



Sea Level Rise in the Tampa Bay Region

Executive Summary

As part of an ongoing program evaluating global climate change, the U.S. Environmental Protection Agency (EPA) has initiated a nationwide project promoting planning for and awareness of sea level rise. In 2000, the EPA issued a grant to the Southwest Florida Regional Planning Council (SWFRPC) to participate in this program and coordinate the study of sea level rise throughout the State of Florida. In late 2005, the Tampa Bay Regional Planning Council (TBRPC) entered into a contract with SWFRPC to conduct a study of sea level rise within the Tampa Bay Region.

This study created maps of the Tampa Bay Region that identify the coastal areas that are likely to be protected from erosion, inundation, and flooding from those areas where natural shoreline retreat is likely to take place. The study was designed to support the EPA's national effort encouraging long-term thinking required to deal with the issues associated with sea level rise. The ultimate goal of this project is to diminish losses to life and property from coastal hazards, such as erosion and inundation, and to ensure the long-term survival of coastal wetlands.

This study followed the general approach of other sea level rise planning studies sponsored by the EPA. We have used decision rules defined by a statewide approach for identifying likelihood of land use protection to characterize all uplands from 0 to 10 feet in elevation and within 1000 feet of the shoreline into the following four general categories:

- protection almost certain;
- protection reasonably likely;
- protection unlikely; and
- no protection.

We have assigned colors to these categories to distinguish the protection scenarios on the sea level rise maps prepared for each county.

Application of the statewide approach for assessing the likelihood of land use protection in the Tampa Bay region resulted in identification of 185,456 acres (290 square miles) of uplands and 64,170 acres (100 square miles) of wetlands in the study area. Regionally, the “protection almost certain” category accounted for 64.3% of the total study area. This was followed by “protection reasonably likely” (0.5%), “protection unlikely” (2.6%), and “no protection” (0.5%). Coastal areas of the Tampa Bay region are clearly identified in this study as primarily “protection almost certain” due to the extent of development that is already present in these areas.

The sea level rise planning maps are intended for general planning purposes. The maps do not represent a comprehensive program to address sea level rise, but rather constitute a planning baseline that decision makers can use when evaluating land use, infrastructure, wetland permits, and other decisions whose outcomes may be sensitive to future sea level rise, flooding, and shoreline erosion. The maps are not intended to be based on a benefit-cost analysis, but rather based on the best planning judgments of the local and regional authorities responsible for land use planning.

Given the broad planning context for this study, an analysis of specific parcels is beyond the intended scope. However, the maps are detailed enough to identify the jurisdictions where factoring sea level rise into near-term decision making is most important. Based on this study, a total of 36 municipalities in the four county Tampa Bay region are likely to be impacted by sea level rise in the future. The final report, including maps, is intended as a starting point to assist local governments to engage in a dialog concerning sea level rise. The sea level rise maps are an attempt to depict the expected response scenarios to sea level rise based on the best currently available knowledge. In the future, local planners may decide that it will be wise to retreat from lands currently deemed to be protected lands, due to coast and environmental considerations. This project seeks to represent one of the first steps in planning for sea level rise in the Tampa Bay Region.