



Encinitas and Solana Beach Shoreline, San Diego County, California

Draft Feasibility Report

August 2005

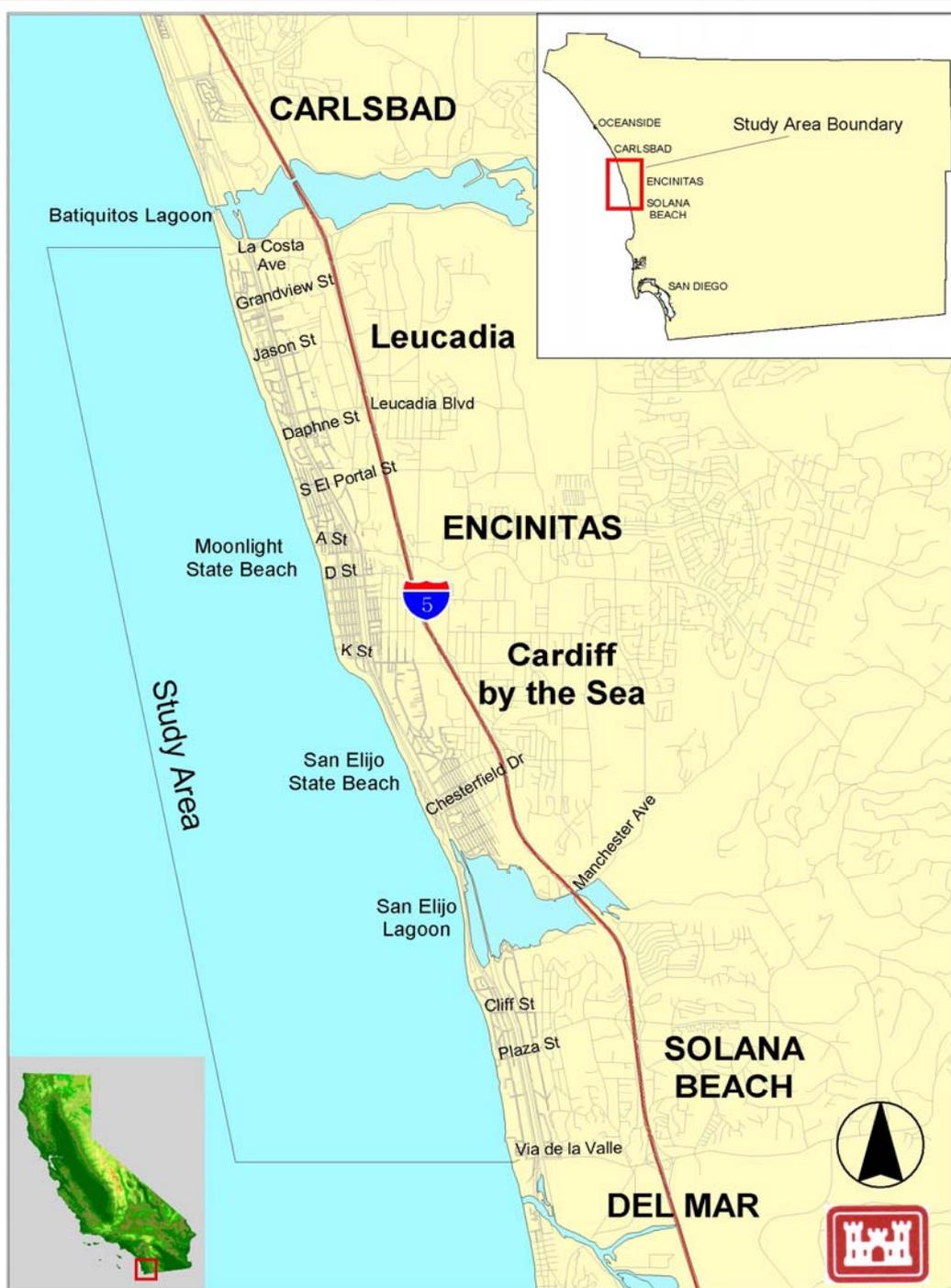


Legislative Authority

- 13 May 1993 Resolution of the House Public Works and Transportation Committee
- 22 April 1999 Resolution of the House Committee on Transportation and Infrastructure

