

STATE OF THE COAST 2022

San Clemente Shoreline Monitoring Program

**Beaches, Parks & Recreation Commission
April 11, 2023**



Overview

1. Background

- Regional Setting
- Monitoring Program

2. Findings

- Fall 2022 Condition
- Shoreline Evolution

3. Summary

4. Future Activities



Regional Setting

➤ Study Area

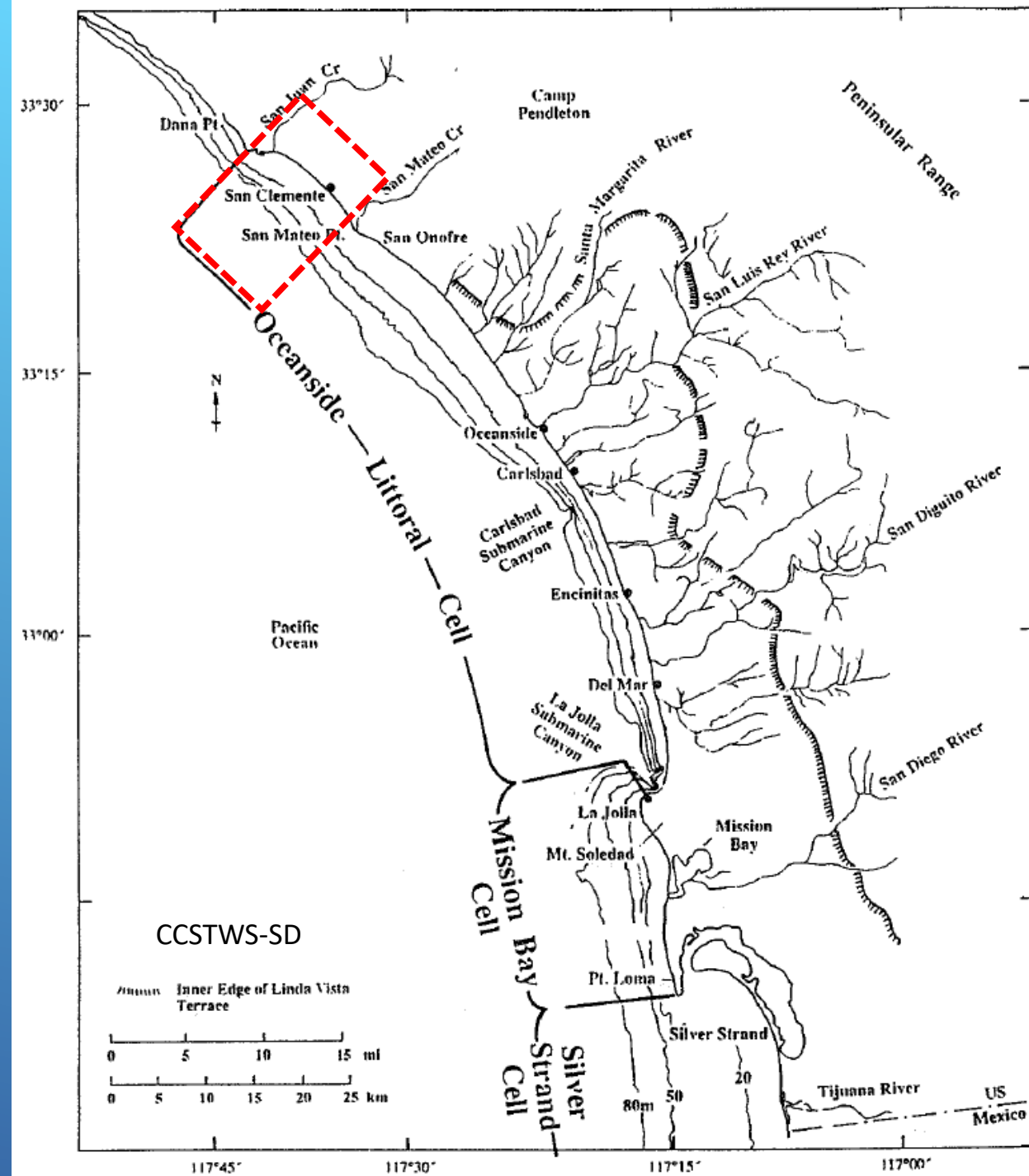
➤ Sediment Budget Components

- Inputs
- Transport Paths
- Losses

➤ Wave Climate

➤ Water Levels

- Astronomical Tides
- Anomalies (Storm Surge; El Niño)
- Sea Level Rise



Shoreline Monitoring Program

➤ Measure Changes in Shorezone

- 12 Sites (Doheny to Cotton's Point)
- Fall and Spring Beach Profile Surveys

➤ Evaluate and Plan Shoreline Projects

- Corps of Engineers Nourishment
- Opportunistic Nourishment
- Nature-based Adaptation
- South Orange County Resiliency Strategic Plan
- OCTA ROW & Facilities Planning Study

