Matagorda Island Lighthouse was built in 1852 and served as an historical navigational aid allowing maritime transportation to Matagorda Bay and its ports. The 55-foot cast iron tower was originally erected on the northeast end of Matagorda Island at the entrance to Pass Cavallo and was painted with red, white, and black horizontal stripes to make it visible. The lighthouse was expanded by 24 feet in 1857. During the Civil War, the light remained dark. Confederate soldiers attempted to destroy the light so that it would not fall into Union hands. They broke several of the cast iron plates and buried the lens in sand to prevent it from falling into Union hands.

After the war, the tower was disassembled and moved inland to higher ground (Figure 5). A new foundation was poured, the tower was erected, and the damage was repaired. With a new fresnel lens and fresh coat of black paint, the lighthouse was put back in service on September 1, 1873. Light keepers operated the light until 1956, when electricity reached the island. The Coast Guard decommissioned the lighthouse in 1995 and transferred it to the Service. The lens was removed about six years ago and is now on display at the museum in Port Lavaca. The lighthouse is on the National Register of Historic Places and has been recognized by the Texas Historical Commission.

The Service, Texas Parks and Wildlife, and the Texas General Land Office have signed a Memorandum of Understanding to jointly manage Matagorda Island. The Service has made subsequent agreements with Calhoun County and the Matagorda Island Foundation to assist with stabilization, restoration, and management of the lighthouse. The Service is also working with Calhoun County and Texas Parks and Wildlife to provide historical and natural history interpretation to lighthouse visitors. Funding for some of the work has been provided by the Texas Department of Statewide Transportation Enhancement Program and the Matagorda Island Foundation.