SABINE REFUGE PROTECTION (C/S-18)
C/S-18-MSPR-0196-2
PROGRESS REPORT NO. 2
for the period
January 27, 1995 to January 29, 1996

Project Status

No additional data have been collected since the previous progress report.

Project Description

The Sabine Refuge Protection (C/S-18) project, located at the Sabine National Wildlife Refuge Impoundment 3, Cameron Parish, Louisiana (figure 1), was designed to prevent further erosion of the impoundment west levee, and thereby protect the existing freshwater wetlands from impact by saltwater intrusion. The specific goals of the project are to restore and protect the west levee of the impoundment using dredged material and a free-standing rock dike, and to protect the existing freshwater vegetation within the impoundment from saltwater intrusion via the Burton-Sutton Canal.

Construction of approximately 5.5 linear mi of free-standing, continuous rock dike along the east bank of the Burton-Sutton Canal (which forms the west bank of the impoundment), was completed in January 1995 (figure 1).

Monitoring Design

Color-infrared aerial photography (1:12,000 scale) will be flown once preconstruction and twice postconstruction. The photographs will be ground-truthed to document changes in the acreage of vegetated and nonvegetated areas. This will be used to monitor changes in vegetation types and abundance within the impoundment, and in a reference area located west of the impoundment.

To document shoreline movement, shoreline markers denoting the vegetated marsh edge will be established at 1000-ft intervals along the east bank of the Burton-Sutton Canal adjacent to the northernmost, central, and southernmost miles of the rock dike. Shoreline markers will also be

established along the west bank of the canal adjacent to the reference area (figure 2). Shoreline position relative to the shoreline markers will be monitored by direct measurement at 3-yr intervals.

Results/Discussion

Habitat Mapping: The preconstruction color-infrared aerial photography (1:12,000 scale) was taken in November 1993. Postconstruction color-infrared aerial photography is scheduled to be obtained for the years 1998 and 2013. Analyses of vegetation changes will occur after the first postconstruction aerial survey.

Shoreline Markers: During August 1995, Professional Engineering and Environmental Consultants of New Orleans completed a shoreline and cross-sectional survey of the Burton-Sutton Canal. This baseline survey data will be compared to future data sets to evaluate project success. Representative plan view and channel cross-section drawings from the survey are provided as examples in figures 2 and 3. The survey will be repeated in 1998.

Prepared on January 11, 1996, by Karl A. Vincent.

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Federal Sponsor:	USFWS/Paul Yakupzack	(318) 598-2216
Construction Start:	December 1, 1994	
Construction End:	January 27, 1995	

