



# ***Shoreline Preservation Working Group Agenda***

**Thursday, September 5, 2024**

**11:30 a.m.**

Welcome to SANDAG. The Shoreline Preservation Working Group meeting scheduled for Thursday, September 5, 2024, will be held in person in the SANDAG Board Room. While Working Group members will attend in person, members of the public will have the option of participating either in person or virtually.

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**Vision Statement:** *Pursuing a brighter future for all*

**Mission Statement:** *We are the regional agency that connects people, places, and innovative ideas by implementing solutions with our unique and diverse communities.*

**Our Commitment to Equity:** *We hold ourselves accountable to the communities we serve. We acknowledge we have much to learn and much to change; and we firmly uphold equity and inclusion for every person in the San Diego region. This includes historically underserved, systemically marginalized groups impacted by actions and inactions at all levels of our government and society.*

*We have an obligation to eliminate disparities and ensure that safe, healthy, accessible, and inclusive opportunities are available to everyone. The SANDAG equity action plan will inform how we plan, prioritize, fund, and build projects and programs; frame how we work with our communities; define how we recruit and develop our employees; guide our efforts to conduct unbiased research and interpret data; and set expectations for companies and stakeholders that work with us.*

*We are committed to creating a San Diego region where every person who visits, works, and lives can thrive.*



# Shoreline Preservation Working Group

Thursday, September 5, 2024

## Comments and Communications

### 1. Non-Agenda Public Comments/Member Comments

Members of the public shall have the opportunity to address the Shoreline Preservation Working Group (SPWG) on any issue within the jurisdiction of SPWG that is not on this agenda. Public speakers are limited to three minutes or less per person. Public comments under this agenda item will be limited to five public speakers. If the number of public comments under this agenda item exceeds five, additional public comments will be taken at the end of the agenda. SPWG members and SANDAG staff also may present brief updates and announcements under this agenda item.

## Consent

### +2. Approval of Meeting Minutes

*Tessa Lero, SANDAG*

Approve

The SPWG is asked to review and approve the minutes from its Thursday, March 7, 2024, meeting.

[Meeting Minutes](#)

## Reports

### +3.

#### Fiscal Year 2025 Work Plan Update

*Courtney Becker, SANDAG*

Discussion

Staff will present an overview of the draft SPWG Fiscal Year 2025 (FY 2025) Work Plan. SPWG members are asked to review and provide any input on the draft FY 2025 Work Plan.

[Fiscal Year 2025 Work Plan Update](#)

[Att. 1 - FY 2025 Workplan](#)

### +4.

#### Regional Shoreline Monitoring Program - 2023 Annual Report Update

*Greg Hearon, Coastal Frontiers Corporation*

Information

The consultant will present an overview of the 2023 Regional Shoreline Monitoring Program (RSMP) results and an update on the current RSMP contract.

Att. 1 - [2023 Regional Shoreline Monitoring Program \(RSMP\) Annual Report](#)

[Regional Shoreline Monitoring Program - 2023 Annual Report Update](#)

[Att. 2 - Regional Shoreline Monitoring Program FY25-27](#)

[Supporting Materials](#)

### +5.

Discussion

### **Regional Beach Sand Project III: Phase I Update**

*Cindy Kinkade, Dave Schug, AECOM; Chris Webb, Moffatt & Nichol; Dr. Phil King, Consultant*

The SPWG members are asked to review the proposed quantities, footprints and preliminary results from the economic analysis for Regional Beach Sand Project (RBSP) III for each coastal jurisdiction and provide feedback and recommendations to proceed.

#### **Regional Beach Sand Project III: Phase I Update**

Att. A - RBSP III - Oceanside

Att. B - RBSP III - Carlsbad

Att. C - RBSP III - Encinitas

Att. D - RBSP III - SB

Att. E - RBSP III - Del Mar

Att. F - RBSP III - San Diego

Att. G - RBSP III - Coronado

Att. H - RBSP III - IB

Att. I - RBSP III - San Clemente

Att. J - RBSP III - Dana Point

Supporting Materials

### **6. Adjournment**

The next SPWG meeting is scheduled for Thursday, December 5, 2024, at 11:30 a.m.

+ next to an agenda item indicates an attachment

\* next to an agenda item indicates that the Board of Directors also is acting as the San Diego County Regional Transportation Commission for that item

September 5, 2024

## **March 7, 2024, Meeting Minutes**

### **[View Meeting Video](#)**

Chair Dwight Worden (City of Del Mar) called the meeting of the Shoreline Preservation Working Group (SPWG) to order at 11:30 a.m.

#### **1. Public Comments/Communications/Member Comments**

Public comments: Dirk Ackema, Camilla Rang, Nancy, and Paul Richards.

Member comments: None.

Associate Regional Planner Courtney Becker presented a brief agency update.

#### **Consent**

#### **2. Approval of Meeting Minutes**

The SPWG was asked to approve the minutes from its Thursday, December 7, 2023, meeting.

#### **3. Request for Proposals: Regional Shoreline Monitoring Program**

This item provided an overview of the competitive bid process utilizing SANDAG's Environmental On-Call Contract to continue the Regional Shoreline Monitoring Program for the next five years.

Public comments: None.

Action: Upon a motion by Deputy Mayor Ryan Keim (City of Oceanside) and a second by Councilmember Jose Rodriguez (City of National City), the SPWG voted to approve the Consent Agenda.

The motion passed.

Yes: Chair Worden, Councilmember Mike Donovan (City of Coronado), Councilmember Rodriguez, Deputy Mayor Keim, and Councilmember Kristi Becker (City of Solana Beach).

No: None.

Abstain: Councilmember Carolyn Luna (City of Carlsbad) and Jessica Curren (US Navy).

Absent: City of Chula Vista, City of Imperial Beach, Port of San Diego, City of San Diego, City of Encinitas, and County of San Diego.

## **Reports**

### **4. Southern California Governance Structures for Shoreline Management**

#### **4A. Beach Erosion authority for Clean Oceans and Nourishment (BEACON)**

BEACON Executive Director Marc Beyeler presented a short review of BEACON, the Beach Erosion Authority for Clean Oceans and Nourishment. BEACON is a Joint Powers Authority comprised of the two counties of Santa Barbara and Ventura and the six coastal cities from Goleta to Pt. Hueneme.

#### **4B. Orange County Parks**

Susan Brodeur and Makana Nova, Orange County Parks, presented an overview of their efforts on the South Orange County Coastal Resilience Strategic Plan with a focus on regional coordination. In addition, the joint agency concepts to address coastal erosion and lessons learned will be presented for future projects.

Public comments: Dirk Ackema.

Action: Information.

### **5. Overview of the RE:BEACH Oceanside Competition**

City of Oceanside staff Jayme Timberlake presented an overview of the elements of the winning design and next steps for the RE:BEACH Oceanside Coastal Resilience Design Competition. The competition is hosted by the City of Oceanside to determine the most innovative, multi-benefit solution for retaining sand along the City's shoreline.

Public comments: None.

Action: Information.

### **6. Adjournment**

The next SPWG meeting is scheduled for Thursday, June 6, 2024, at 11:30 a.m.

Chair Worden adjourned the meeting at 1:14 p.m.



## Confirmed Attendance at Shoreline Preservation Working Group Meeting

Jurisdiction	Name	Attended
City of Carlsbad	Councilmember Carolyn Luna	Yes
	Mayor Keith Blackburn	No
City of Chula Vista	Mayor John McCann	No
	Vacant	n/a
City of Coronado	Councilmember Mike Donovan	Yes
	Councilmember John Duncan	No
City of Del Mar	Councilmember Dwight Worden, Chair	Yes
	Councilmember Terry Gaasterland	No
City of Encinitas	Councilmember Kellie Hinze	No
	Deputy Mayor Joy Lyndes	No
City of Imperial Beach	Councilmember Mitch McKay	No
	Mayor Paloma Aguirre	Yes
City of National City	Councilmember Jose Rodriguez	Yes
	Councilmember Marcus Bush	No
City of Oceanside	Deputy Mayor Ryan Keim	Yes
	Councilmember Eric Joyce	No
Port of San Diego	Commissioner Dan Malcolm	No
	Eileen Maher	No
City of San Diego	Councilmember Joe LaCava	No
	Councilmember Jennifer Campbell	No
County of San Diego	Supervisor Terra Lawson-Remer	No
	Supervisor Joel Anderson	No
City of Solana Beach	Councilmember Kristi Becker	Yes
	Deputy Mayor David Zito	No
U.S. Navy	Jason Golumbskie-Jones	No
	Jessica Curran	Yes
<b>Advisory Members</b>		
California Coastal Commission	Kanani Leslie	No
National Marine Fisheries Service	Bryant Chesney	No
State Department of Fish and Wildlife	Leslie Hart	No
State Department of Parks and Recreation	Darren Smith	No
State Lands Commission	Kenneth Foster	No
U.S. Army Corps of Engineers	Heather Schlosser	No

California Coastal Coalition	Steve Aceti	No
California Lobster and Trap Fishermen's Association	Vacant	No
Coastal Environmental Rights Foundation	Marco Gonzalez	No
Scripps Institute of Oceanography	Dr. Reinhard Flick	No
Southern California Tribal Chairmen's Association	Michael Connolly	No
Surfrider Foundation	Mitch Silverstein	No
Caltrans	Reece Allen	Yes

DRAFT

September 5, 2024

## Fiscal Year 2025 Work Plan Update

### Overview

The Shoreline Preservation Working Group (SPWG) was established in the 1980s to address regional shoreline erosion and preservation issues through policy, planning, regional monitoring, and the implementation of climate adaptation projects. The SPWG meets quarterly and is guided by an Annual Work Plan.

### Key Considerations

Each year, SANDAG staff prepares an annual Work Plan that outlines proposed meeting topics and reports to be presented and discussed at future SPWG meetings. SANDAG staff will present an overview of the proposed SPWG FY 2025 Work Plan (Attachment 1) and ask members to provide feedback for future meeting topic/project recommendations.

### Next Steps

The Work Plan may be updated during the fiscal year with new and/or changing meeting topics. The Work Plan will be redistributed to the SPWG members if any revisions are made through FY 2025.

***Keith Greer, Deputy Director of Environmental Compliance and Climate***

Attachment: 1. SPWG Draft Fiscal Year 2025 Work Plan

#### Action: **Discussion**

Staff will present an overview of the draft SPWG Fiscal Year 2025 (FY 2025) Work Plan. SPWG members are asked to review and provide any input on the draft FY 2025 Work Plan.

#### **Fiscal Impact:**

None.

#### **Schedule/Scope Impact:**

None.