➤ Document Impact of Natural Events

- El Niño
- SLR



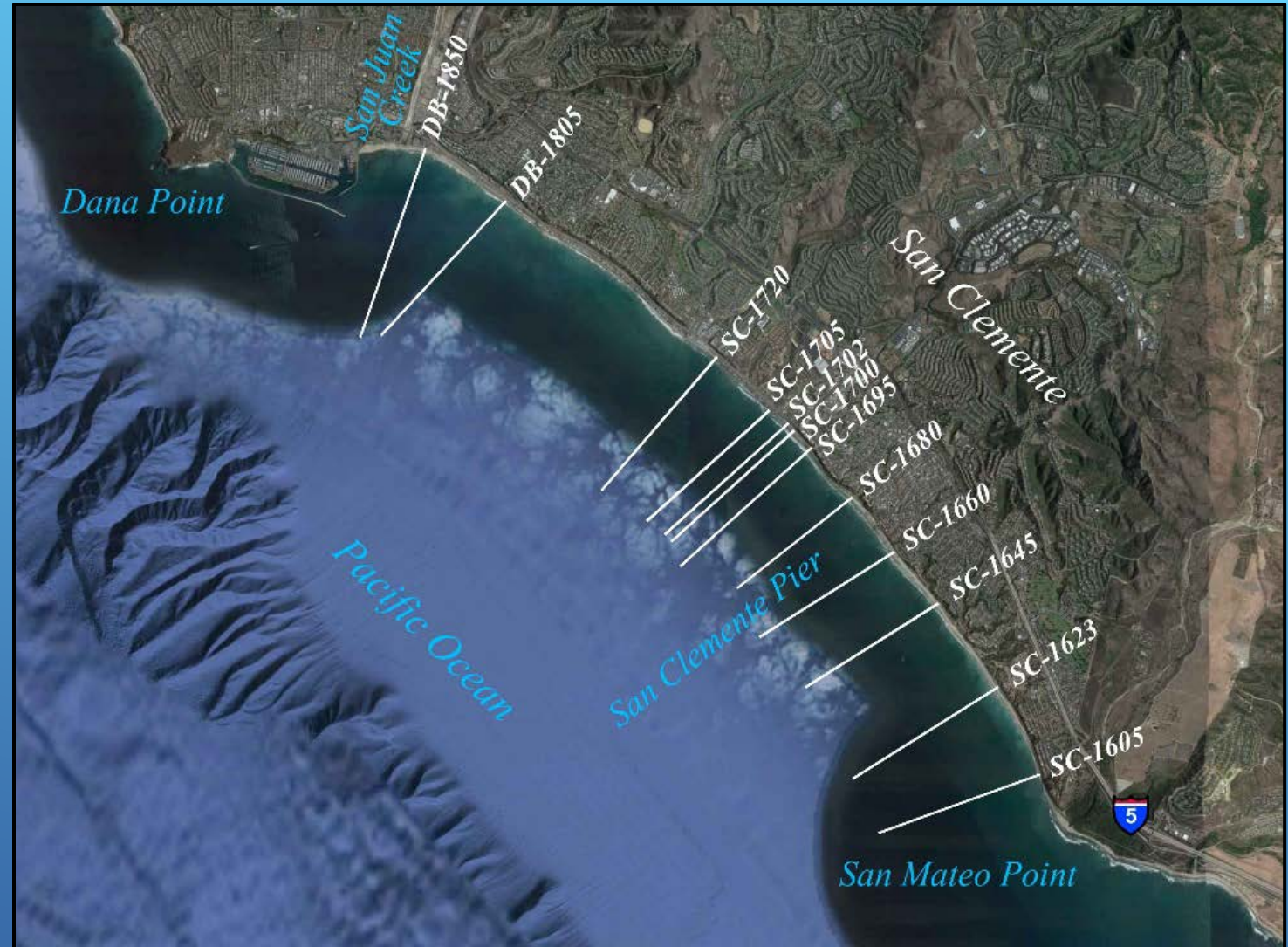
Program Overview

➤ Historical Data

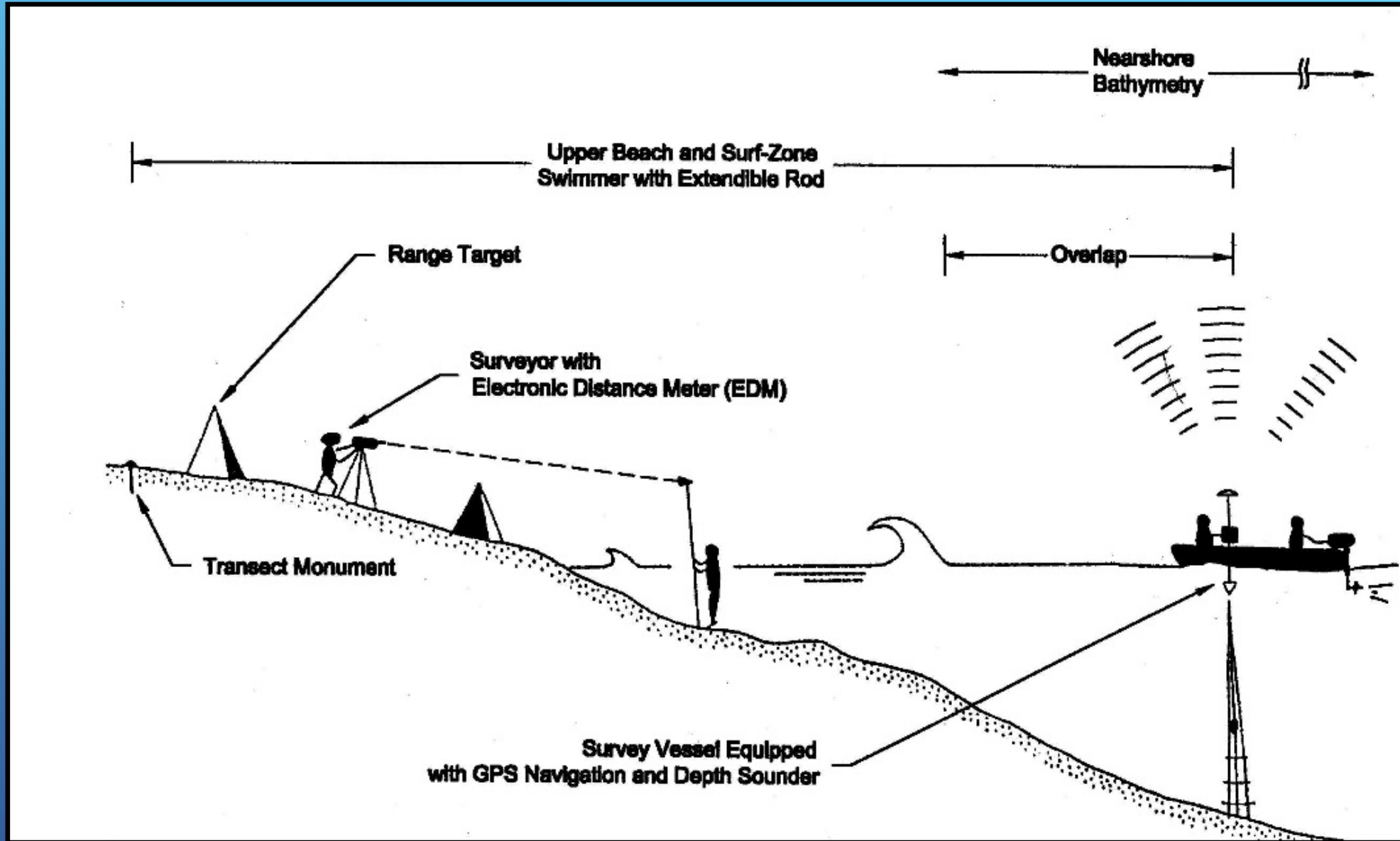
- CCSTWS-SD (1980s)
- City Program (2001-2007)