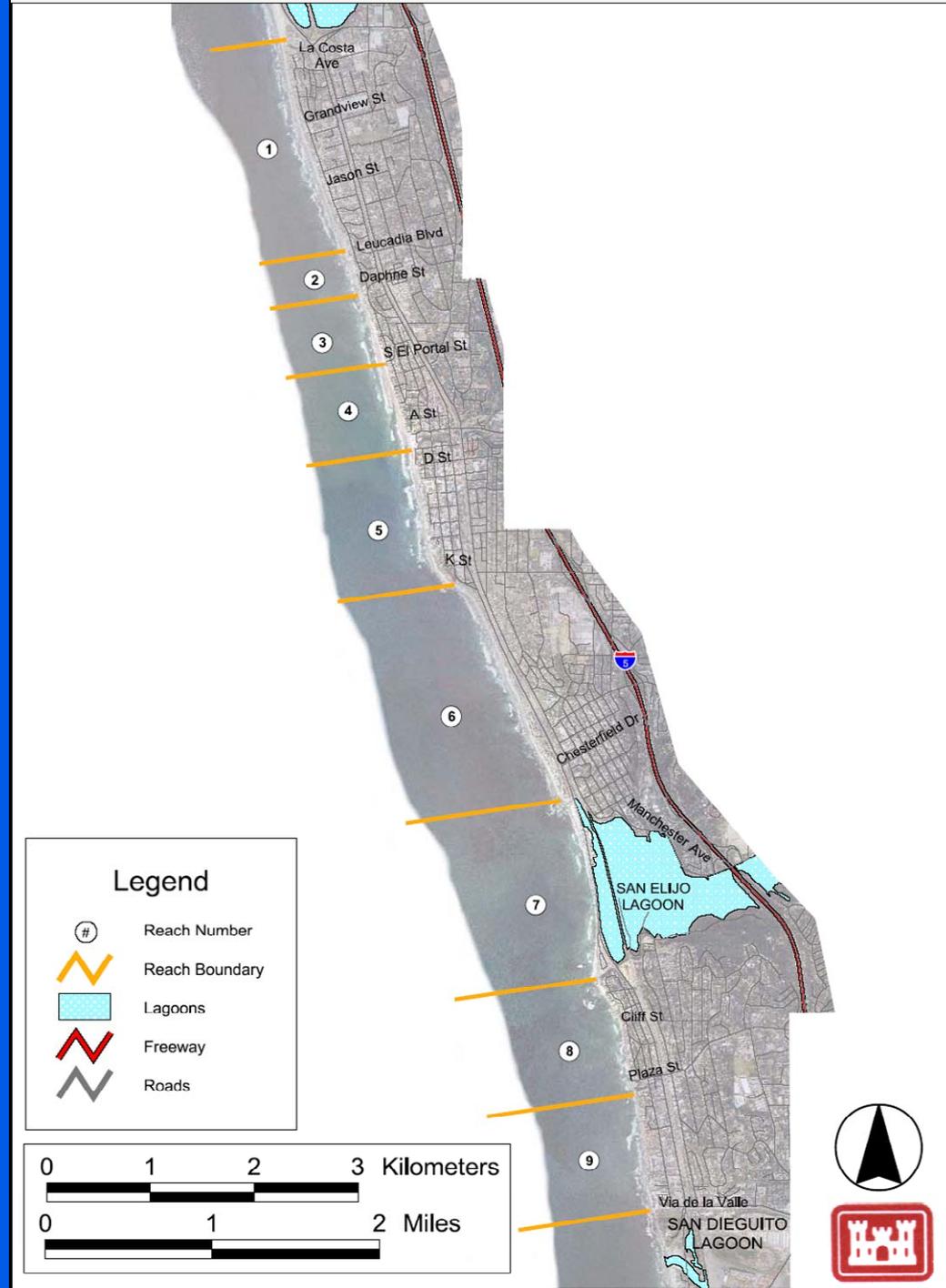


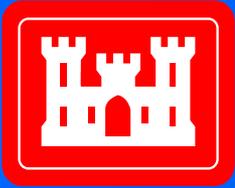
Study Area





Study Reaches





Problem Summary





Problem Summary

Loss of Sediment Supply to the Shoreline.