## SHORELINE PRESERVATION WORKING GROUP FY 2025 Workplan

The Shoreline Preservation Working Group meets quarterly to provide technical expertise, background knowledge and inter agency coordination on regional shoreline issues with the goal to promote sand preservation on all beaches in the three littoral cells of the region and to promote best practices for adapting to sea level rise among the coastal and bay front cities. This workplan will serve as a roadmap for Working Group tasks and activities that promote sand preservation on all beaches in the three littoral cells of the region and to promote best practices for adapting to sea level rise among the coastal and bay front cities. The workplan is intended to provide focus and will be updated on an annual basis. The workplan is a living document and may be amended as new initiatives emerge during the course of the year, and task forces may be created to accomplish the listed activities.

### **Beach Sand Preservation Projects**

- Regional Beach Sand Project III
- Status of ReBeach - Oceanside Beach Sand Replacement & Retention Project
- The future of SCoup permits (possible regional SCoup permit)
- San Clemente Beach Nourishment Project
- Port of San Diego Sand Nourishment to Imperial Beach
- City of Imperial Beach Sediment Management Plan for Tijuana River Valley

### **Shoreline Monitoring**

- Regional Shoreline Monitoring Program
- USACE Coastal Sediment Management Monitoring Results
- Open data portal for shoreline monitoring
- Innovative coastal monitoring techniques

### **Policy and Adaptation Strategies**

- Review and update existing shoreline policy documents
- California State Parks Sea-Level Rise Strategy
- California State Sea-Level Rise Guidance Update
- Living Shorelines and other Nature Based Climate Solutions
- Southern California information exchange on adaptation projects
- Coastal Resiliency Planning

### **State of the Science**

- Understanding sediment transport rates and directions at a local scale
- Coastal Data Information Program
- Modern understanding of the effects of El Nino



## FY 2025 Tentative Topics

Date	Topics
Q1 September	<ul style="list-style-type: none"> <li>• FY 2025 SPWG Work Plan</li> <li>• Regional Beach Sand Project III – Phase I Status and Preliminary Recommendations</li> <li>• Regional Shoreline Monitoring Program (Spring Survey Result)</li> </ul>
Q2 December	<ul style="list-style-type: none"> <li>• Sediment Management Technical Taskforce Report Out &amp; Recommendations</li> <li>• California State Sea-Level Rise Guidance Update</li> <li>• San Clemente Beach Nourishment– Sales Tax Measure</li> </ul>
Q3 March*	<ul style="list-style-type: none"> <li>• Southern California Beach Erosion Collaborative (Panel Discussion)</li> <li>• ReBeach Status Update</li> </ul>
Q4 June	<ul style="list-style-type: none"> <li>• Final Results of RBSP III Feasibility Study &amp; Economic Analysis</li> <li>• Regional Shoreline Monitoring Program (Fall Survey Results)</li> <li>• USACE Coastal Sediment Management Monitoring Results</li> </ul>

*Offsite meeting: TBD*

September 5, 2024

## Regional Shoreline Monitoring Program - 2023 Annual Report Update

### Overview

With over 70 miles of coastline, San Diego is known world-wide for its dramatic shoreline and beautiful beaches. However, with climate hazards such as increasing, global temperatures, and rising sea levels, policy makers are challenged with sustaining San Diego's beaches and addressing new threats to coastal infrastructure. As a response to these threats, SANDAG established the Shoreline Preservation Working Group (SPWG) in the 1980s to address regional shoreline erosion and preservation issues through policy, planning, regional monitoring, and the implementation of climate adaptation projects. An overview of the [2023 Regional Shoreline Monitoring Program \(RSMP\) Annual Report](#) results will be presented.

#### Action: Information

The consultant will present an overview of the 2023 Regional Shoreline Monitoring Program (RSMP) results and an update on the current RSMP contract.

#### Fiscal Impact:

None.

#### Schedule/Scope Impact:

None.

### Key Considerations

- In 1996 the SPWG established the RSMP to better track beach width change over time. The RSMP tracks the status and trends of sand movement across the region's beaches and is funded by the coastal jurisdictions. Monitoring reports are presented to the SPWG biannually to help make decisions on sediment management. In addition, SANDAG staff manages a robust monthly photographic monitoring program at 38 sites along the coast within the San Diego region. These photographs and reports are saved on SANDAG's digital server and posted to the SANDAG website annually.
- On July 24, 2024, SANDAG executed a new consultant contract to continue the Regional Shoreline Monitoring Program FY 2025-2027. This contract was awarded to Dudek through a competitive bid process and is set to expire on April 28, 2028. The Notice to Proceed will include continuing the Baseline Shoreline Monitoring Program (Attachment 2; Tasks 1-4) with the possibility to execute Optional Task 5: Establish 5 Additional Transects prior to the Spring beach monitoring surveys (Spring 2025). The consultant will perform the Fall beach monitoring surveys this October 2024.

### Next Steps

SANDAG will distribute the 2023 RSMP Annual Report to the SPWG members for review.

**Keith Greer, Deputy Director of Environmental Compliance and Climate**

Attachments:      1. 2023 Annual Regional Shoreline Monitoring Report  
                             2. Regional Shoreline Monitoring Program FY 2025-2027

**TASK ORDER FOR SERVICES BETWEEN  
THE SAN DIEGO ASSOCIATION OF GOVERNMENTS  
AND DUDEK**

**TASK ORDER NO. 1**

**SANDAG AGREEMENT NO. S1190275**

- I. Under the Agreement between the San Diego Association of Governments ("SANDAG") and DUDEK ("Consultant"), dated 06/07/2023, Consultant is responsible for providing services and deliverables described in the Scope of Work of the Agreement. All of the terms of said Agreement are incorporated herein by reference.
- II. This Task Order authorizes Consultant to commence performance on the Regional Shoreline Monitoring Program FY 25-27 (hereinafter referred to as the "Project") according to the terms of the Agreement. The Project Scope of Work is attached as an Exhibit to this Task Order.]
- III. The parties anticipate that the entire Scope of Work on the Project will be broader than what is described in the current Scope of Work for this Task Order. All work that may be assigned is within the Scope of Work to the Agreement and would generally consist of Tasks 1-4, however SANDAG may exercise Tasks 5, 6, and 7 as outlined in the Scope of Work. The work being awarded to Consultant on the Project at this time is described in the exhibits to this Task Order for a specific Project phase and/or period of time. The parties contemplate that additional work by Consultant in the future will be needed for the Project if various conditions are met. If Consultant's performance demonstrates that it will continue to provide the best value to SANDAG from among other eligible consultants, SANDAG determines it wants the Project to continue, and sufficient funding for additional work is allocated, Consultant could be awarded one or more amendments to this Task Order to perform additional work on the Project.
- IV. Consultant shall be paid using the following method(s) for this Task Order, up to an amount not to exceed \$561,318.15 for work performed on the Project pursuant to this Task Order.
  - ☒ Lump Sum
  - ☒ Cost Per Unit of Work
  - ☐ Specific Rates of Compensation
  - ☐ Cost Plus Fixed Fee

The Payment Schedule is attached as an Exhibit to this Task Order. Consultant will be reimbursed for incurred (actual) Other Direct Costs (ODCs) besides salaries indicated in the Payment Schedule. No markup of ODCs is permitted and receipts for each incurred expense must be submitted to SANDAG. Time spent preparing invoices shall be included in the Consultant's overhead cost. SANDAG shall not pay for Consultant time spent preparing billing for SANDAG.

- V. The term of performance for this Task Order is effective as of the NTP to 04/28/2028. SANDAG shall not pay for services rendered by the Consultant on this Task Order after the termination date. The Project Schedule is attached as an Exhibit to the Task Order.

- VI. This Task Order is subject to the following Disadvantaged Business Enterprise (DBE) requirements:

SANDAG has not established a DBE goal for this Task Order; however, Consultant is encouraged to obtain DBE participation for work performed pursuant to this Task Order. Consultant is still obligated to meet DBE requirements on other Task Orders when a goal is set on a Task Order with federal funds. Consultant has agreed to use good faith efforts to meet or exceed DBE goals on such Task Orders within the range identified in the Agreement.

- VII. This Task Order may be executed and delivered by electronic signature. This Task Order may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same agreement.

The persons below assert that they are authorized to execute this Task Order, which shall be effective as of the last date a party to the Task Order provides an electronic signature below.

SAN DIEGO ASSOCIATION OF  
GOVERNMENTS

DUDEK

  
Antoinette Meier (Jul 23, 2024 16:00 PDT)  
23/07/24  
**ANTOINETTE MEIER**  
Senior Director of Regional Planning

  
23/07/24  
**JOSEPH MONACO**  
President/CEO

APPROVED AS TO FORM AND  
LEGALITY:

OGC signature not required per  
Delegation of Authority Policy

Office of General Counsel

Exhibits:

- Project Scope of Work
- Payment Schedule
- DBE/SB Utilization Summary
- Project Schedule
- DBE Commitment Form



## PROJECT SCOPE OF WORK

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### I. EXECUTIVE SUMMARY

The [Regional Shoreline Monitoring Program](#) (RSMP) provides physical measurements of the region's beaches essential to the design and evaluation of efforts to manage the region's shoreline. The RSMP measures the impacts of beach erosion over time, documents the benefits of sand replenishment projects, and helps to improve the design and effectiveness of beach fills. RSMP success depends on continuity of the fundamental components including beach monitoring and lagoon entrance monitoring. Consistency over time has exposed trends, which are used to plan climate adaptation projects, such as the Regional Beach Sand Projects (RBSP), lagoon restoration projects which enhance the resilience of the coast, and future regional pilot sand retention device projects.

### II. SCOPE OF WORK

#### **Task 1. Survey Control Recovery and Maintenance**

Consultant shall update benchmarks at the historical SANDAG sponsored transect locations included in the Base Program described in Table 1, *Beach Profile Transect Locations*.

##### **Task 1 Deliverables:**

1. Provide SANDAG updated control sheets, annually, that describe the location and condition of each benchmark as well as note any significant changes.
2. Quarterly Reports detailing work performed, successes and challenges experienced, anticipated work to be performed for the next quarter, and any media (photographs, videos, maps, etc.) will accompany each invoice submission.

#### **Task 2. Spring & Fall Fiscal Year (FY) 2025-2027<sup>1</sup> Beach Profile Surveys**

Consultant shall obtain fall beach profile data compatible with historical data at the 38 SANDAG sponsored Base Program transects described in Table 1. The methods used to collect the profile data shall be comparable to those used in previous Regional Beach Monitoring Programs. Profiles will extend from the back beach to beyond the presumed depth of closure.

Consultant shall obtain spring beach profile data compatible with historical data at the 38 SANDAG sponsored Base Program transects described in Table 1. The methods used to collect the profile data shall be comparable to those used in previous Regional Beach Monitoring Programs. Profiles will extend from the back beach to beyond the presumed depth of closure.