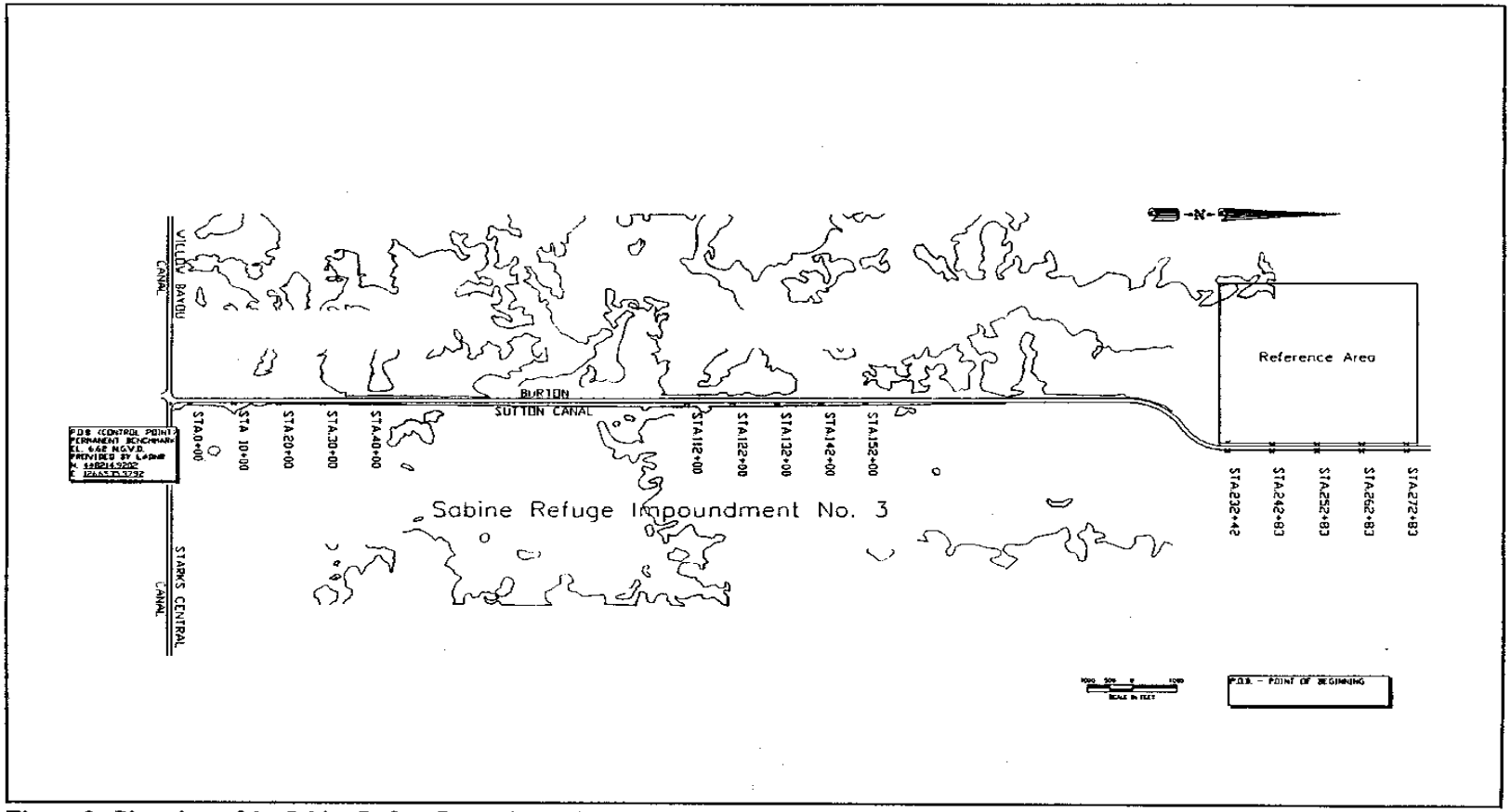

Figure 2. Plan view of the Sabine Refuge Protection (C/S-18) project rock dike along the Burton-Sutton Canal showing the location of the survey cross sections established to monitor shoreline movement.

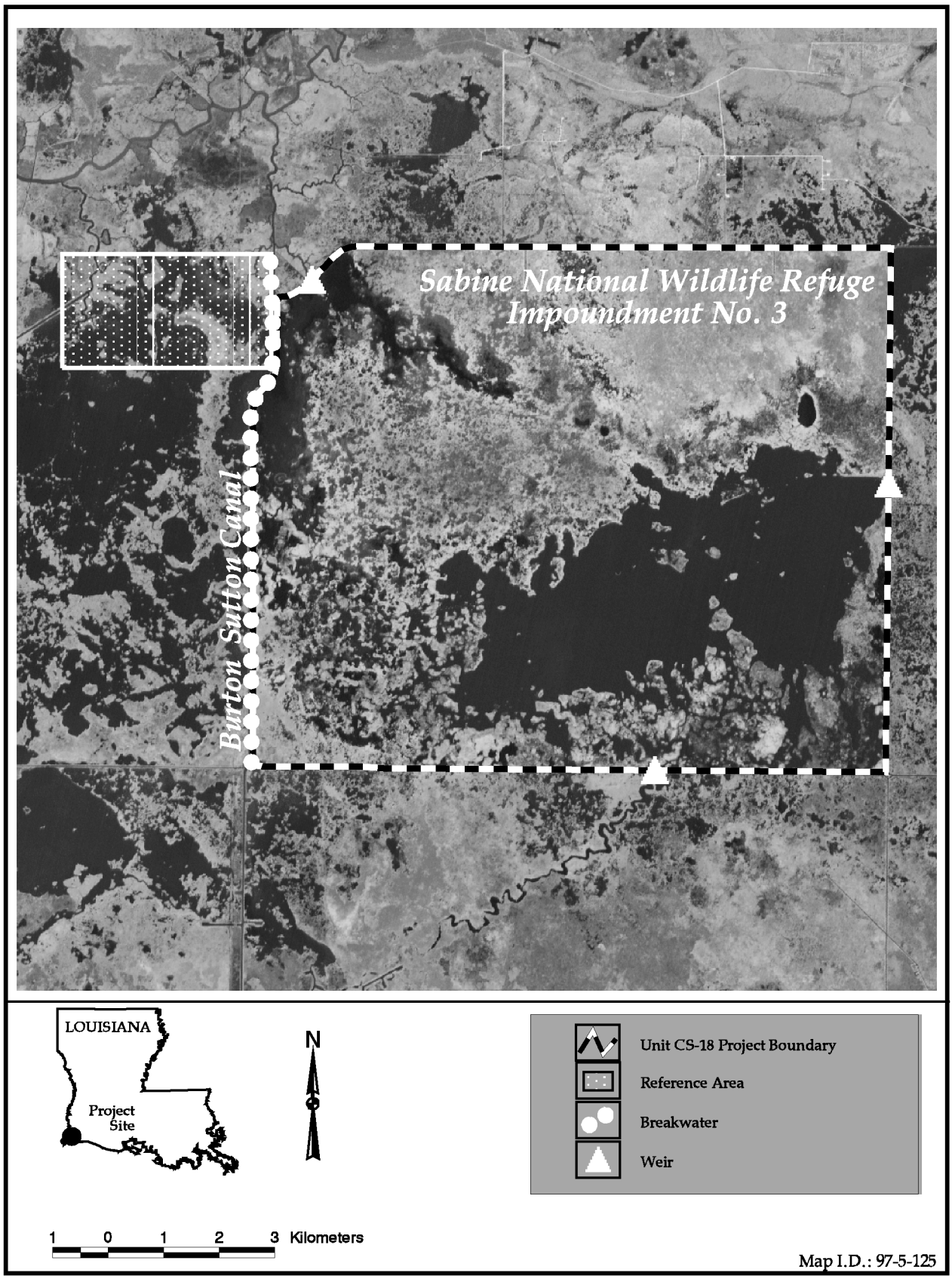

Figure 1. Sabine Refuge Protection (C/S-18) project area map.

