

GEOGRAPHIC INFORMATION SYSTEM (GIS) INVENTORY OF IMPACTED TIDAL WETLANDS IN COASTAL GEORGIA

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Abstract. Coastal Georgia is biologically diverse and productive and contains a large percentage of the remaining salt marsh along the Eastern seaboard even though 23% of Georgia's wetlands disappeared statewide from 1780-1980. Anthropogenic disturbance continues today, as wetlands are modified for transportation, dredge material containment, mosquito control, stormwater management and armored. Furthermore, the coastal population of Georgia is projected to increase 51% from 2000 to 2030, and 32% of the adjacent uplands are developable. The purpose of this study was to create a GIS inventory of tidal wetlands that have been structurally altered by human activities; characterize the impact type; and approximate the areal extent via remote sensing. We documented 1,016 impacted areas encompassing 69,247 acres of tidal wetlands in Georgia. Chatham County was the most highly impacted county, with 24,994 acres of tidal wetlands identified as impacted, followed by McIntosh (12,617 acres), Glynn (11,195 acres), Camden (9,246 acres), Bryan (5,933) and Liberty (5,262 acres). The project was developed as a management tool to identify potential wetland restoration, mitigation and/or preservation sites and record baseline values to track changes over time.