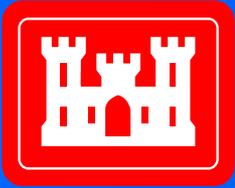




Problem Summary

Notch Formation





Problem Summary

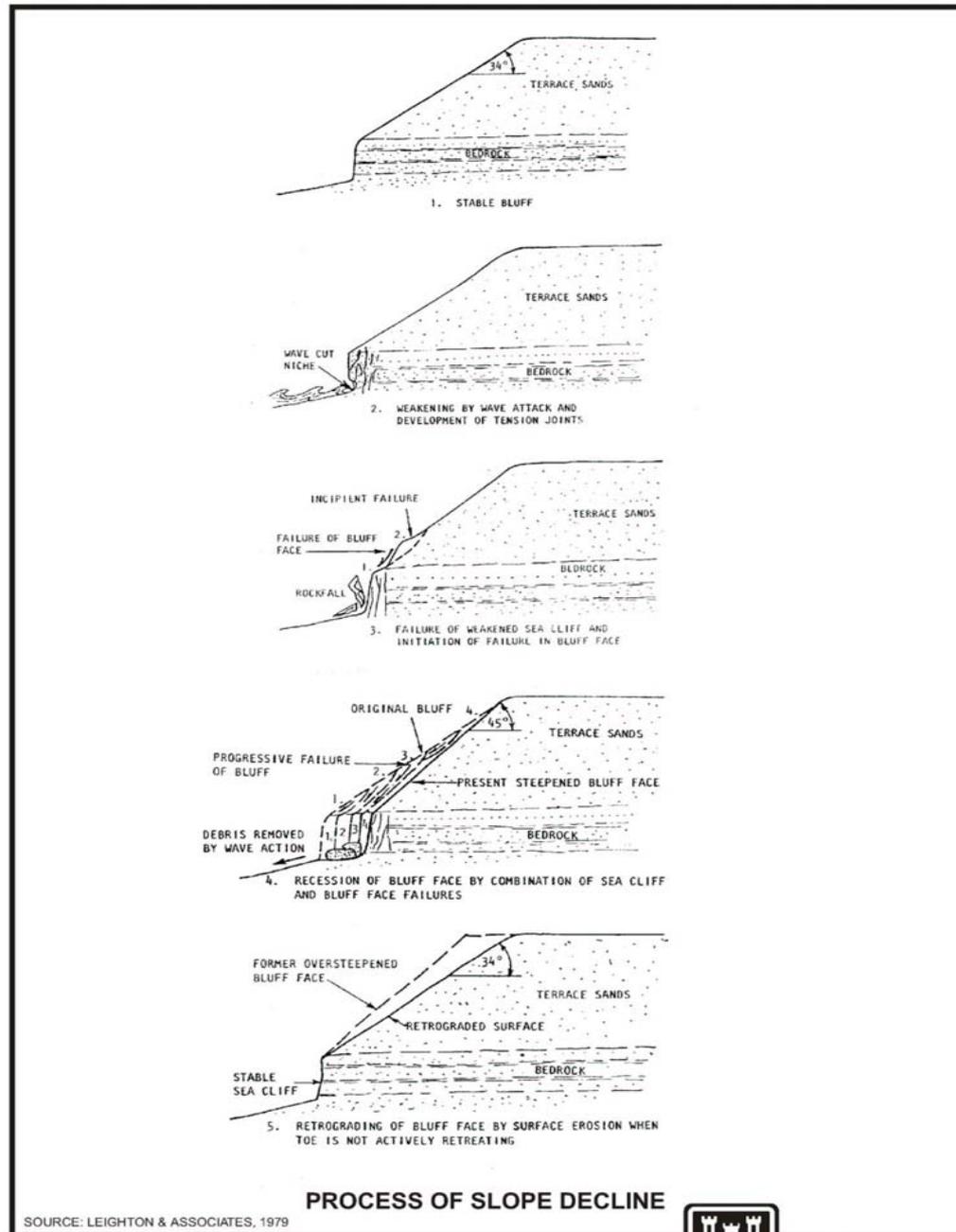
Bluff Failure Results





Problem Summary

- Lack of Sediment Supply
- Loss of Protective Beach
- Wave attack at toe of bluff
- Toe notch formation
- Bluff failure
- Present over-steepened Bluff face





