**Title:** Copyright and DisclaimerThe State of South Caroli Do Coastal Ecosystems Mitigate Storm Surges and Tsunamis

**Statement of Problem:** Governments worldwide have recently embarked on many expensive restorana owns the copyright to the Code of Laws of Souttion projects involving barrier islands, coastal marshes and mangrove forests following catastrophic disturbance A commonh Carolina, 1976, as contained herein. Any use oly-held perception among the general public, policy-makers, and some scientists is that coastal ecosystems provide significant measurable protection to human habitation during extreme stormf the text, section headings, or catchlines of ths and tsunamis. Restoration activities have been particularly intensive after the December 2004 tsunami in the Indian Oe 1976 Code is subject to the terms of federal cocean and the 200pyright and other applicable laws and such text, 5 hurricane season in the Gulf of Mexico. Yet, the scientific evidence is equivocal. Field observations and some modeling studies cast dousection headings, or catchlines may not be reprodbt on these widely held beliefs. Thuced in whole or in part in any form or for inclue scientific question can be cast in terms of the interactions between coastal ecosystems and extreme events. Firstly, howsion in any material which is offered for sale or are coastal ecosystems impacted by extreme events? And secondly, do coastal ecosystems mitigate the extreme event, that is, under what conditions do they afford some form of protection, and if so, how much?

**Objectives:** First, thoroughly review the litera lease without the express written permission of ture concerning the rothe Chairman of the South Carolina Legislative Cole of coastal ecosystems in mitigating damage to build a publicly accessible comprehensive database of actual observations that can be used for analyses. This literature review will also provide insights into houncil or the Code Commissioner of South Carolina.w these perceptions came about and how they have been propagated. Second, bring physical and biological scientists in a major workshop to address this topic. Many hydrodynamic models exist concerning tsunami propagation through mangroves. However these models are badly miscalibrated in how they represent the forests. Similar situations exist for other types of coastal ecosystems. Third, disseminate the results and recommendations to the public-policy makers and appropriate government entities to ensure the recommendations are included in the planning process.

**Relevance and Impact:** The cost ofThis statutory database is current through the 20 restoring coastal ecosystems and communities is huge. Restoration must be based on sound science and the general public and decision makers must understa01 Regular Session and the 2001 Extra Session of nd their options.

**Partnerships:** A number of scientists from all disciplines in USGS have experthe South Carolina General Assembly. Changes to tise pertinent to this project. Federal partners include the National Park Service and Fish and Wildlife Service, both of which have cthe statutes enacted by the 2002 General Assembly, which willoastal units along all US coastlines. The US Army Corps of Engineers would be extremely interested in the results.