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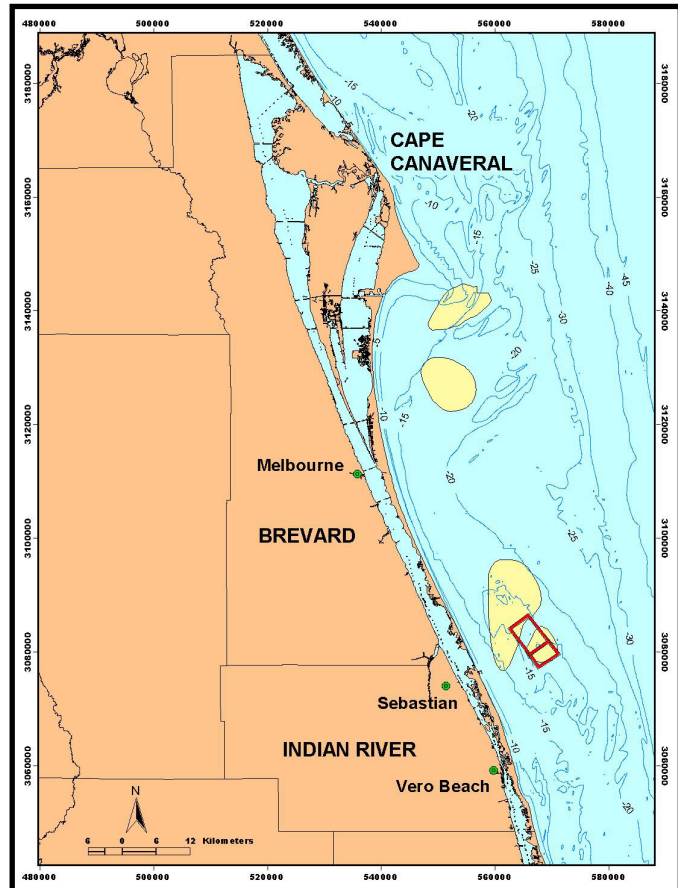


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Project: Environmental Surveys of Potential Borrow Areas on the East Florida Shelf and the Environmental Implications of Sand Removal for Coastal and Beach Restoration

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The primary purpose of this study is to address environmental issues raised by the potential for dredging sand from the inner continental shelf offshore the east coast of Florida for beach replenishment purposes. Furthermore, the MMS is interested in ensuring the offshore minerals are developed in a safe and environmentally sound manner and that the information generated from the study is used for decisions concerning the preparation of an Environmental Assessment/Environmental Impact Statement to support a negotiated agreement. In cooperation with the Florida Geological Survey, the MMS identified eight general sites of high-quality sand deposits in Federal waters. Five study elements were identified for addressing the study purpose. The elements that Applied Coastal personnel are responsible for conducting include: 1) quantify the potential modifications to waves and currents that cross within the identified borrow areas due to offshore dredging; and 2) quantify the impacts of offshore dredging and consequent beach



nourishment on local and regional sediment transport patterns, coastal and nearshore sedimentary environments, and local shoreline processes.

Applied Coastal personnel are conducting physical processes study elements using existing coastal processes data sets, ADCP surveys that document the spatial variability of currents at a borrow site, the spectral wave transformation model STWAVE, historical shoreline and bathymetry data sets, and sediment transport modeling tools. Sediment transport estimates along the shoreline and in the nearshore have been determined from wave and current analyses, as well as historical shoreline and bathymetric change data sets. The information gathered and analyzed during the course of this study is expected to enable MMS to monitor and assess the potential impacts of offshore dredging activities and to identify ways in which dredging operations can be conducted to minimize or preclude long-term adverse impacts to the environment.