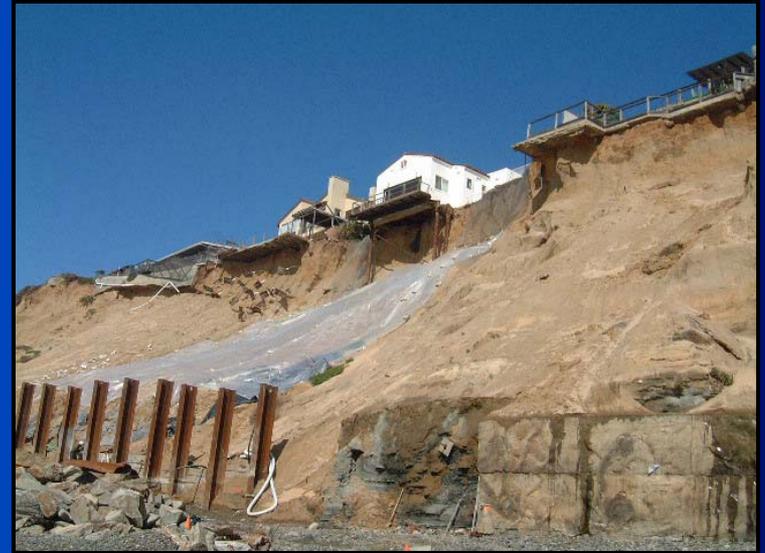
Problem Summary

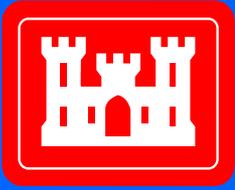




Problem Summary

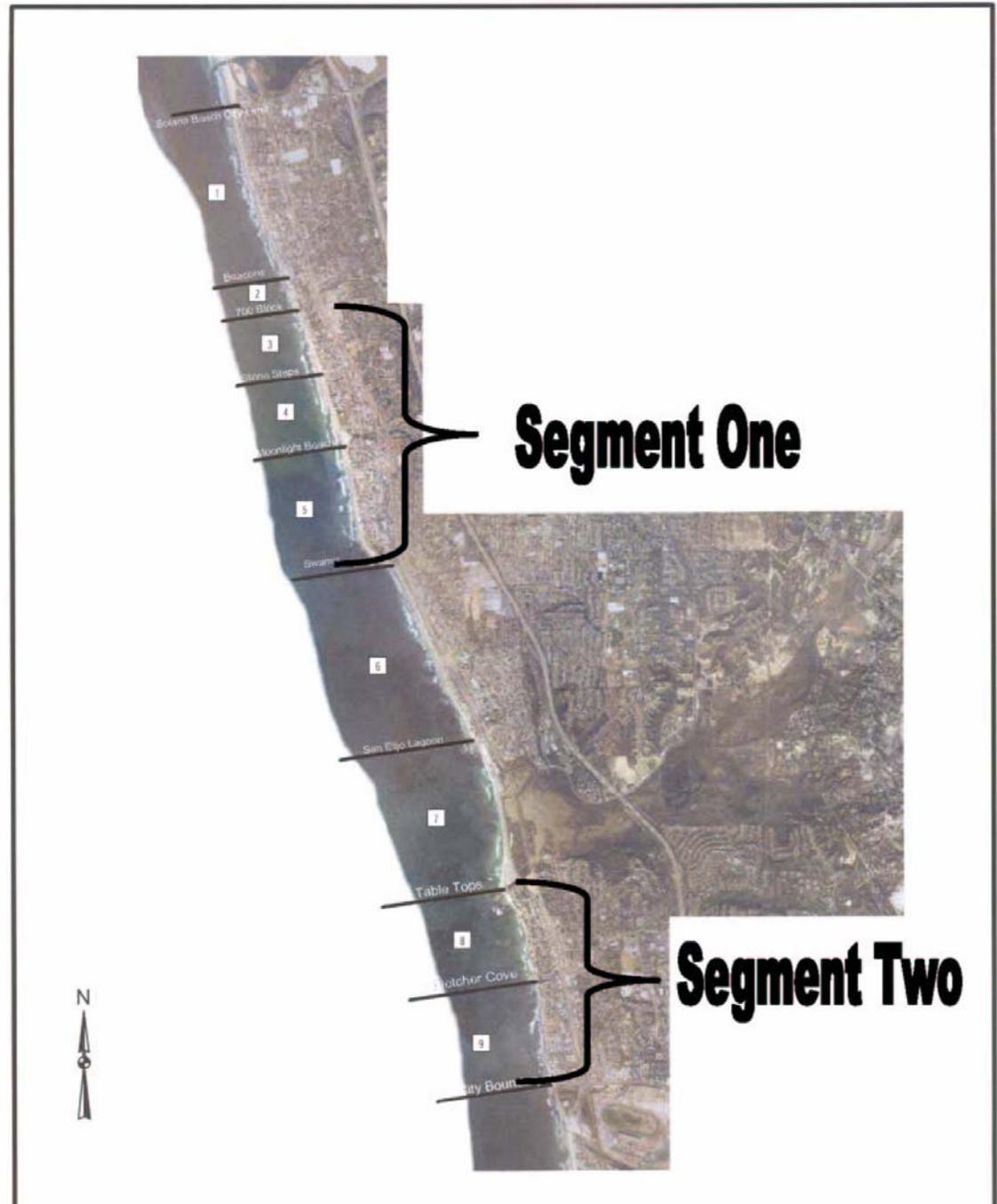
Large Bluff Failures.

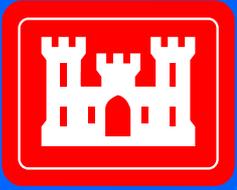




Segments

- Segment 1
 - Encinitas
 - 3.2 km
- Segment 2
 - Solana Beach
 - 2.3 km





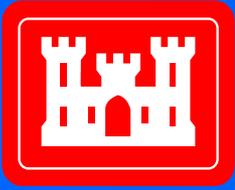
Plan Evaluation

- Evaluation of alternatives
 - Beach Nourishment
 - Beach Nourishment with Notch fills
 - Breakwaters
 - Groins
 - Revetment
 - Seawall