➤ Current Program

- 2022-2025
- Fall and Spring Surveys
- 12 Transects

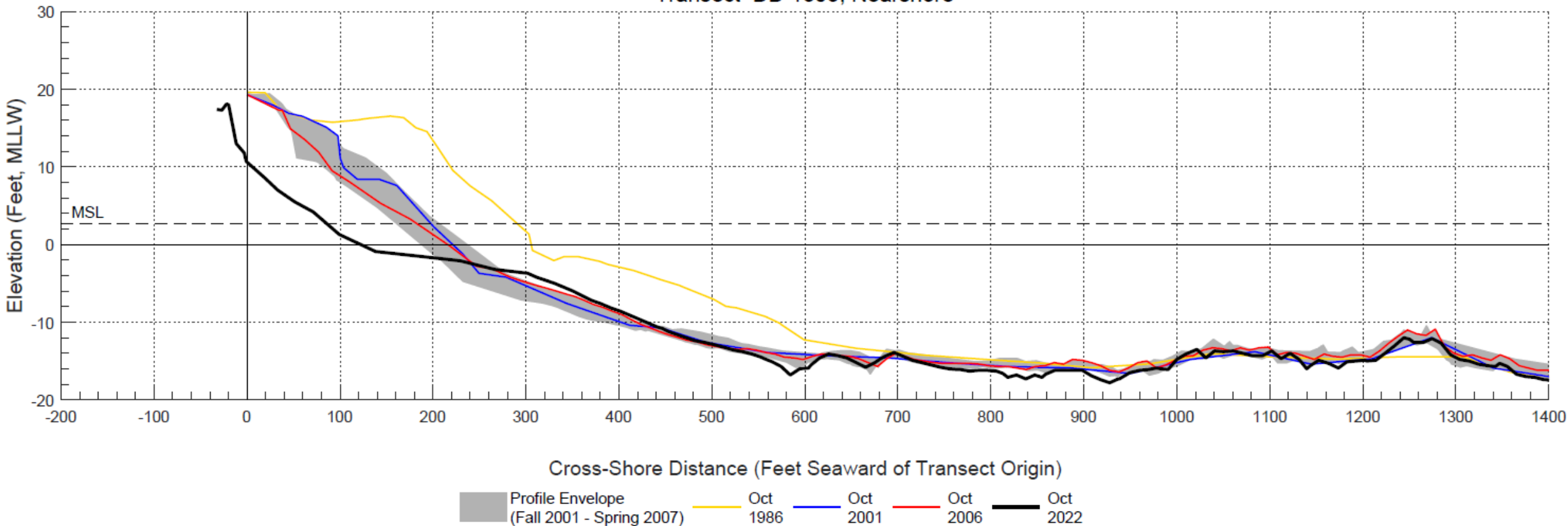


Beach Profile Surveys



Beach Profile Data Transect DB-1805 S. Doheny State Beach

Transect DB-1805, Nearshore



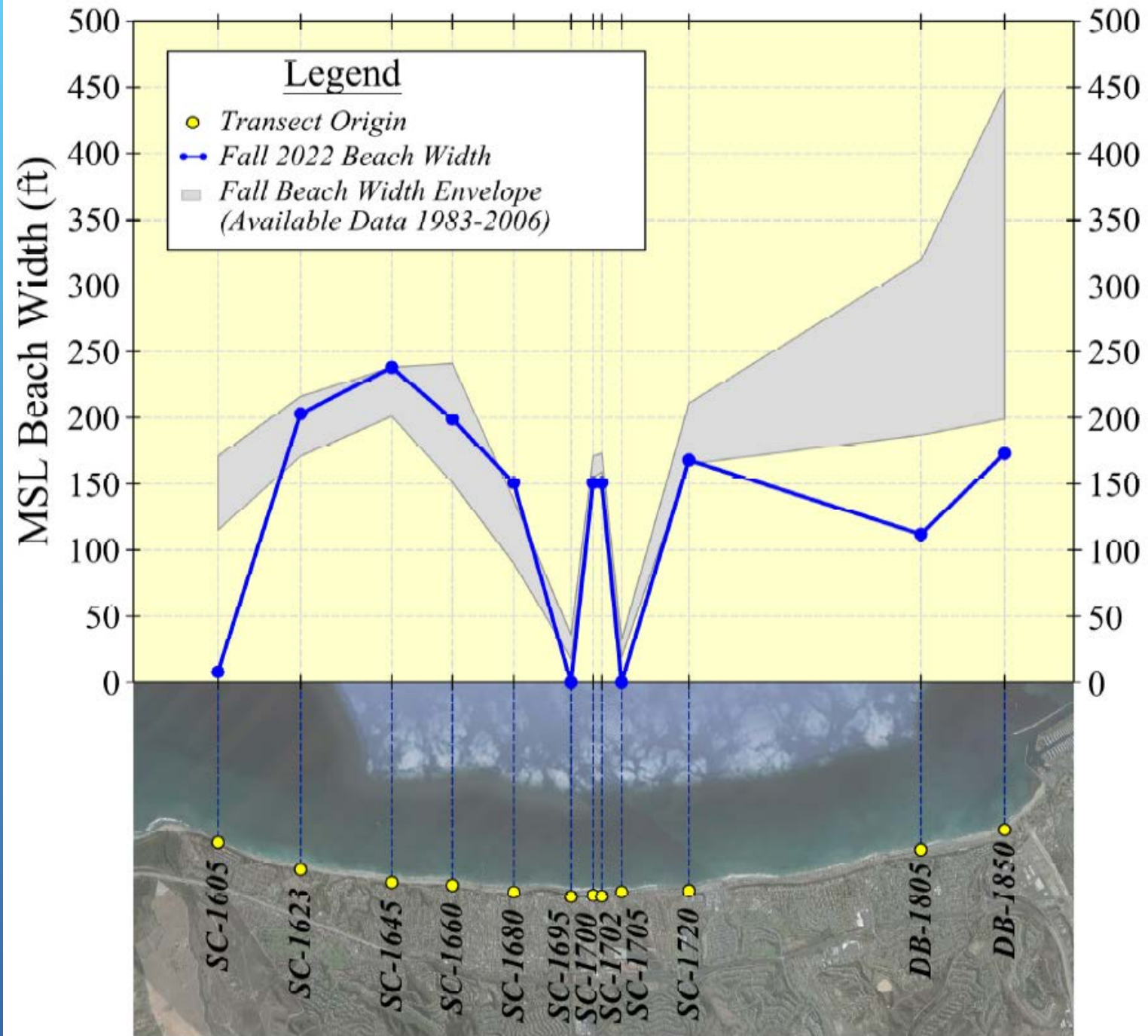
Findings

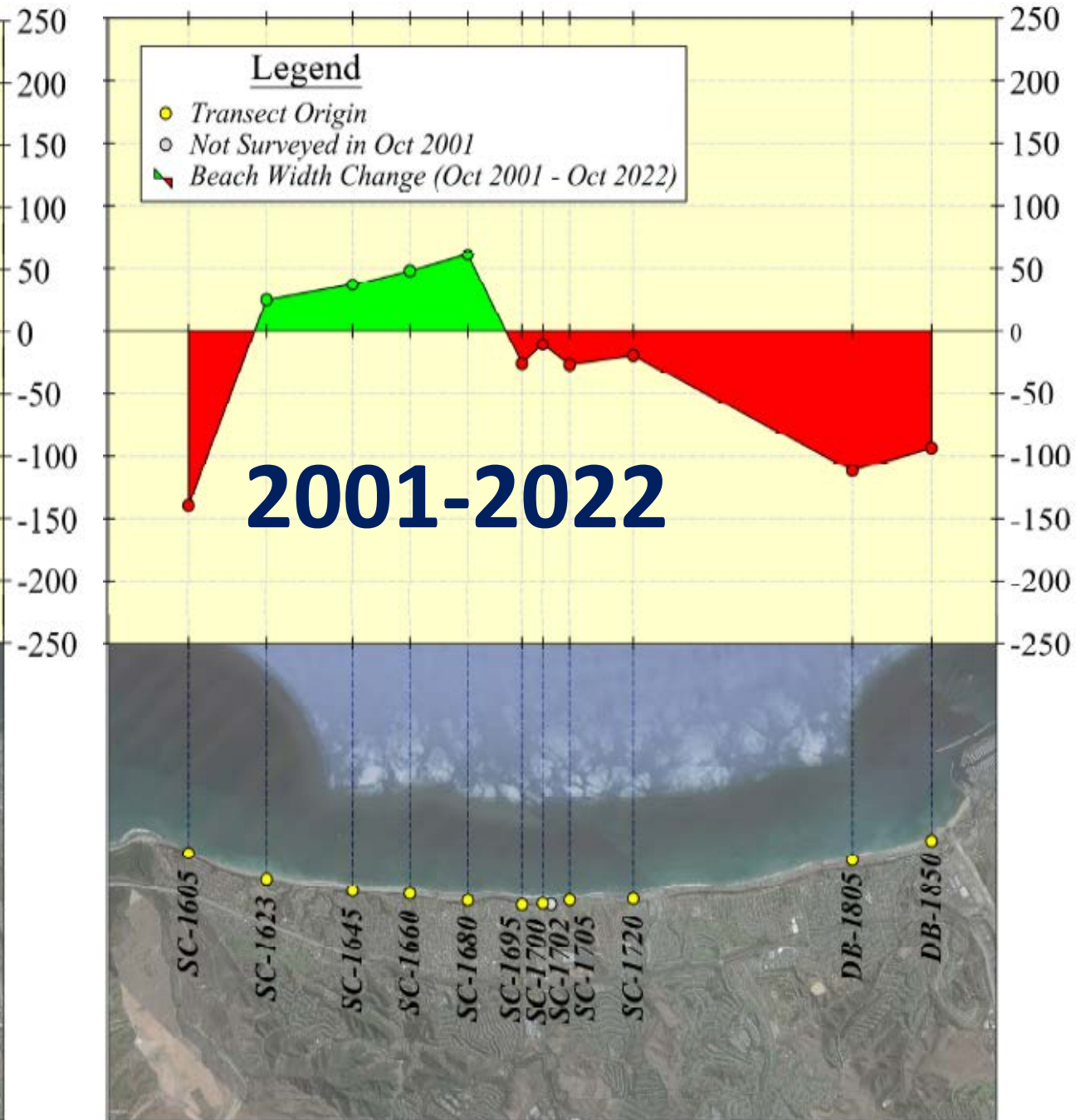
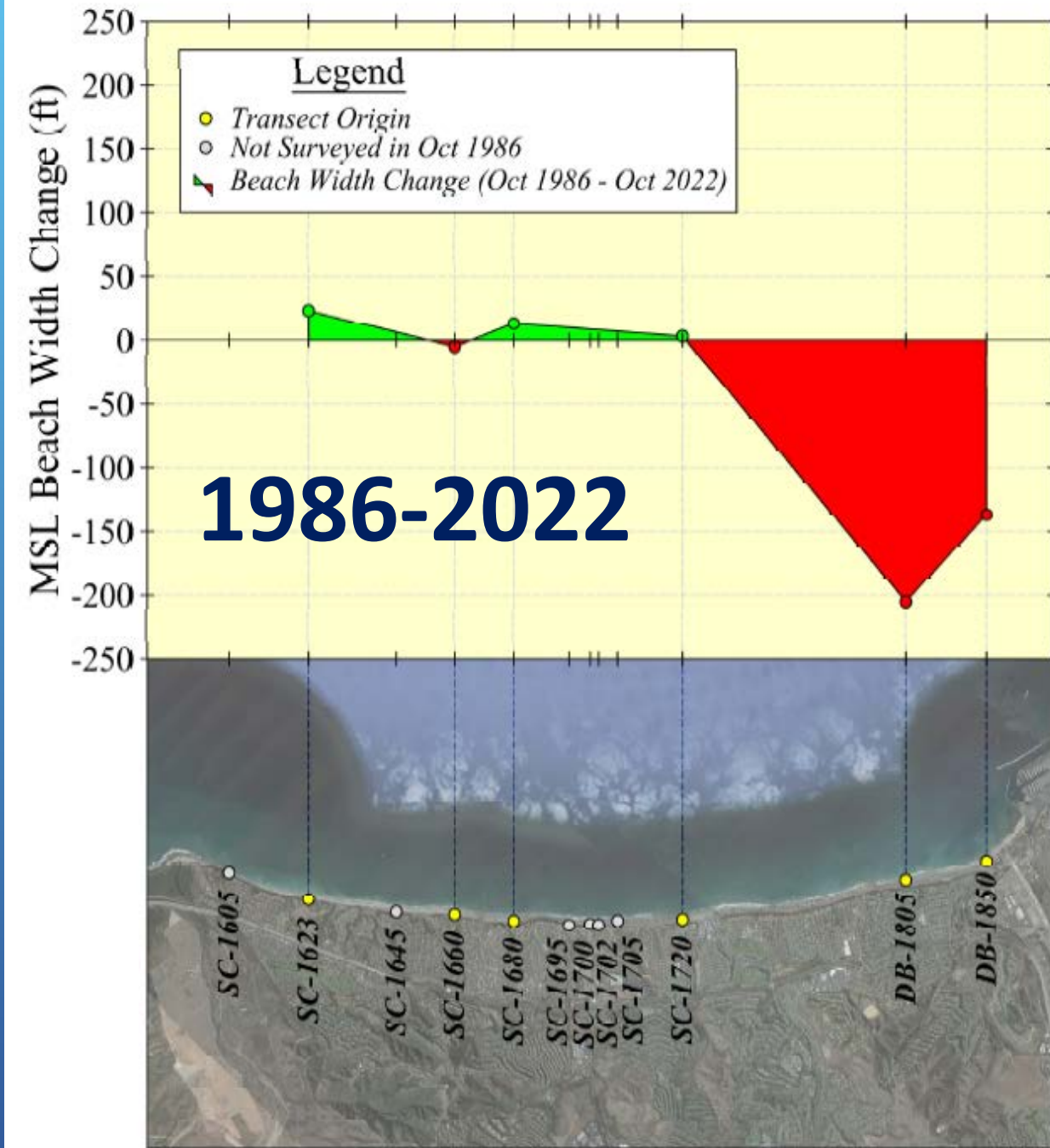
- **Fall 2022 Beach Widths**
- **Long-Term Beach Width Changes**
- **Shoreline Evolution**