##### **Task 2 Deliverables:**

1. Analyzed Fall and Spring beach profile data (digital files, etc. ArcMap files, etc.) to be provided to SANDAG annually as well as incorporated into the annual reports.
2. Quarterly Reports detailing work performed, successes and challenges experienced, anticipated work to be performed for the next quarter, and any media (photographs, videos, maps, etc.) will accompany each invoice submission.

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<sup>1</sup> Based on the given project schedule, there will only be monitoring in the Fall of 2027; Spring and Fall of 2028 monitoring will be dependent on the execution of a new contract agreement or amendment to the current contract

### **Task 3. Regional Shoreline Monitoring Annual Reports for FY 2025-2027**

Consultant shall prepare Annual Reports for FY 2025-2027<sup>2</sup> that contains the following products for the Base Program beach transects included in the Spring and Fall Surveys.

1. A plot that displays the beach profile data obtained along each transect.
2. A tabulation of the Mean Sea Level (MSL) shoreline positions and changes measured at each transect since Spring 1996.
3. A tabulation of the beach width (reckoned from landward limit of the sandy beach to the MSL shoreline) measured at each transect since Spring 1996.
4. A tabulation of changes in shoreline volume per lineal foot at each transect for select winter, summer, annual, and long-term periods between 1997 and 2028.

In addition to these graphical and tabular products, which shall be provided in digital format as one or more appendices, the Annual Report shall include: (1) an overview of historical and recent environmental conditions, nourishment activities, and sediment bypassing operations; (2) a summary of the regional beach changes noted during the previous one-year period, and (3) an assessment of the impacts of the recent environmental conditions, nourishment activities, and bypassing activities on the observed condition of the beaches. A summary of lagoon entrance changes noted during the previous one-year period also will be included.

#### **Task 3 Deliverables:**

1. Draft report will be prepared for review by SANDAG with a final report (with appendices) incorporating comments.
2. Annual presentations on the FY 2025-2027 Regional Shoreline Monitoring Program to SANDAG's Shoreline Preservation Working Group in June of each year.
3. Quarterly Reports detailing work performed, successes and challenges experienced, anticipated work to be performed for the next quarter, and any media (photographs, videos, maps, etc.) will accompany each invoice submission.
4. Final Annual Report(s) will be due June of each active year of the project following the monitoring year.<sup>3</sup>

### **Task 4. State Parks Scientific Research and Collections Permit(s)**

Consultant shall prepare an application(s) for a Scientific Research and Collections Permit(s) for surveys at beaches managed by the California Department of Parks and Recreation. The permit application can be downloaded from the [California Department of Parks and Recreation website](#). Provide relevant survey data from the California Department of Parks and Recreation, as dictated by the permit. Permit(s) must be issued before beginning fall beach monitoring activities each year.

#### **Task 4 Deliverables:**

1. California Department of Parks and Recreation Scientific Research and Collections Permit(s)

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<sup>2</sup> To provide continuity, the Annual Report years are listed as the following: 2024 Annual Report is monitoring performed from November 2023-October 2024; 2025 Annual Report is monitoring performed from November 2024- October 2025; 2026 Annual Report is monitoring performed from November 2025-October 2026; 2027 Annual Report is monitoring performed from November 2026-October 2027

<sup>3</sup> Annual Report due dates are as the following: 2024 Annual Report will be due June 30, 2025; 2025 Annual Report will be due June 30, 2026; 2026 Annual Report will be due June 30, 2027.

### **OPTIONAL Task 5. Establish 5 Additional Transects**

If exercised by SANDAG, based on the 28 years' worth of beach monitoring data and best available science, four additional transects will be added to the base monitoring program in order to track and understand sub-littoral cell sand movement and to close gaps in current monitoring data for South Carlsbad, Cardiff, Del Mar, and Coronado. Transects were identified to better understand beach erosion hot spots, impacts from other regional beach nourishment efforts, and success of Regional Beach Sand Nourishment Projects.

#### **OPTIONAL Task 5 Deliverables:**

1. 5 additional transects (Table 2) will be included for Fall and Spring beach profile data collection to be provided to SANDAG annually as well as incorporated into the annual reports.
2. Quarterly Reports detailing work performed, successes and challenges experienced, anticipated work to be performed for the next quarter, and any media (photographs, videos, maps, etc.) will accompany each invoice submission.

### **OPTIONAL Task 6. Tidal Datum Epoch Update**

If exercised by SANDAG, an update to the beach profile data obtained from 1996 to the 2002-2020 National Tidal Datum Epoch based on datum information derived by the National Ocean Service will be performed. It is anticipated that the [National Oceanic and Atmospheric Administration's \(NOAA\) National Ocean Service](#) will be releasing a new National Tidal Datum Epoch (2002-2020 Epoch) in 2026/2027.

Currently, the beach profile data included in the Regional Shoreline Monitoring Program are referenced to the current tidal datum epoch (Mean Lower Low Water for the 1983-2001 Epoch). Updating the beach profile data and the derivative products (computed beach widths and sand volumes) to the new National Tidal Datum Epoch will implicitly account for sea level rise and appropriately reflect the effect on Mean Sea Level (MSL) shoreline positions and other metrics (i.e., beach widths will narrow in response to the higher water levels). The data also will be directly comparable to important boundaries that are based on tidal elevations (e.g., the Mean High-Water shoreline).

The work will include recomputing and tabulating the MSL shoreline position, MSL beach width, subaerial volume, and shore zone volume for each transect based on the updated beach profile data. All updates will document the tidal datum epoch update in the relevant annual report(s).

#### **OPTIONAL Task 6 Deliverables:**

1. Updated historic beach profile data.
2. Updated MSL shoreline position, MSL beach width, subaerial volume, and shore zone volume for each transect.
3. Documentation of tidal epoch update in relevant annual report(s).

### **OPTIONAL Task 7. Historical Shoreline Data Analysis**

If exercised by SANDAG, the consultant will be reviewing the previously collected beach profile data from 1996 to current, to then synthesize and prepare the data to be uploaded into an Open Data

Portal. The Open Data Portal (ODP) will make the beach profile data interactive and help users better visualize the regional beach profile data sets.

The work will include converting historical beach profile data into a format that will easily upload into the ODP, once established. This conversion will make the integration of the system and data more seamless, once an agreed upon format is decided upon by SANDAG. Quarterly meetings will be held with the consultant and the SANDAG ODP team to make final decisions on data format, integration, and how the data will interact with the ODP.

**OPTIONAL Task 7 Deliverables:**

1. Updated historic beach profile data into agreed upon digital format.
2. Quarterly meetings with SANDAG Open Data Portal team and consultant to discuss the best visualization of temporal and spatial shoreline monitoring data, file format for data sets and discussion on how data will be provided for future shoreline data to be integrated into Open Data Portal.
3. Documentation of data conversion and data collection integration methodology in final report.



**Table 1. Beach Profile Transect Locations**

CELL	TRANSECT	LOCATION	TRANSECT	LOCATION
Silver Strand Littoral Cell	SS-0003 <sup>(1)</sup>	Tijuana Estuary	SS-0050 <sup>(1)</sup>	Imperial Beach
	SS-0015 <sup>(1)</sup>	Imperial Beach	SS-0077 <sup>(1)</sup>	Silver Strand
	SS-0025 <sup>(1)</sup>	Imperial Beach	SS-0090 <sup>(1)</sup>	Silver Strand
	SS-0035 <sup>(1)</sup>	Imperial Beach	SS-0160 <sup>(1)</sup>	Coronado
Mission Beach Littoral Cell	OB-0230 <sup>(1)</sup>	Ocean Beach	MB-0340 <sup>(1)</sup>	Mission Beach
	MB-0310 <sup>(1)</sup>	Mission Beach	MB-0384 <sup>(1)</sup>	Mission Beach
	MB-0320 <sup>(1)</sup>	Mission Beach	PB-0408 <sup>(1)</sup>	Pacific Beach
Oceanside Littoral Cell	LJ-0443 <sup>(1)</sup>	La Jolla	SD-0675 <sup>(1)</sup>	Stone Steps
	LJ-0445 <sup>(1)</sup>	La Jolla	SD-0680 <sup>(1)</sup>	Beacons
	LJ-0450 <sup>(1)</sup>	La Jolla	SD-0710 <sup>(1)</sup>	Batiquitos
	LJ-0460 <sup>(1)</sup>	Scripps Pier	CB-0720 <sup>(1)</sup>	Batiquitos
	TP-0470 <sup>(1)</sup>	Blacks Beach	CB-0760 <sup>(1)</sup>	Ponto Beach
	TP-0530 <sup>(1)</sup>	Torrey Pines	CB-0830 <sup>(1)</sup>	Carlsbad
	TP-0520 <sup>(1)</sup>	Torrey Pines	CB-0865 <sup>(1)</sup>	Carlsbad
	DM-0580 <sup>(1)</sup>	Del Mar	CB-0880 <sup>(1)</sup>	Buena Vista
	DM-0590 <sup>(1)</sup>	Del Mar	OS-0930 <sup>(1)</sup>	Buccaneer Beach
	SD-0600 <sup>(1)</sup>	Fletcher Cove	OS-1000 <sup>(1)</sup>	Oceanside
	SD-0630 <sup>(1)</sup>	Cardiff	OS-1030 <sup>(1)</sup>	Oceanside
	SD-0670 <sup>(1)</sup>	Moonlight Beach	OS-1070 <sup>(1)</sup>	Oceanside

Notes: <sup>(1)</sup> Base Program Transect.

**Table 2.OPTIONAL ADDITIONAL BEACH PROFILE TRANSECT LOCATIONS**

CELL	TRANSECT	LOCATION
Oceanside Littoral Cell	CB-0810	Carlsbad
	CB-0725	Carlsbad
	SD-0645	Cardiff
	DM-0570	Del Mar
	SS-0140	Coronado

## PAYMENT SCHEDULE

Tasks 5, 6, and 7 are optional and will be exercised as needed via an Amendment to this Task Order.

\*Under this Task Order, Other Direct Costs (ODCs) will be monitored according to the amounts specified below for each fiscal year. The Consultant is responsible for providing a detailed breakdown of the expenses in each invoice to ensure that the total cost remains within the specified "do not exceed" amount. If requested by the Project Manager, the Consultant must provide a copy of any receipt for any ODC.