Economic Comparison of Alternative Plans

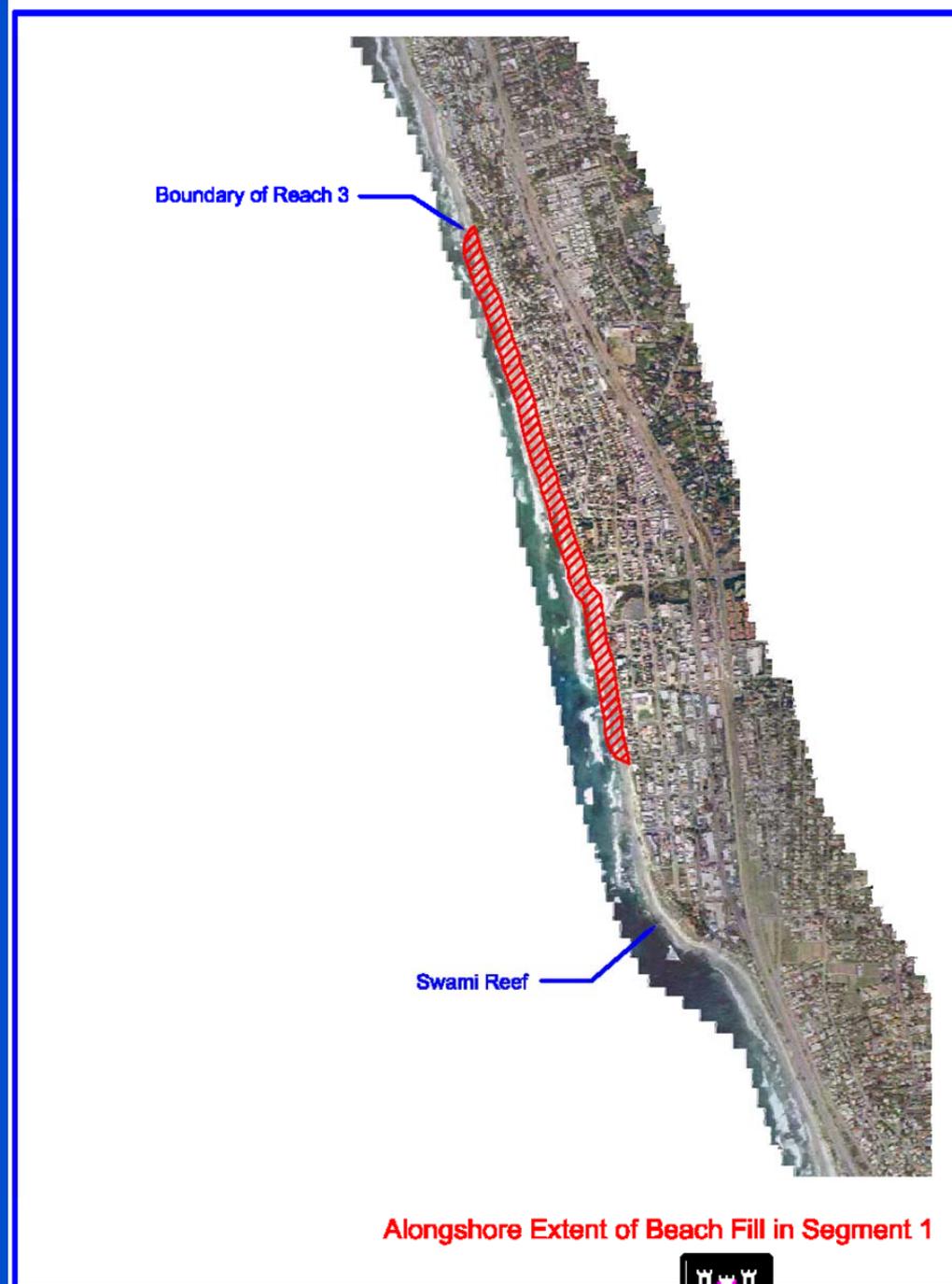
	Annual Benefits	Annual Costs	Annualized Net Benefits	B/C Ratio
Alt 1- Beachfill	\$2,292,500	\$1,819,100	\$473,400	1.26
Alt 2- Beachfill and Notch fill	\$2,582,200	\$1,772,600	\$809,600	1.46
Alt 3- Seawalls	\$1,628,300	\$3,035,500	-\$1,407,200	0.54



Recommended Plan

Segment One

- Notch fill will extend 2.4 km along the bluff base
- Total initial placement of 628,000 cubic meters
- Beach will initially be 60 meters wider than existing.
- Beach will be renourished every 5 years with 262,000 cubic meters