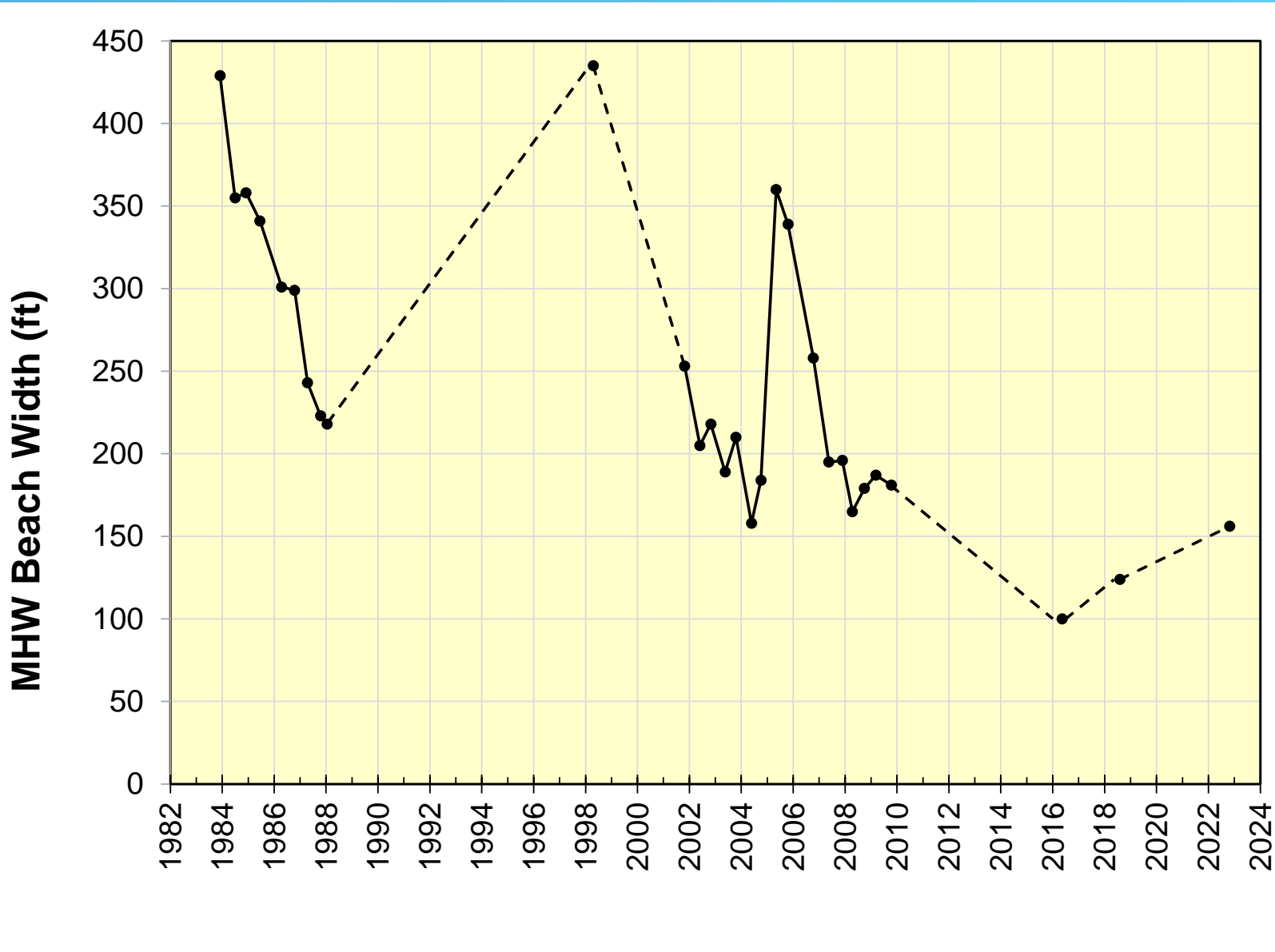
Fall 2022 Beach Widths

- Range: 0 ft to 238 ft
- Historical Minimums:
 - Doheny to North Beach
 - Cottons
- Above Average:
 - Pier Bowl Region
 - State Beach