### FISCAL YEAR 2025<sup>4</sup>

Task	Description	Payment Upon Received Deliverable	ODCs – Do Not Exceed Amount <sup>5</sup>	Task Payment Milestone
Task 1	Survey Control	Provide Updated Survey Control Sheets	\$24,284.00	\$3,778.78
Task 2	Fall 2024 & Spring 2025 Survey	Subtask 1: Provide Analyzed Fall Beach Profile Data		\$44,543.70
		Subtask 2: Provide Analyzed Spring Beach Profile Data		\$44,543.70
Task 3	Annual Report	Provide Final 2024 Annual Report		\$64,747.13
Task 4	Parks Permit	Provide California Department of Parks & Recreation Scientific Research Collections Permit		\$2,343.36
OPTIONAL: Task 5	Fall 2024 – 5 Additional Transects	Establish 5 additional Transects during Fall 2024 Surveys for Beach Profile Data	\$2,534	\$18,028.62
	Spring 2025 – 5 Additional Transects	Survey 5 Additional Transects in Spring 2025 for Beach Profile Data		\$6,009.54
OPTIONAL: Task 6	Datum Update	N/A	\$0.00	\$0.00
			<b>Tasks 1-4 Total: \$184,240.67</b>	
			<b>All Task Total: \$210,812.83</b>	

<sup>4</sup> FY25: July 01, 2024, till June 30, 2025

<sup>5</sup> \* The following section is waived from the SSA (S1190275) for this Task Order only:

Per Section A: Compensation, Section 4: Travel Expenses, it states:

"SANDAG shall not reimburse Consultant for local travel, which is travel within 100 miles of a person's assigned office. Transportation and subsistence costs will be reimbursed at the actual costs incurred by the Consultant, as supported by receipts, and shall not exceed the maximum amounts authorized for state employees, which are available at CalHR Travel Reimbursements. All ODCs, including travel, shall be invoiced to SANDAG without markup for profit".

# **FISCAL YEAR 2026<sup>6</sup>**

Task	Description	Payment Upon Received Deliverable	ODCs*- Do Not Exceed Amount <sup>7</sup>	Task Payment Milestone
Task 1	Survey Control	Provide Updated Survey Control Sheets	\$24,695.85	\$3,873.26
Task 2	Fall 2025 & Spring 2026 Survey	Subtask 1: Provide Analyzed Fall Beach Profile Data		\$45,657.88
		Subtask 2: Provide Analyzed Spring Beach Profile Data		\$45,657.88
Task 3	Annual Report	Provide Final 2025 Annual Report		\$64,131.07
Task 4	Parks Permit	Provide California Department of Parks & Recreation Scientific Research Collections Permit		\$2,401.96
OPTIONAL: Task 5:	Fall 2025 - 5 Additional Transects Survey	Survey 5 Additional transects in Fall of 2025 for Beach Profile Data	\$68.68	\$6,465.30
	Spring 2026 - 5 Additional Transects Survey	Survey 5 Additional transects in Spring of 2026 for Beach Profile Data		\$6,465.30
OPTIONAL: Task 6	Datum Update	Subtask 1: Updated historical beach profile data	\$0.00	\$7,519.72
		Subtask 2: Updated MSL shoreline position, MSL beach width, subaerial volume, and shore zone volume for each transect		\$16,323.08
		Subtask 3: Documentation of tidal epoch update		\$3,970.92
Tasks 1-4 Total: \$186,417.90				
All Task Total: \$227,230.90				

<sup>6</sup> FY 26: July 01, 2025, till June 30, 2026

<sup>7</sup> \* The following section is waived from the SSA (S1190275) for this Task Order only:

Per Section A: Compensation, Section 4: Travel Expenses, it states:

"SANDAG shall not reimburse Consultant for local travel, which is travel within 100 miles of a person's assigned office. Transportation and subsistence costs will be reimbursed at the actual costs incurred by the Consultant, as supported by receipts, and shall not exceed the maximum amounts authorized for state employees, which are available at CalHR Travel Reimbursements. All ODCs, including travel, shall be invoiced to SANDAG without markup for profit".

# **FISCAL YEAR 2027<sup>8</sup>**

Task	Description	Payment Upon Received Deliverable	ODCs- Do Not Exceed Amount <sup>*9</sup>	Task Payment Milestone
Task 1	Survey Control	Provide Updated Survey Control Sheets	\$25,117.99	\$3,970.10
Task 2	Fall 2026 & Spring 2027 Survey	Subtask 1: Provide Analyzed Fall Beach Profile Data		\$46,798.30
		Subtask 2: Provide Analyzed Spring Beach Profile Data		\$46,798.40
Task 3	Annual Report	Provide Final 2026 Annual Report		\$65,512.87
Task 4	Parks Permit	Provide California Department of Parks & Recreation Scientific Research Collections Permit		\$2,462.02
OPTIONAL: Task 5	Fall 2026 - 5 Additional Transects Survey	Survey 5 Additional Transects in Fall 2026 for Beach Profile Data	\$70.39	\$6,626.76
	Spring 2027 - 5 Additional Transect Survey	Survey 5 Additional Transects in Spring 2027 for Beach Profile Data		\$6,626.76
OPTIONAL: Task 6	Datum Update	N/A	\$0.00	\$0.00
				<b>Tasks 1-4 Total: \$190,659.58</b>
				<b>All Tasks Total: \$203,983.49</b>

<sup>8</sup> FY27: July 01, 2026, till June 30, 2027

<sup>9</sup> \* The following section is waived from the SSA (S1190275) for this Task Order only:

Per Section A: Compensation, Section 4: Travel Expenses, it states:

*"SANDAG shall not reimburse Consultant for local travel, which is travel within 100 miles of a person's assigned office. Transportation and subsistence costs will be reimbursed at the actual costs incurred by the Consultant, as supported by receipts, and shall not exceed the maximum amounts authorized for state employees, which are available at CalHR Travel Reimbursements. All ODCs, including travel, shall be invoiced to SANDAG without markup for profit".*

Summary Total by FY	Tasks 1-4 Base Program
FY25	\$184,240.67
FY26	\$186,417.90
FY27	\$190,659.58
<b>Total:</b>	<b>\$561,318.15</b>

- If exercised Task 7 will be conducted on a time and materials basis for a cost not to exceed: \$13,921.00

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**DBE/SB UTILIZATION SUMMARY**

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Firm Name	Budgeted Amount	Firm Certification Status	Certification No.
DUDEK	\$28,526.57	<input type="checkbox"/> DBE <input type="checkbox"/> SB	
Coastal Frontiers Corporation	\$532,791.58	<input type="checkbox"/> DBE <input type="checkbox"/> SB	
	\$	<input type="checkbox"/> DBE <input type="checkbox"/> SB	
	\$	<input type="checkbox"/> DBE <input type="checkbox"/> SB	
	\$	<input type="checkbox"/> DBE <input type="checkbox"/> SB	

## PROJECT SCHEDULE

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Task #	Description	State Date	End Date
1	Survey Control Recovery and Maintenance	Notice to Proceed	04/28/2028
2	Spring & Fall FY 2025-2027 Beach Profile Surveys	Notice to Proceed	04/28/2028
3	Regional Shoreline Monitoring Annual Reports for FY 2025-2027	Notice to Proceed	04/28/2028
4	State Parks Scientific Research and Collections Permit(s)	Notice to Proceed	04/28/2028
5	<i>OPTIONAL</i> : Establish 5 Additional Transects	Notice to Proceed	04/28/2028
6	<i>OPTIONAL</i> : Tidal Datum Epoch Update	Notice to Proceed	TBD <sup>10</sup>
7	<i>OPTIONAL</i> : Historical Shoreline Data Analysis	Notice to Proceed	TBD <sup>11</sup>

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<sup>10</sup> Completion of Optional Task 6 will be dependent on the release date for the new National Tidal Datum Epoch (2002-2020 Epoch).

<sup>11</sup> Completion of Optional Task 7 will be dependent on when SANDAG ODP team creates and establishes a data portal to locate the integrated shoreline data onto.



# *STATE OF THE COAST 2023*

**SANDAG**

*Shoreline Preservation  
Working Group*

*Coastal Frontiers Corporation  
September 5, 2024*

# OVERVIEW

## ➤ Shoreline Monitoring Program

- Measure Changes in Shorezone
- Established 1996
- Beach Profile Surveys
  - 61 sites; Spring and Fall 2023
  - 44 sites w/ data back to Fall 2000

## ➤ Findings

- Post-RBSP I Outcome by Sub-Reach
- Beach Width and Shorezone Volume
- Encinitas and Solana Beach Post-Nourishment

