TIMBALIER ISLAND PLANTINGS (TE-18)
TE-18-MSPR-0895-1
PROGRESS REPORT NO. 1
for the period
May 11, 1995 to August 01, 1995

Project Description/Status

Timbalier Island has decreased in size by 58 % over the last century with an additional 20 % lost between 1978 and 1985 (Hester and Mendelssohn 1992). Although the dunes of Timbalier Island are not well developed and are less than 6.5 ft above mean sea level, stabilized sand dunes reduce the likelihood of island breaching (Mendelssohn and Hester 1988, Mendelssohn et al. 1991). Additionally, Mendelssohn et al. (1991) found that the only way to maintain a healthy, well vegetated dune in Louisiana's barrier islands is through beach nourishment in conjunction with dune building and vegetative stabilization techniques.

The design of this project is to stabilize portions of bare beach and washover areas on Timbalier Island by utilizing sediment-trapping fences and vegetative plantings (figure 1). This will be accomplished by constructing approximately 7,390 linear ft of fencing at nine locations along the length of the island parallel to the Gulf of Mexico shoreline with perpendicular spurs, which extend 25 ft from the fence towards the bay at 50-ft intervals. Also vegetation plantings will be planted on the bayward side of the fences. The specific goals of the project are (1) to increase the percent cover of emergent vegetation behind the sediment-trapping fences, (2) to increase the elevation adjacent to sediment trapping fences and (3) to decrease the rate of shoreline erosion along 7,390 ft of the island.
The construction of Unit No. 1 (sediment-trapping fences) was completed on May 11, 1995 but the construction of Unit No. 2 (vegetative plantings) will not begin until April, 1996.

Monitoring Design

Habitat mapping, shoreline movement, plant species composition, percent plant survival, plant cover and surface elevation will be measured to evaluate the project goals. Aerial photography will be flown prior to construction and three times after planting. Shoreline movement will be evaluated a minimum of three times after planting and vegetation will be monitored at one month, six months and one year after planting and then at three year intervals or until the original plants are

indistinguishable. Elevational transects will be sampled for two years after construction at six month intervals.

Results/Discussion

Preconstruction aerial photography was flown on November 21, 1993. One month after the completion of Unit No. 2, vegetation and elevation data will be collected. Vegetation and elevation data collection is currently scheduled for September, 1996.

References

Hester, M. W. and I. A. Mendelssohn 1992. Barrier island revegetation dynamics: stabilization and maintenance projects on Timbalier Island. Final report prepared for Texaco USA. New Orleans, Louisiana: Operations Division. 61 pp.

Mendelssohn, I. A. and M. W. Hester 1988. Coastal Vegetation Project: Timbalier Island. Final report submitted to Texaco USA. New Orleans, Louisiana: State of Louisiana Agreement No. RC-84-01. 244 pp.

Mendelssohn, I. A., M. W. Hester, F. J. Monteferrante, and F. Talbot 1991. Experimental dune building and vegetative stabilization in a sand-deficient barrier island setting on the Louisiana coast, USA. Journal of Coastal Research 7(1):137-149.

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Construction Start:	March 1, 1995	
Construction End:	May 30, 1996	

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Figure 1. Timbalier Island Plantings (TE-18) project elements. Letters (A-I) represent fence segments.