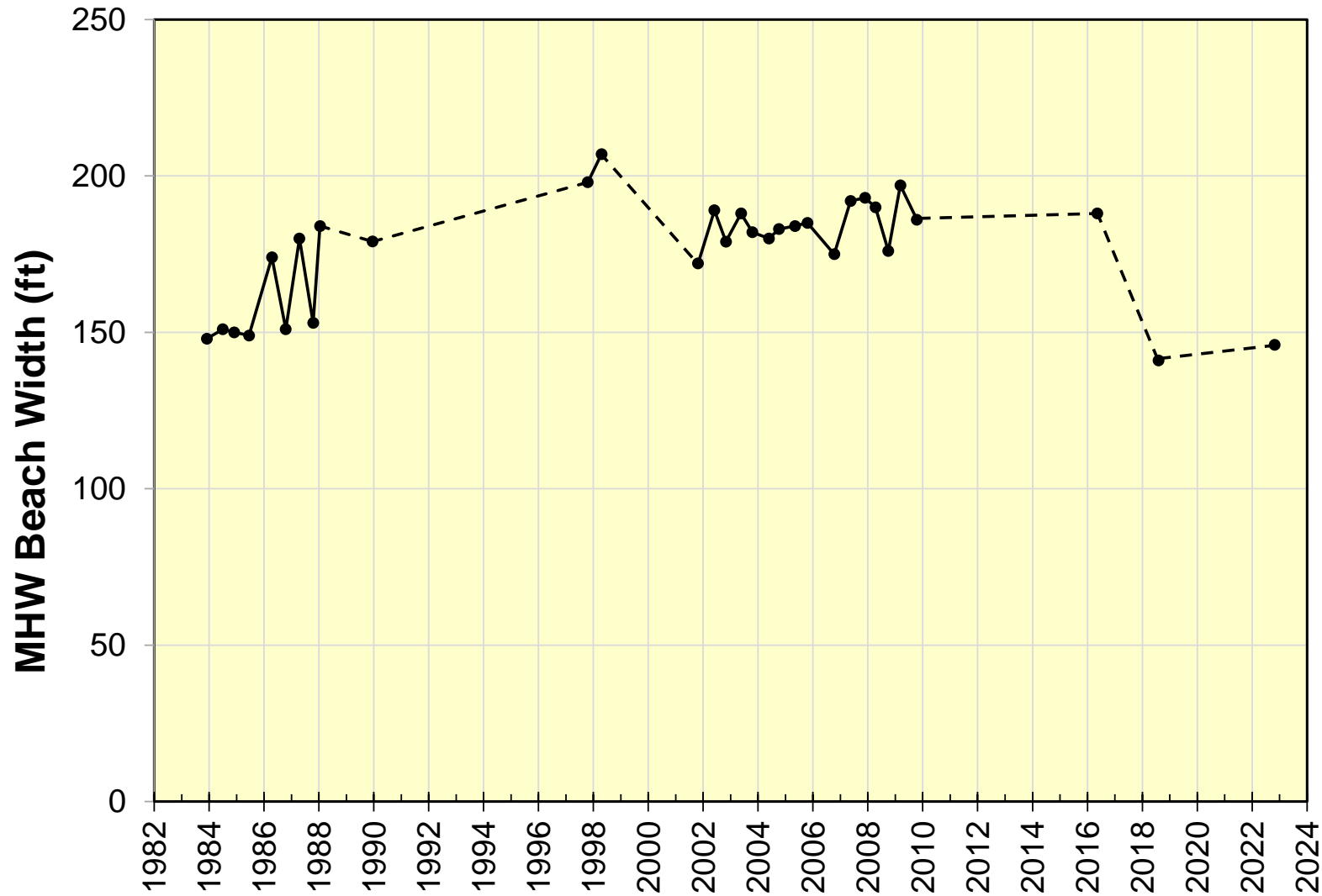
Transect DB-1850 (N. Doheny State Beach)



Transect DB-1850 (N. Doheny State Beach)



Transect SC-1720 (Shorecliffs)