Oceanside

N. Carlsbad

S. Carlsbad

Encinitas/Leucadia

Cardiff

Solana Beach

Del Mar

Torrey Pines

La Jolla

Mission Beach

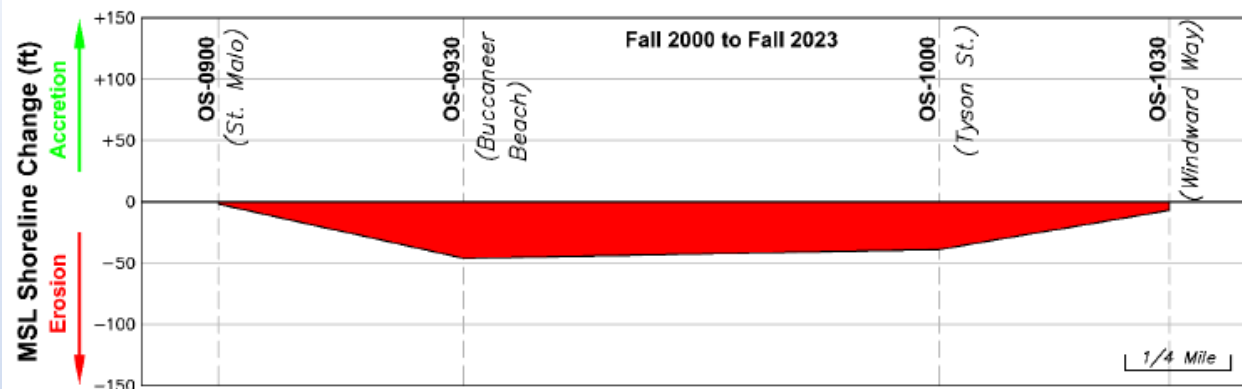
Coronado

Imperial Beach

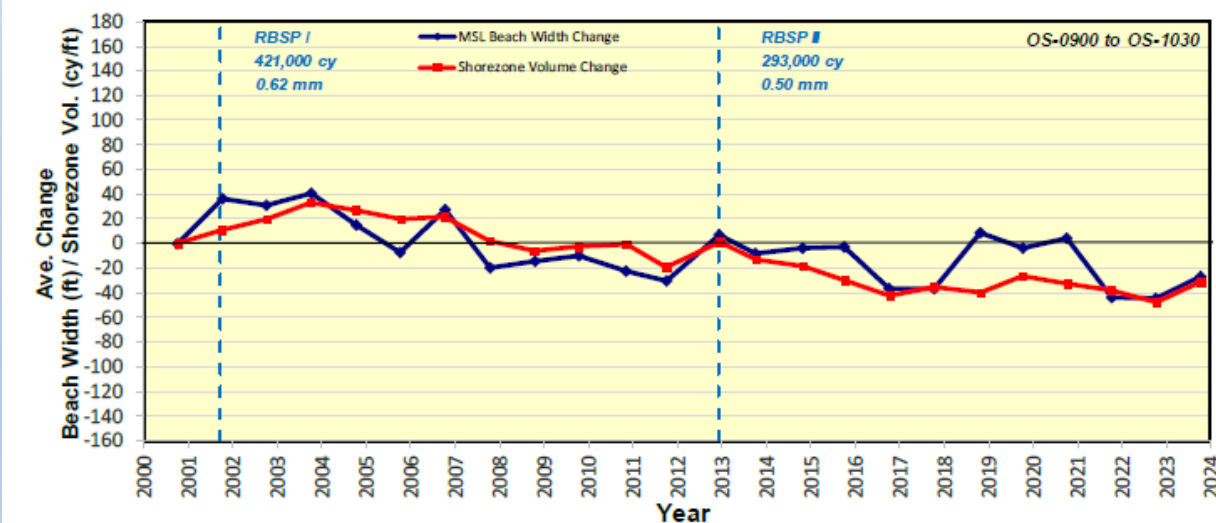


# Oceanside Sub-Reach

**Post-RBSP I MSL Shoreline Change (Fall 2000 to Fall 2023)**



**Average MSL Beach Width and Shorezone Volume Change Relative to Pre-RBSP I Condition**



## Net Change: Fall 2000 to Fall 2023

MSL Beach Width: -27 ft

Shorezone Vol: -31 cy/ft

## Trend: Fall 2000 to Fall 2023

MSL Beach Width: -2.2 ft/yr

Shorezone Vol: -3.1 cy/ft/yr

**Transect OS-1000 (October 9, 2023)**



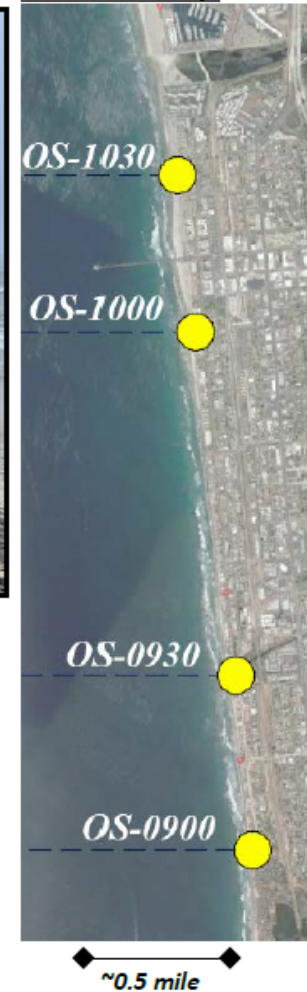
## MSL Beach Width Summary

Transect	Fall 2023 Beach Width (ft)	Seasonal Change (ft)		Annual Change (ft) Fall 22-Fall 23	Post-RBSP I (ft) Fall 00-Fall 23
		Winter (Fall 22-Spr. 23)	Summer (Spr. 23-Fall 23)		
OS-1030	246	57	-16	41	-7
OS-1000	143	-81	77	-4	-39
OS-0930	28	4	6	10	-46
OS-0900	15	-6	45	39	-2

## Shorezone Volume Summary

Transect	Annual Change (cy/ft) Fall 22-Fall 23	Post-RBSP I (cy/ft) Fall 00-Fall 23
OS-1030	25	-32
OS-1000	-22	-62
OS-0930	49	-3
OS-0900	18	-24

**Location Map**



[SandSnap Database](#)

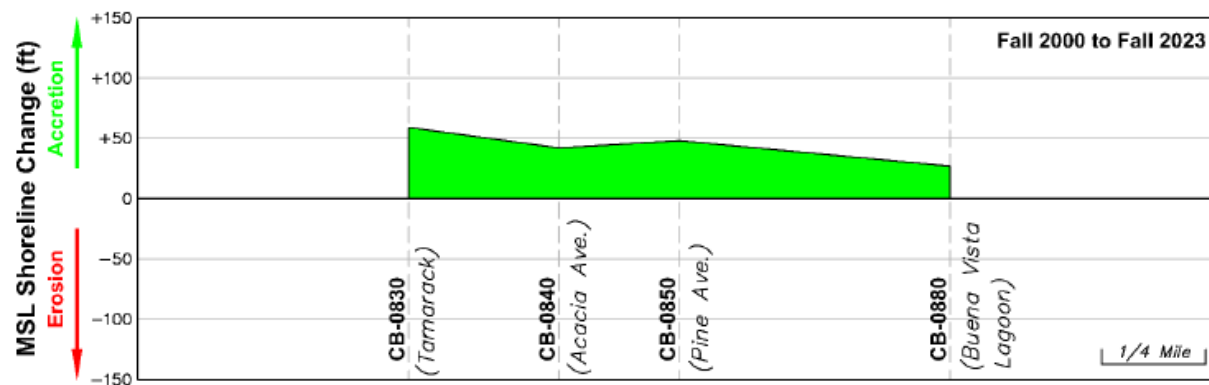




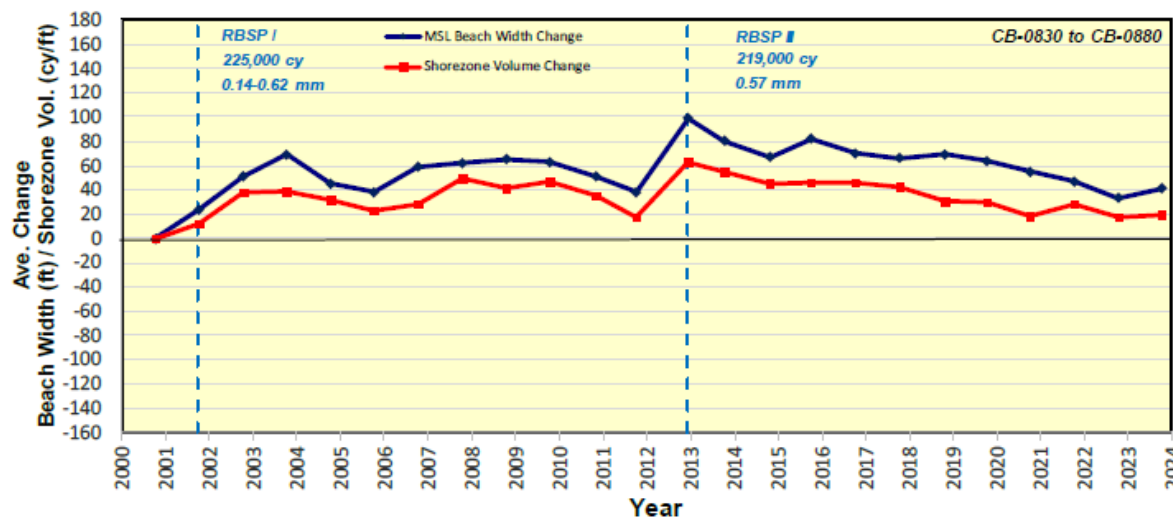


# North Carlsbad Sub-Reach

## Post-RBSP I MSL Shoreline Change (Fall 2000 to Fall 2023)



## Average MSL Beach Width and Shorezone Vol. Change Relative to Pre-RBSP I Condition



### Net Change: Fall 2000 to Fall 2023

MSL Beach Width: +41 ft

Shorezone Vol: +19 cy/ft

### Trend: Fall 2000 to Fall 2023

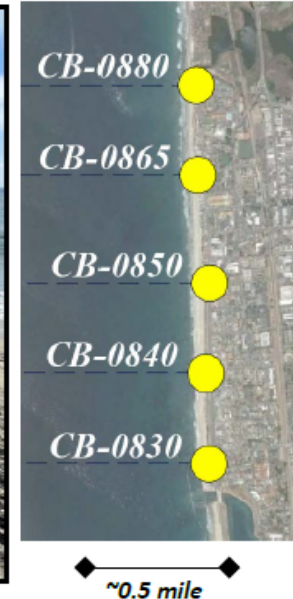
MSL Beach Width: +0.9 ft/yr

Shorezone Vol: +0.1 cy/ft/yr

## Transect CB-0840 (October 9, 2023)



## Location Map



## MSL Beach Width Summary

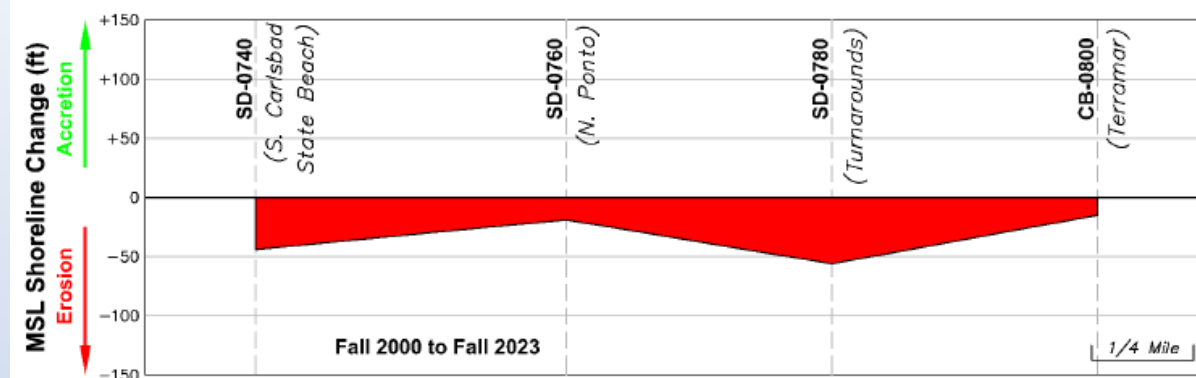
Transect	Fall 2023 Beach Width (ft)	Seasonal Change (ft)		Annual Change (ft) Fall 22-Fall 23	Post-RBSP I (ft) Fall 00-Fall 23
		Winter (Fall 22-Spr. 23)	Summer (Spr. 23-Fall 23)		
CB-0880	147	-3	34	31	27
CB-0865	140	-60	52	-8	-
CB-0850	161	-30	20	-10	48
CB-0840	125	17	-21	-4	42
CB-0830	156	43	-33	10	59

