revealed preference, state preference, hedonic analysis, coastal wetlands, ecosystem services, economic valuation

**** The Original signed document is on file at this institution. ****

Signature	Title	Date
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