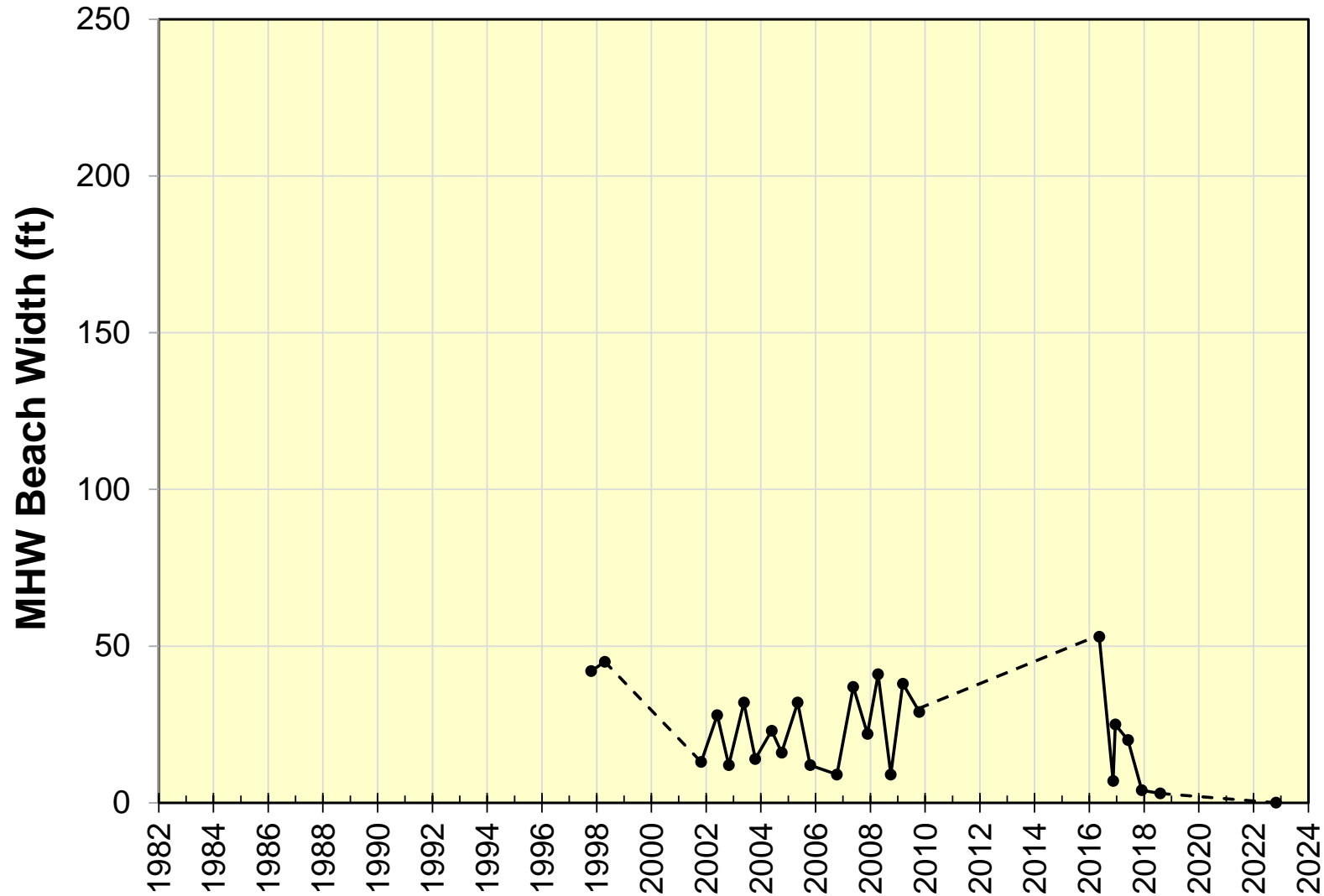
Fall 2006



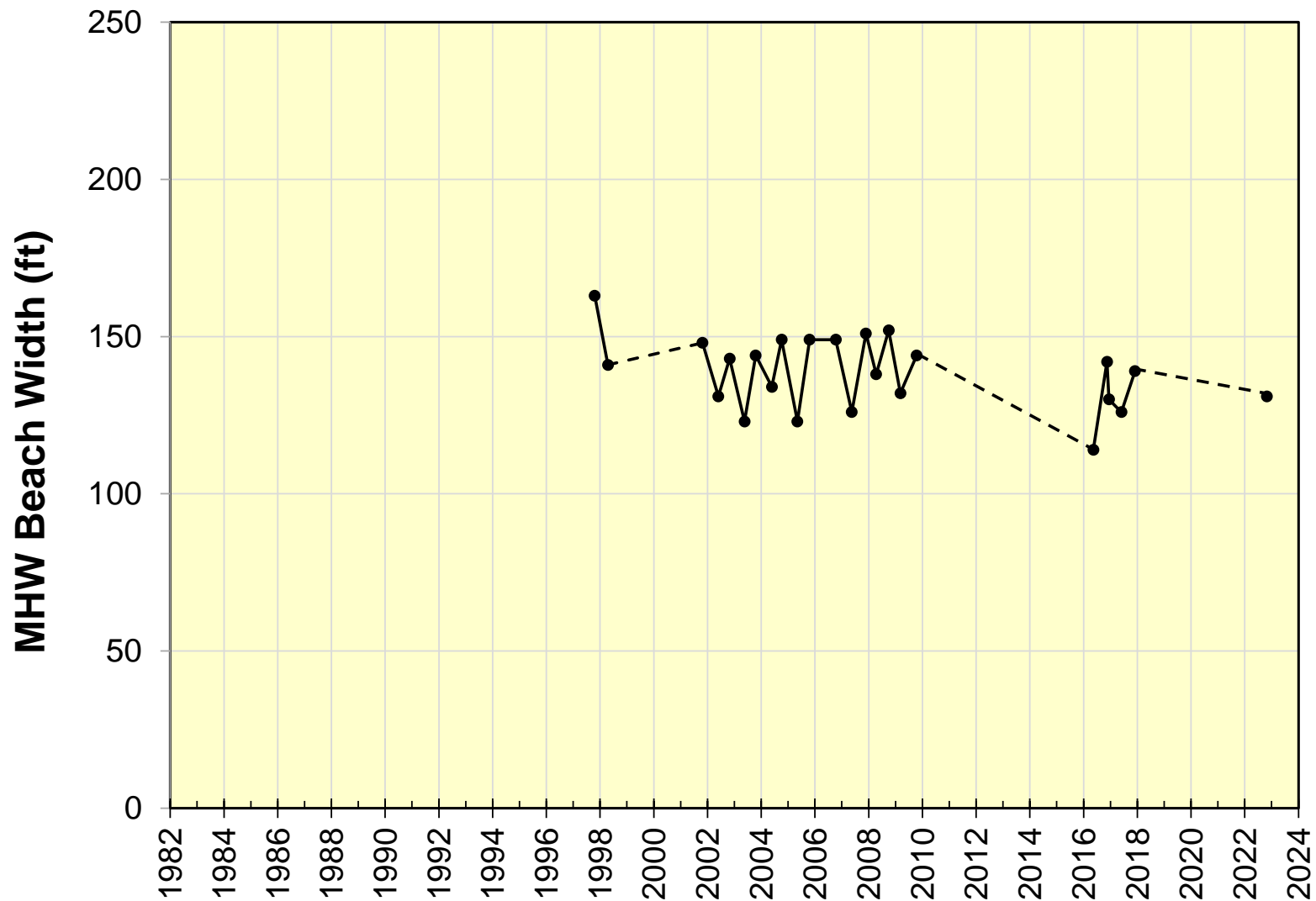
Fall 2022



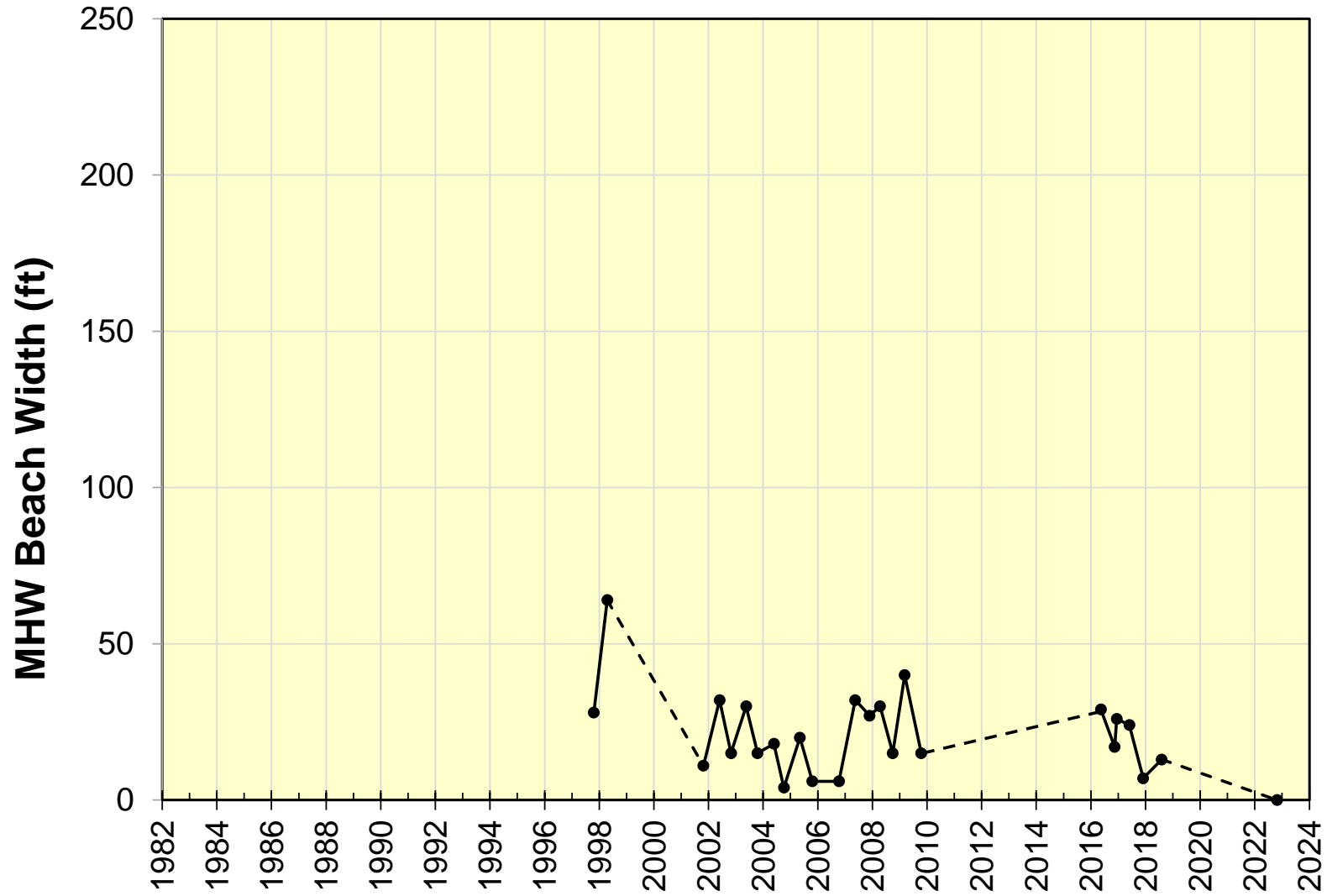
Transect SC-1705 (Capistrano Mobile Home Park)