## Shorezone Volume Summary

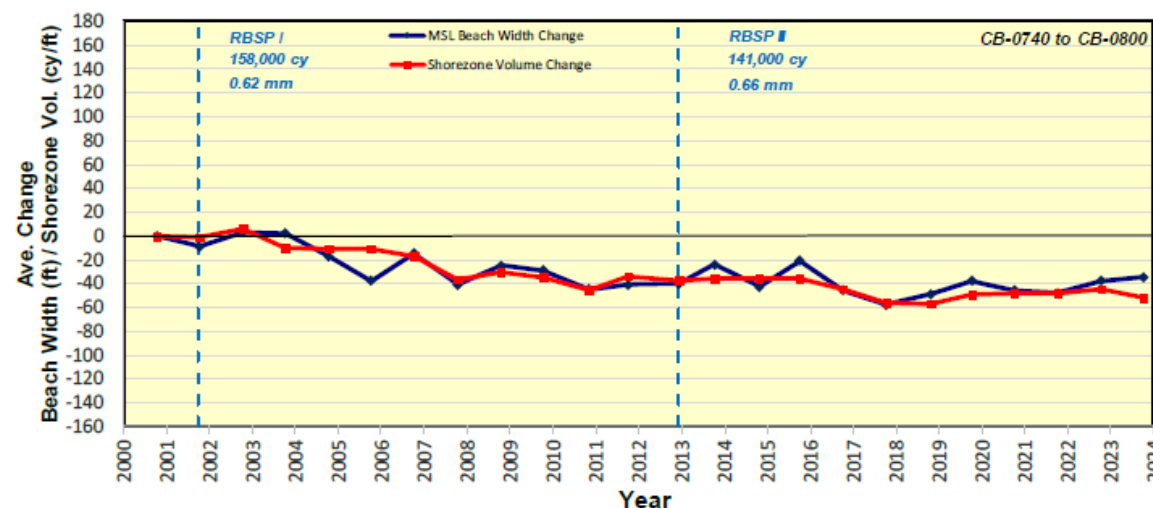
Transect	Annual Change (cy/ft)	Post-RBSP I (cy/ft)
	Fall 22-Fall 23	Fall 00-Fall 23
CB-0880	5	-3
CB-0865	-11	-
CB-0850	-3	27
CB-0840	-3	32
CB-0830	10	34

# South Carlsbad Sub-Reach

## Post-RBSP I MSL Shoreline Change (Fall 2000 to Fall 2023)



## Average MSL Beach Width and Shorezone Vol. Change Relative to Pre-RBSP I Condition



### Net Change: Fall 2000 to Fall 2023

MSL Beach Width: -35 ft

Shorezone Vol: -52 cy/ft

### Trend: Fall 2000 to Fall 2023

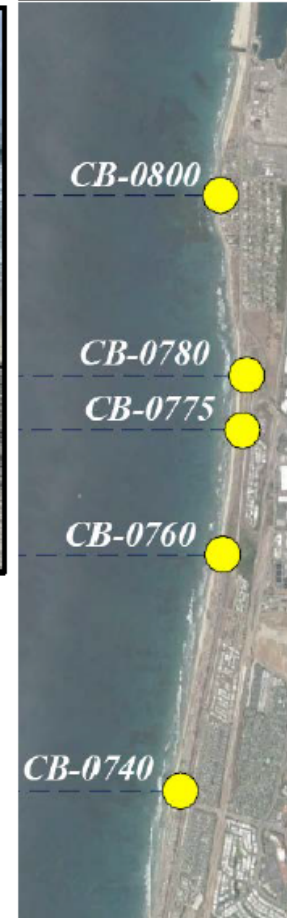
MSL Beach Width: -1.8 ft/yr

Shorezone Vol: -2.4 cy/ft/yr

## Transect CB-0760 (October 10, 2023)



## Location Map



## MSL Beach Width Summary

Transect	Fall 2023 Beach Width (ft)	Seasonal Change (ft)		Annual Change (ft) Fall 22-Fall 23	Post-RBSP I (ft) Fall 00-Fall 23
		Winter (Fall 22-Spr. 23)	Summer (Spr. 23-Fall 23)		
CB-0800	21	10	2	12	-15
CB-0780	117	-55	32	-23	-56
CB-0775	118	-2	20	18	-
CB-0760	120	-6	15	9	-19
CB-0740	106	-35	42	7	-44

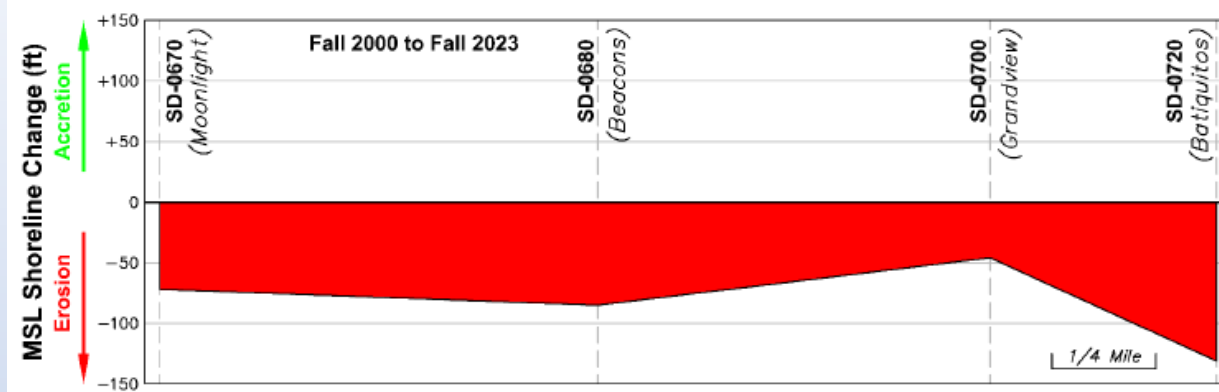
## Shorezone Volume Summary

Transect	Annual Change (cy/ft) Fall 22-Fall 23	Post-RBSP I (cy/ft) Fall 00-Fall 23
CB-0800	19	0
CB-0780	-40	-130
CB-0775	-6	-
CB-0760	-2	-56
CB-0740	-11	-45

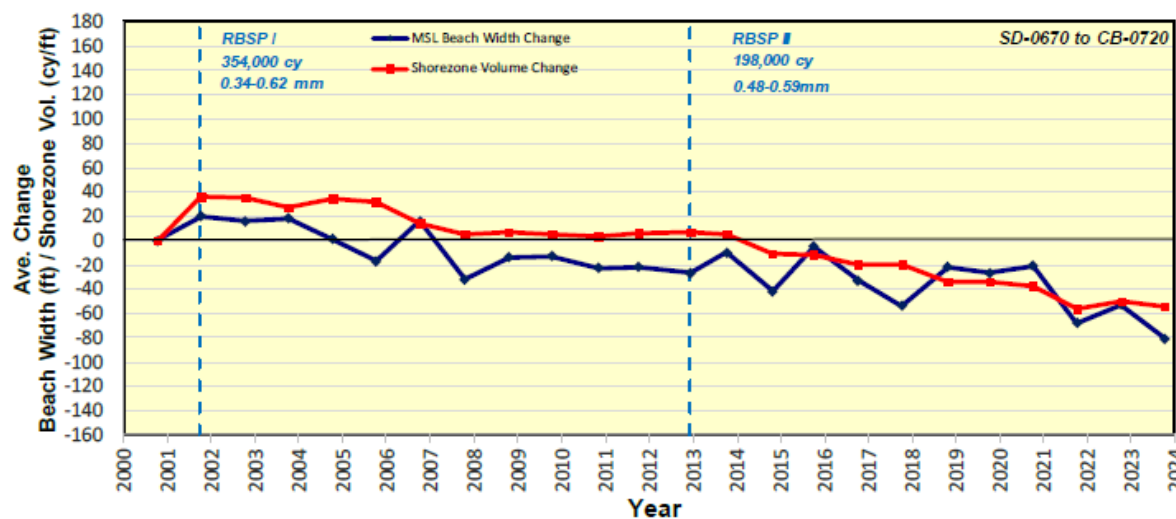


# Encinitas/Leucadia Sub-Reach

## Post-RBSP I MSL Shoreline Change (Fall 2000 to Fall 2023)



## Average MSL Beach Width and Shorezone Vol Change Relative to Pre-RBSP I Condition



### Net Change: Fall 2000 to Fall 2023

MSL Beach Width: -81 ft

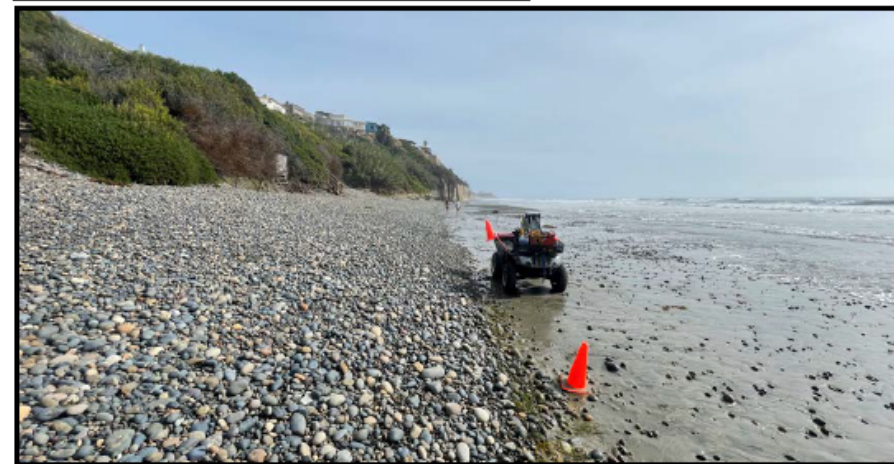
Shorezone Vol: -55 cy/ft

### Trend: Fall 2000 to Fall 2023

MSL Beach Width: -3.0 ft/yr

Shorezone Vol: -3.7 cy/ft/yr

## Transect SD-0680 (October 14, 2023)



## MSL Beach Width Summary

Transect	Fall 2023 Beach Width (ft)	Seasonal Change (ft)		Annual Change (ft) Fall 22-Fall 23	Post-RBSP I (ft) Fall 00-Fall 23
		Winter (Fall 22-Spr. 23)	Summer (Spr. 23-Fall 23)		
CB-0720	244	-61	60	-1	-131
SD-0710	82	-50	38	-12	-
SD-0700	44	-4	-5	-9	-46
SD-0695	47	9	-17	-8	-
SD-0690	27	-18	-16	-34	-
SD-0680	59	-41	-21	-62	-85
SD-0675	48	-54	5	-49	-
SD-0670	155	-87	60	-27	-72