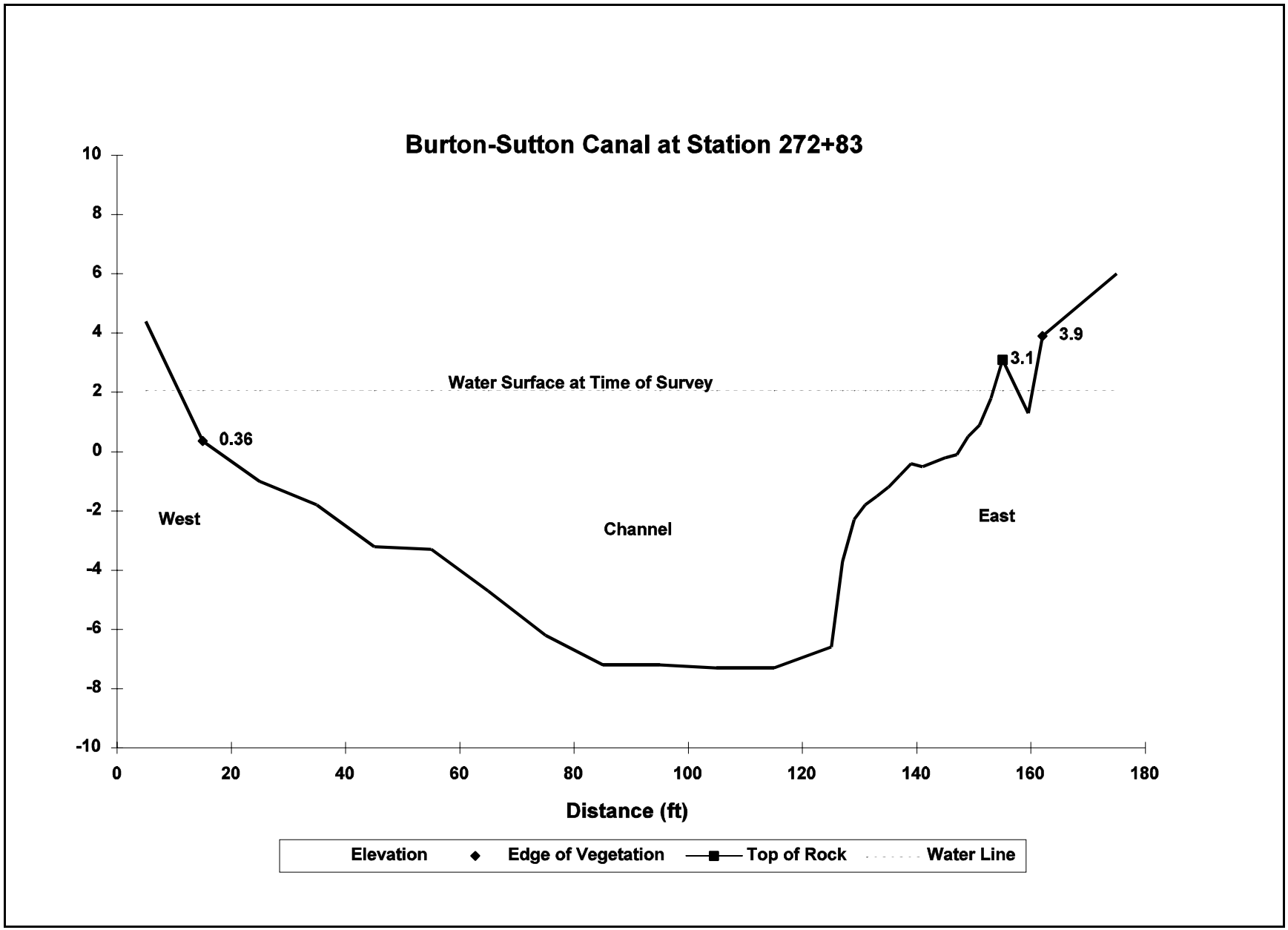

Figure 3. Cross-sectional view of the Burton-Sutton Canal at station 272+83 on the west side of Impoundment No. 3 at Sabine National Wildlife Refuge in Cameron Parish, Louisiana, showing channel profile, locations of the vegetative edge, the Sabine Refuge Protection (C/S-18) project rock dike, and the water level at the time of the survey in October 1995.