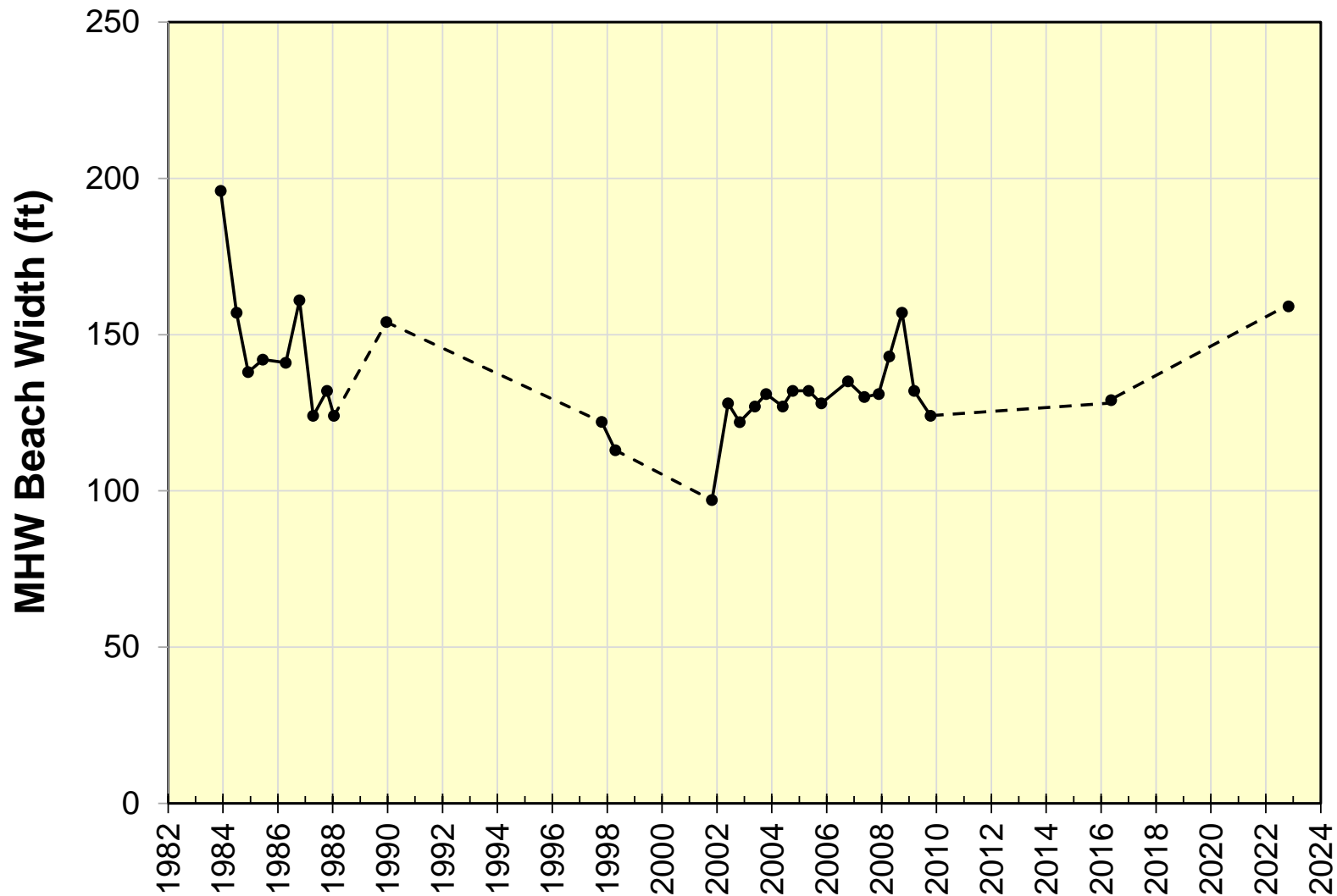
Transect SC-1700 (North Beach)



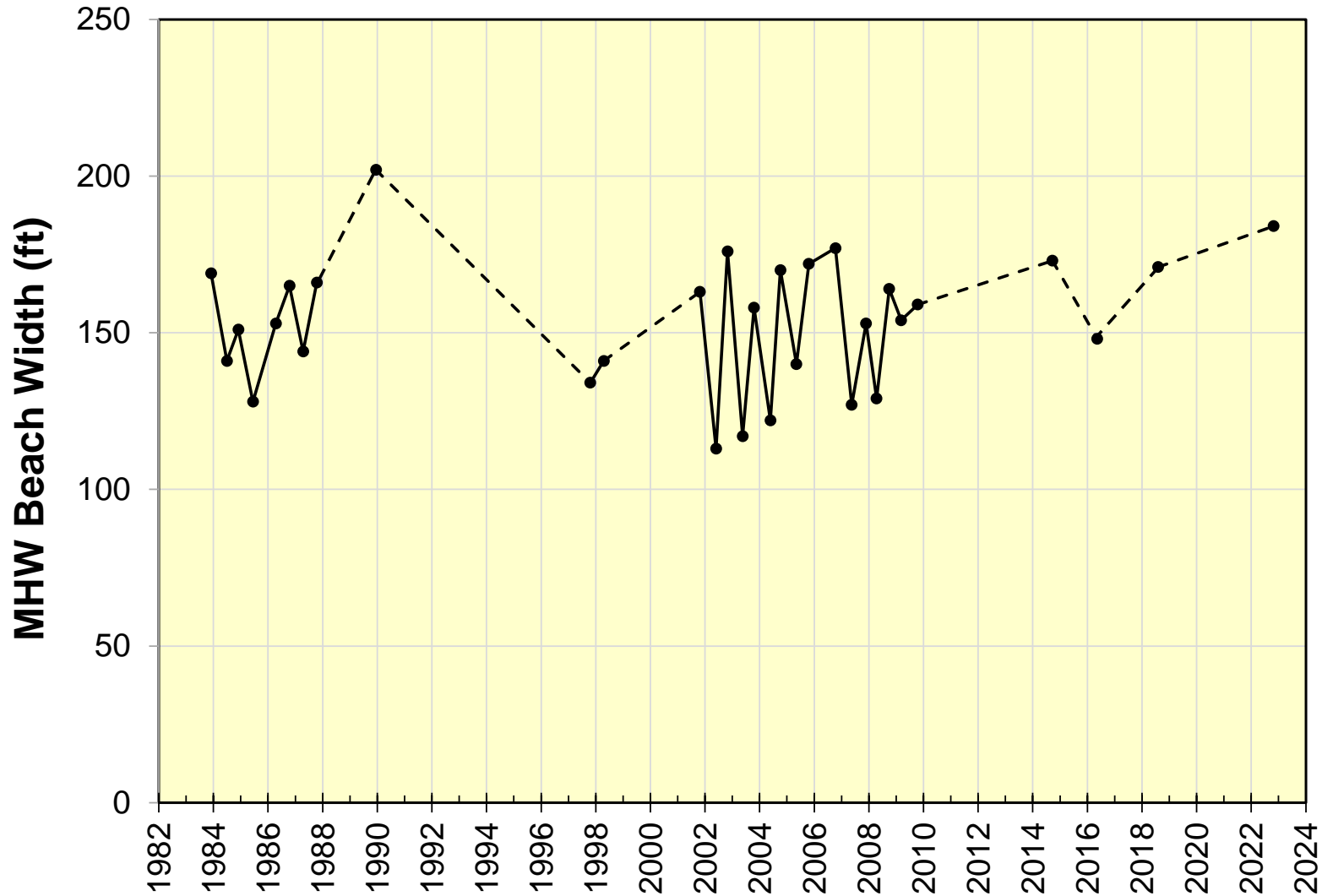
Transect SC-1695 (Dije Court – City Beach)



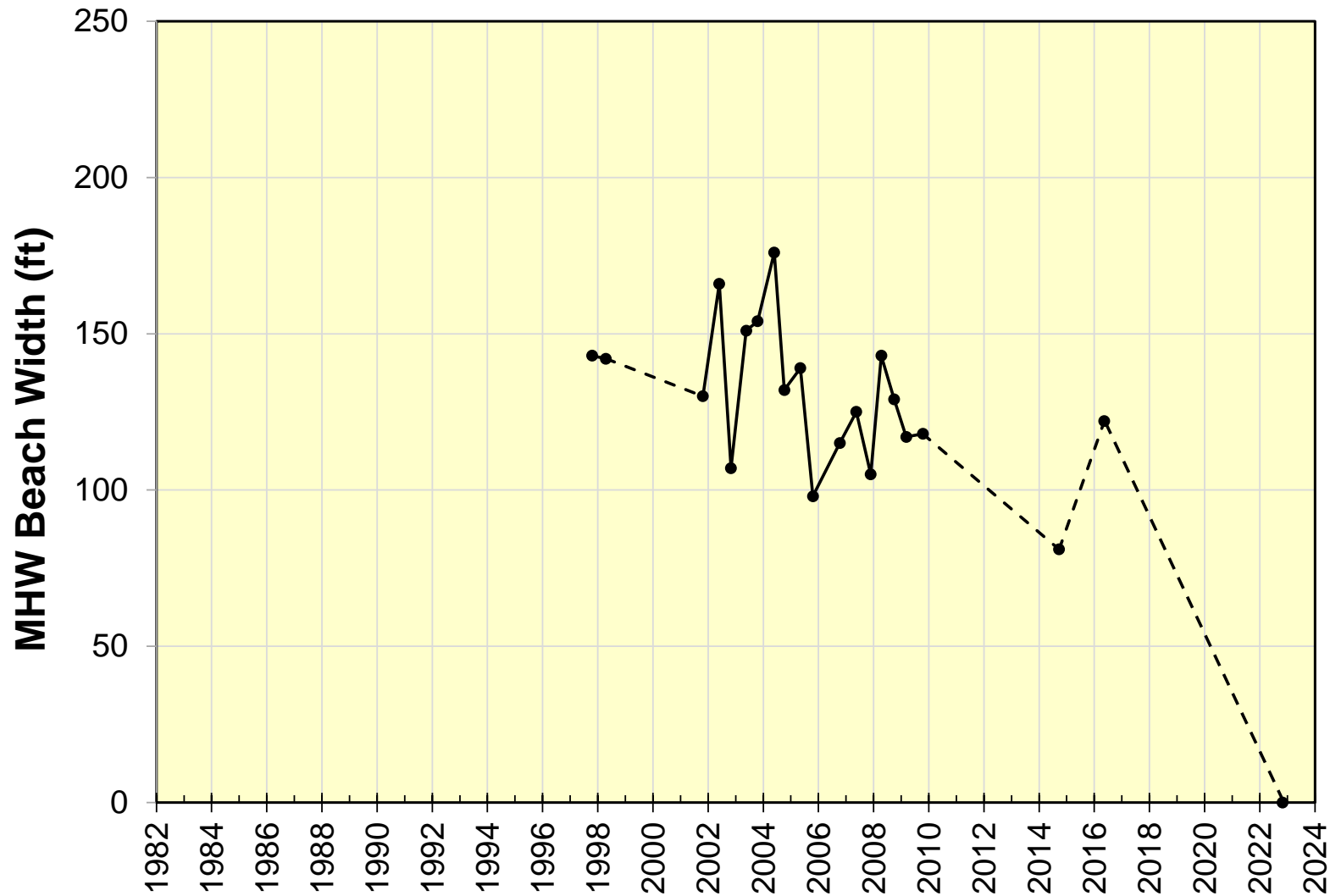
Transect SC-1660 (T-Street)