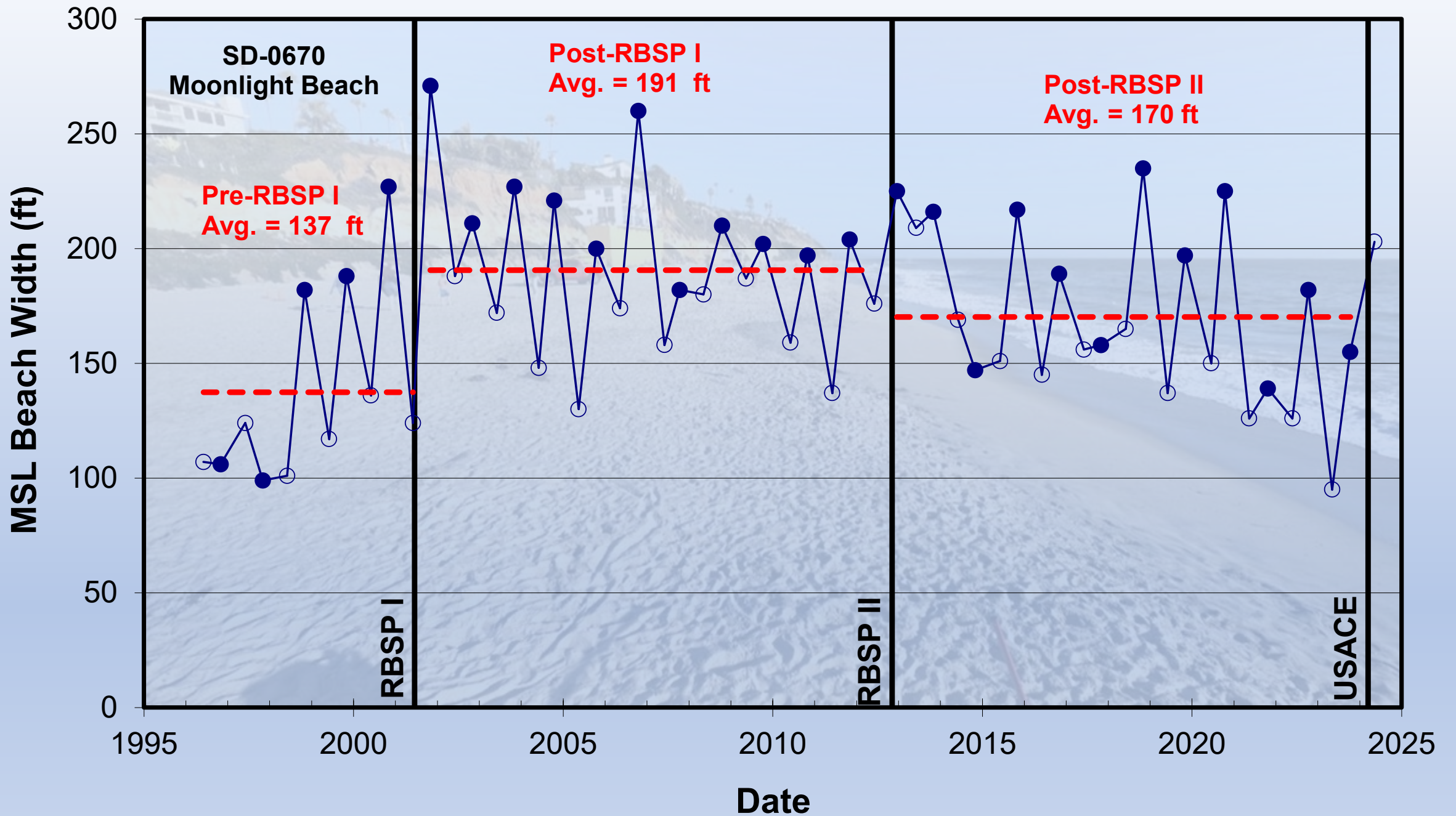
## Shorezone Volume Summary

Transect	Annual Change (cy/ft) Fall 22-Fall 23	Post-RBSP I (cy/ft) Fall 00-Fall 23
CB-0720	-4	-127
SD-0710	-15	-
SD-0700	5	2
SD-0695	-1	-
SD-0690	-15	-
SD-0680	-11	-21
SD-0675	-31	-
SD-0670	-8	-81

## Location Map

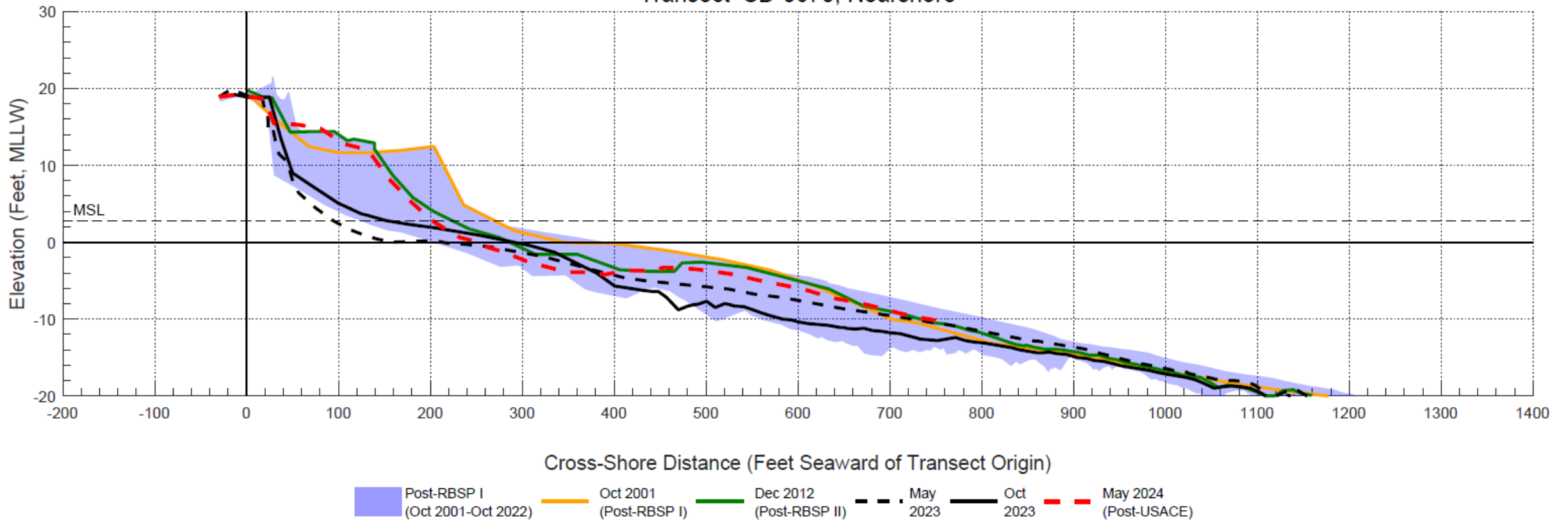


~0.5 mile



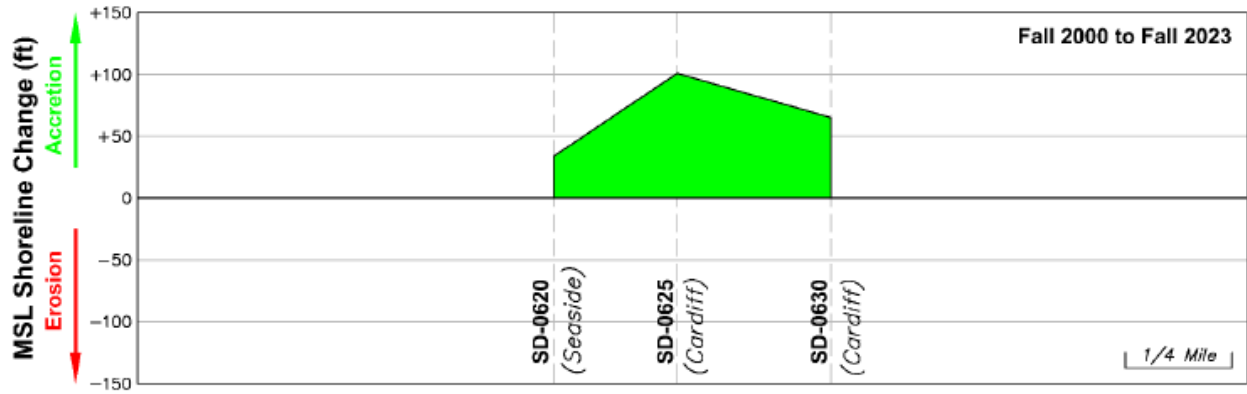


Transect SD-0670, Nearshore

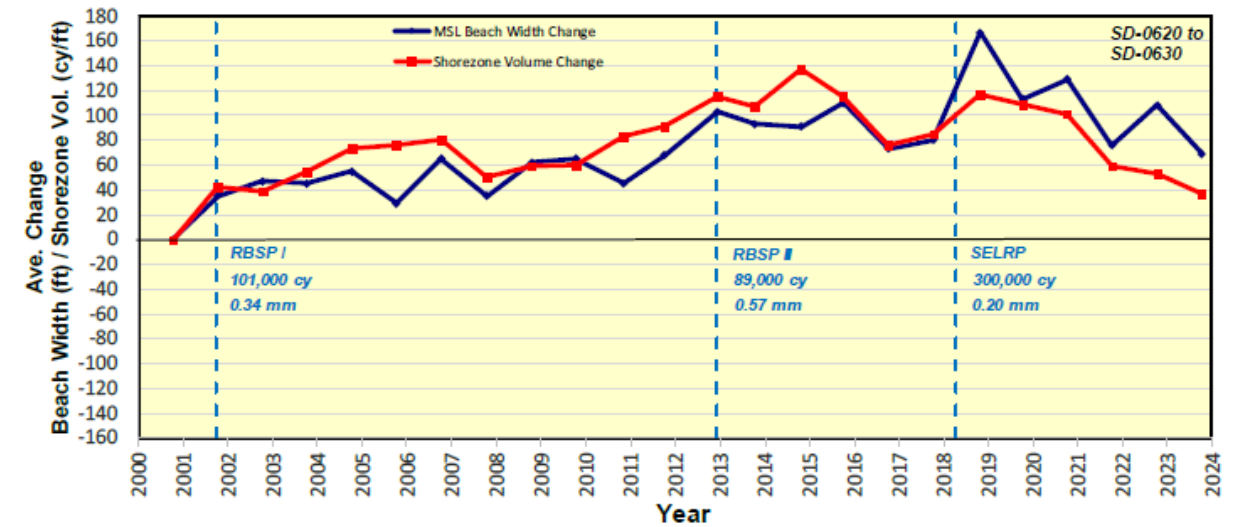


# Cardiff Sub-Reach

Post-RBSP I MSL Shoreline Change (Fall 2000 to Fall 2023)



Average MSL Beach Width and Shorezone Vol Change Relative to Pre-RBSP I Condition



