

**Distribution of Black Mangrove (*Avicennia germinans*) in the Spoil Island Chains
of the Lower Laguna Madre of Texas**

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Abstract. Supervised image classifications developed from 2012 color-infrared National Agricultural Imagery Program (NAIP) imagery were used to evaluate the current spatial distribution of black mangrove, *Avicennia germinans*, within the spoil island chains of the Lower Laguna Madre (LLM) of Texas. Sizeable stands of *A. germinans* occur on many of the islands located south of the mouth of the Arroyo Colorado, but tend to be scarce or absent on most of the islands north of the Arroyo. Where mangroves are present on islands, they tend to be concentrated along western shorelines or in depressed areas within the interior of islands where wave action is minimal. The most probable explanation for these trends is that the prevailing westerly winds during most of the year create waves that impede establishment of mangrove propagules (seedlings) along eastern shorelines of islands and greatly increase the severity of wave-caused erosion. Black mangrove is a recognized shoreline stabilizer, and current efforts are underway in southern Texas to utilize this native plant for shoreline erosion prevention and mitigation.