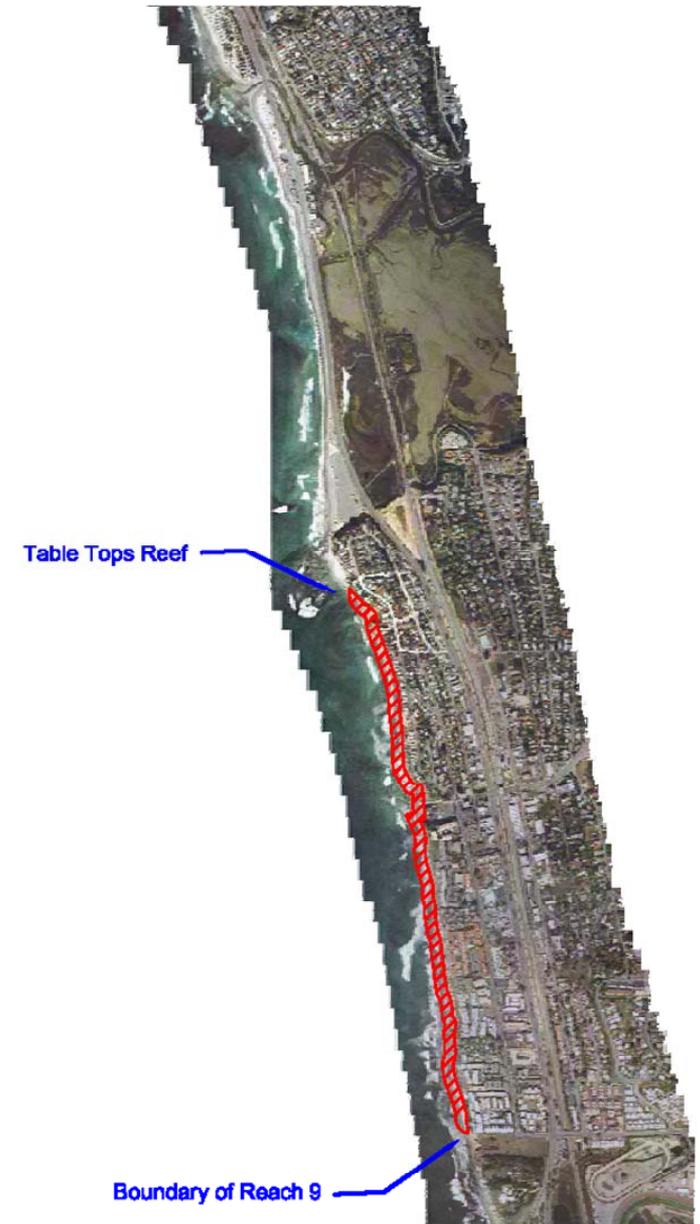
Alongshore Extent of Beach Fill in Segment 1





Recommended Plan Segment Two

- 2.2 km Notch Fill
- Initial placement of 310,000 cubic meters along 2.2 km shoreline
- Beach will initially be 30 meters wider than existing.
- Beach will be renourished every 5 years with 140,000 cubic meters



Alongshore Extent of Beach Fill in Segment 2





Economic Summary

Total Costs	\$30,142,000
Annual Costs	-\$1,772,000
Annual Benefits	+\$2,582,000
Net Annual Benefits	\$809,000
Benefit / Cost Ratio	1.46



Schedule

- Public Release of Draft Feasibility Report and DEIS/EIR Aug 2005
 - Final Public Meeting Sep 2005
 - Final Feasibility Report EIS/EIR Complete Oct 2005
 - Commander's Briefing Nov 2005
 - Final State and Agency Review Nov 2005
 - Report of the Chief of Engineers Dec 2005
 - Water Resources Development Act (WRDA) 2005
- Final Design-
- Execute Project Cooperation Agreement Mar 2006
 - Plans & Specifications Complete Mar 2008
- Initiate Construction Apr 2008