C2.2.4.2 Sediment transport capacities for the reach of East Access Channel just upstream from Bayou Sorrel Lock and the reach of the Navigation Channel just downstream from the lock were computed using the computer program SAM published by the Waterways Experiment Station in Vicksburg, Mississippi. This program was developed to perform the hydraulic and sediment calculations required in the design of Alluvial Channels. The transport function developed by Mr. Fred B. Toffaleti in 1968 was used. The channel upstream of the lock has a higher transport capacity than the channel downstream of the lock. The difference in transport capacities is consistent with the dredging quantities listed above. Replacement of the lock will not affect these transport capacities and, hence, will have no effect on dredging quantities. The new approach channels, however, may experience some additional deposition for the first few years until the banks and bottom stabilize. Replacement of the lock will not induce any deposition in the GIWW channel north of the lock.

C2.3 Water Quality.

C2.3.1 General. This Water Quality Assessment considers the applicable standards and criteria used to assess existing water quality in the area. It also describes existing water quality and identifies the potential water quality impacts associated with the alternatives proposed in the Bayou Sorrel Lock Feasibility Study.

C2.3.2 Water Quality Standards And Criteria. Both the Louisiana Department of Environmental Quality (LDEQ) and the U. S. Environmental Protection Agency (EPA) have established ambient water quality standards and criteria applicable to surface waters in the State of Louisiana. These standards and criteria are discussed in the following paragraphs.

C2.3.2.1 Applicable Louisiana State Standards. The LDEQ has established general written water quality standards that are applicable to all waters of the State of Louisiana. The general written standards relate to the condition of the water as affected by waste discharges or human activity as opposed to purely natural phenomena, and are as follows. The standards were last revised in 1997.