Transect SC-1623 (San Clemente State Beach)



Transect SC-1605 (Cotton's Pt; Cyprus Shores)

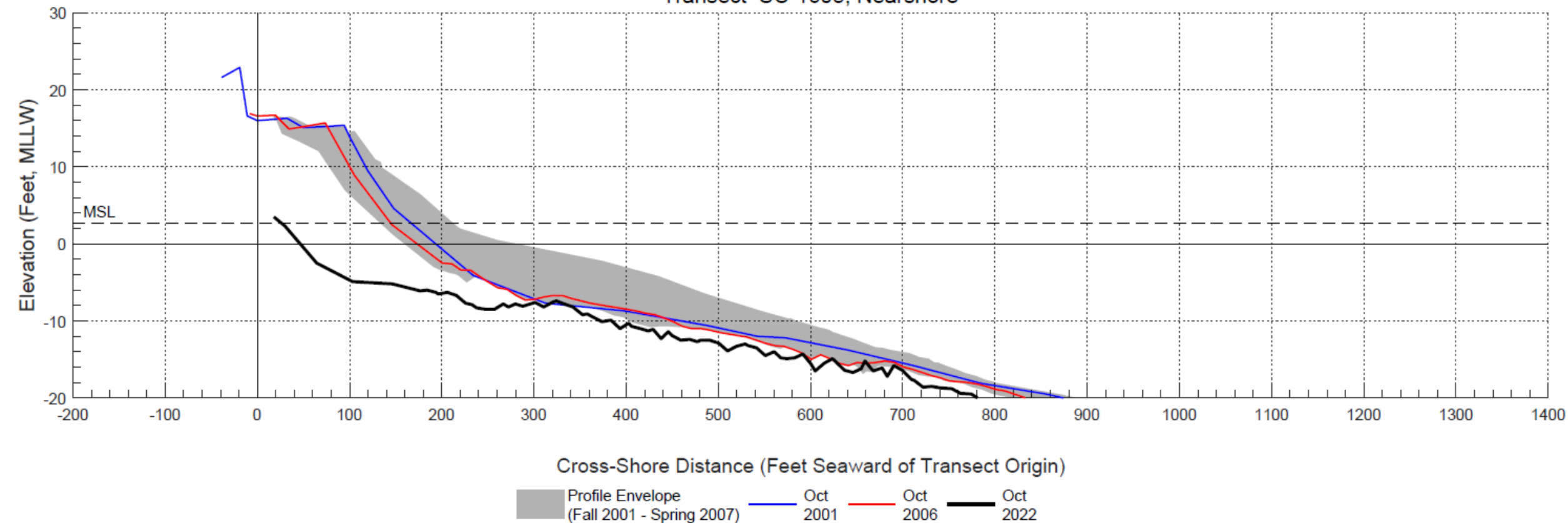


Beach Profile Data

Transect SC-1605

Cotton's Point – Cypress Shores

Transect SC-1605, Nearshore



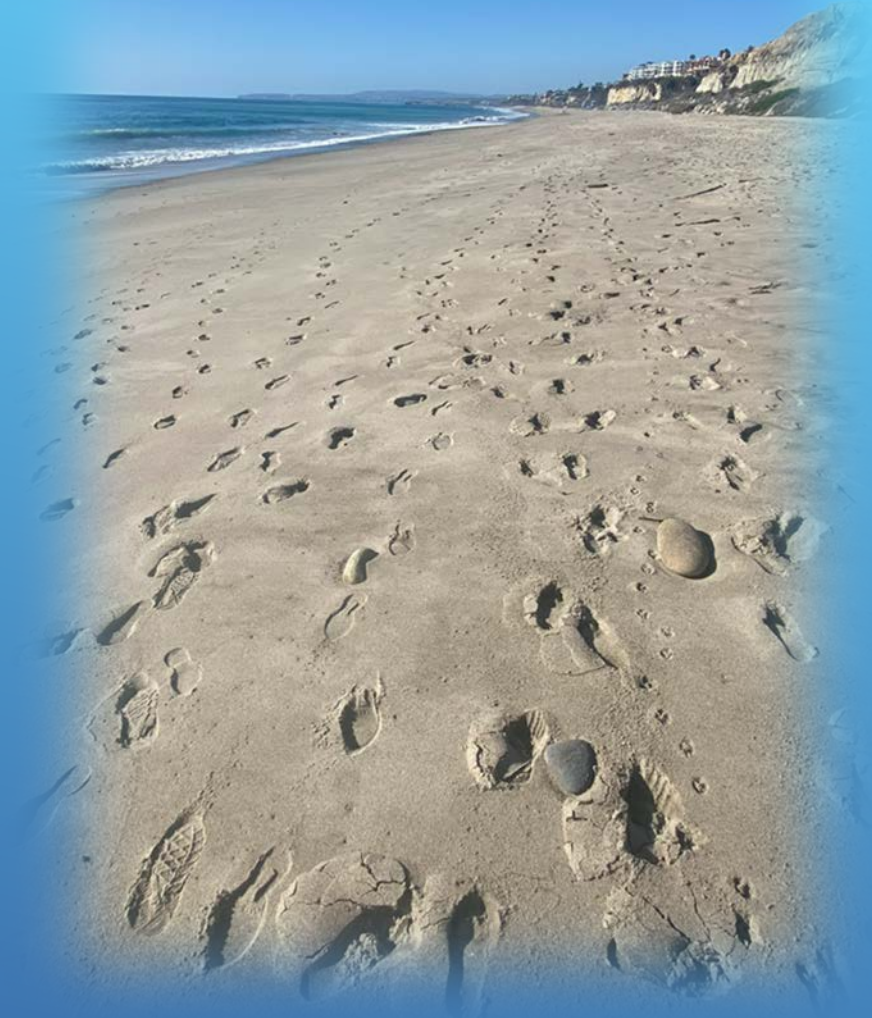
Summary

➤ Fall 2022 Shoreline Condition

- Beach Widths: 0 to 238 ft
- Historically Narrow Beaches at North and South Ends of Study Area
- Beach Widths about Average in Pier Bowl Region

➤ Long-Term Changes

- Losses from Doheny thru North Beach
- Modest Gains in Pier Bowl/State Beach Area
- Losses at Cotton's Pt



Future Activities

➤ Beach Profile Surveys

- 2023: Spring and Fall
- 2024: Spring and Fall
- 2025: Spring and Fall
- Field Activities Report for Each Survey

➤ Annual State of the Coast Presentation

- 2023
- 2024
- 2025



Questions