## Net Change: Fall 2000 to Fall 2023

MSL Beach Width: +69 ft

Shorezone Vol: +37 cy/ft

## Trend: Fall 2000 to Fall 2023

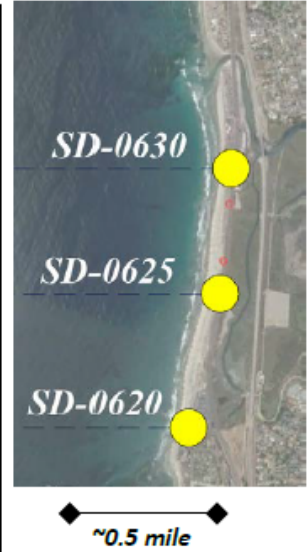
MSL Beach Width: +3.9 ft/yr

Shorezone Vol: +2.0 cy/ft/yr

Transect SD-0630 (October 11, 2023)



Location Map



## MSL Beach Width Summary

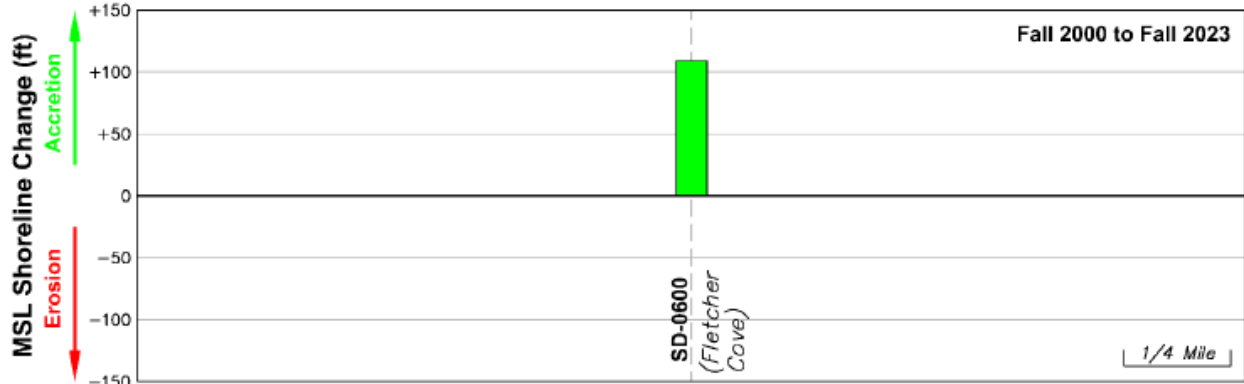
Transect	Fall 2023 Beach Width (ft)	Seasonal Change (ft)		Annual Change (ft)	Post-RBSP I (ft)
		Winter (Fall 22-Spr. 23)	Summer (Spr. 23-Fall 23)		
SD-0630	197	-82	52	-30	65
SD-0625	207	-95	58	-37	101
SD-0620	133	-50	-5	-55	34

## Shorezone Volume Summary

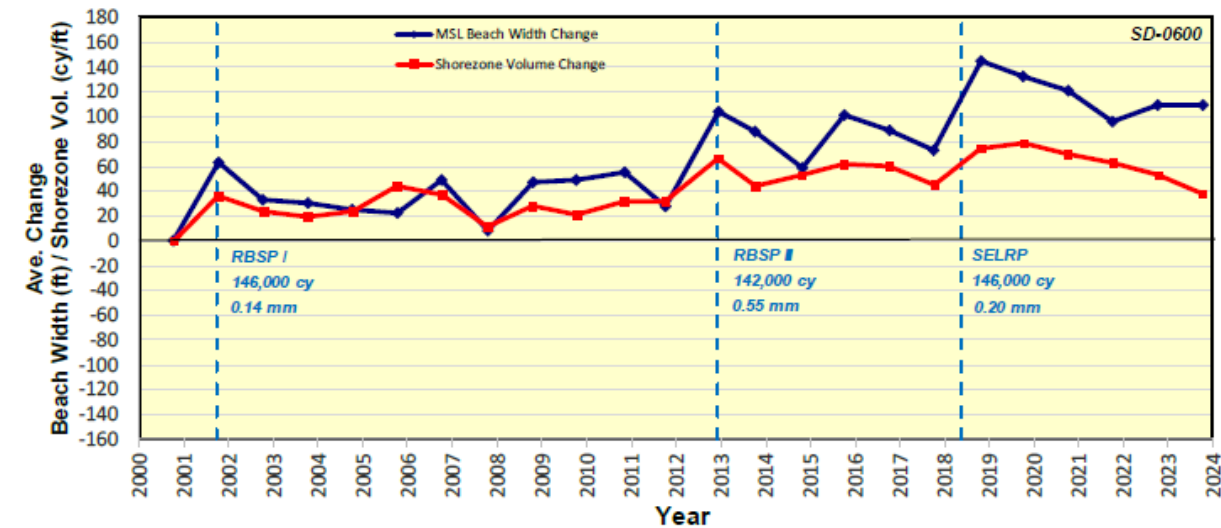
Transect	Annual Change (cy/ft)	Post-RBSP I (cy/ft)
	Fall 22-Fall 23	Fall 00-Fall 23
SD-0630	-3	36
SD-0625	-19	70
SD-0620	-33	-4

# Solana Beach Sub-Reach

Post-RBSP I MSL Shoreline Change (Fall 2000 to Fall 2023)



Average MSL Beach Width and Shorezone Vol Change Relative to Pre-RBSP I Condition



## Net Change: Fall 2000 to Fall 2023

MSL Beach Width: +109 ft

Shorezone Vol: +38 cy/ft

## Trend: Fall 2000 to Fall 2023

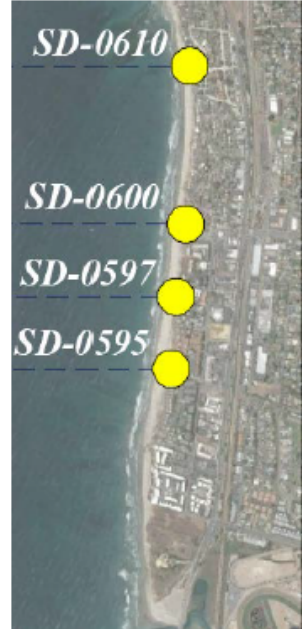
MSL Beach Width: +4.8 ft/yr

Shorezone Vol: +2.2 cy/ft/yr

Transect SD-0600 (October 11, 2023)



Location Map



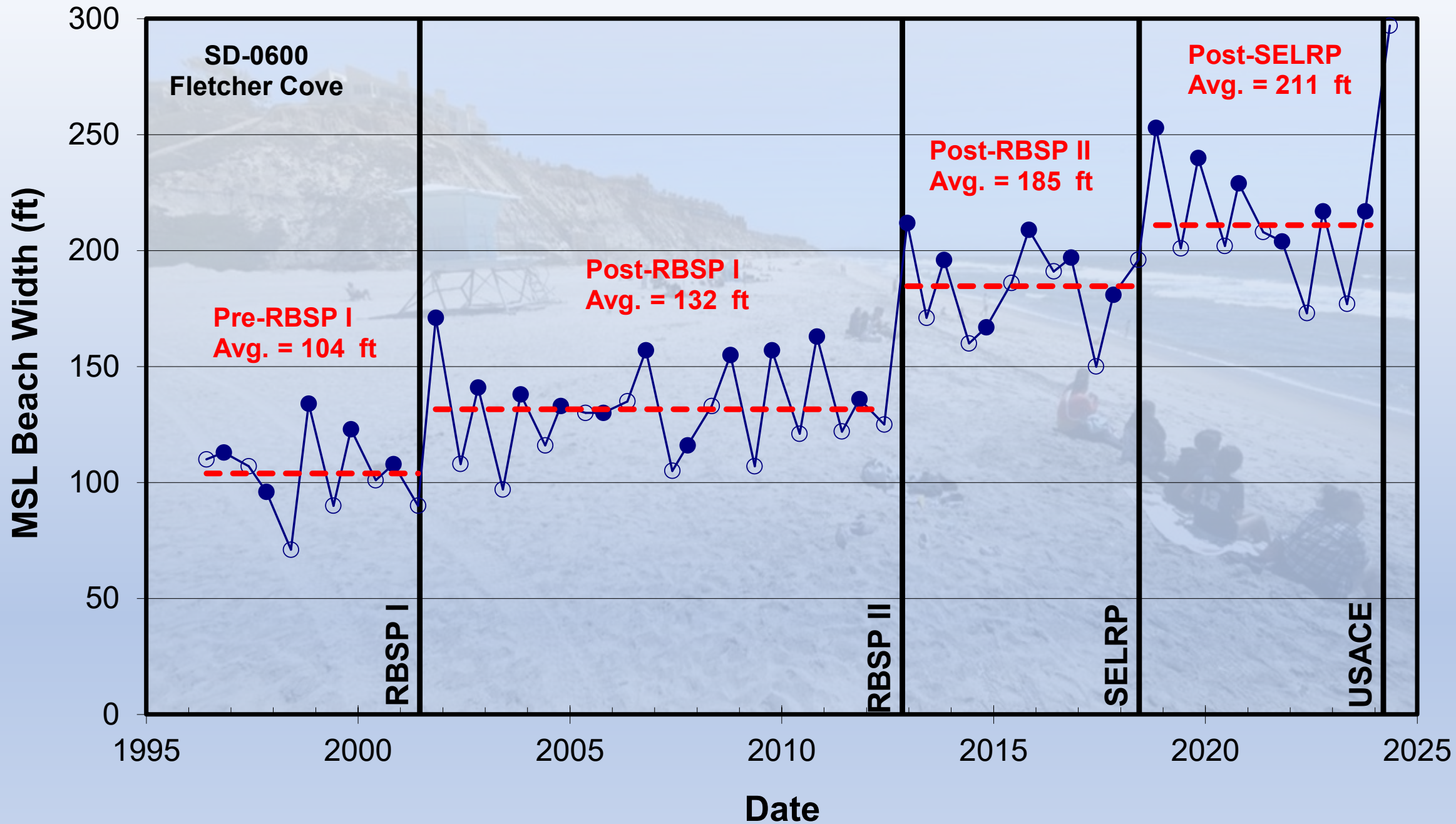
## MSL Beach Width Summary

Transect	Fall 2023 Beach Width (ft)	Seasonal Change (ft)		Annual Change (ft) Fall 22-Fall 23	Post-RBSP I (ft) Fall 00-Fall 23
		Winter (Fall 22-Spr. 23)	Summer (Spr. 23-Fall 23)		
SD-0610	193	-155	106	-49	-
SD-0600	217	-40	40	0	109
SD-0597	168	-11	21	10	-
SD-0595	180	-54	25	-29	-

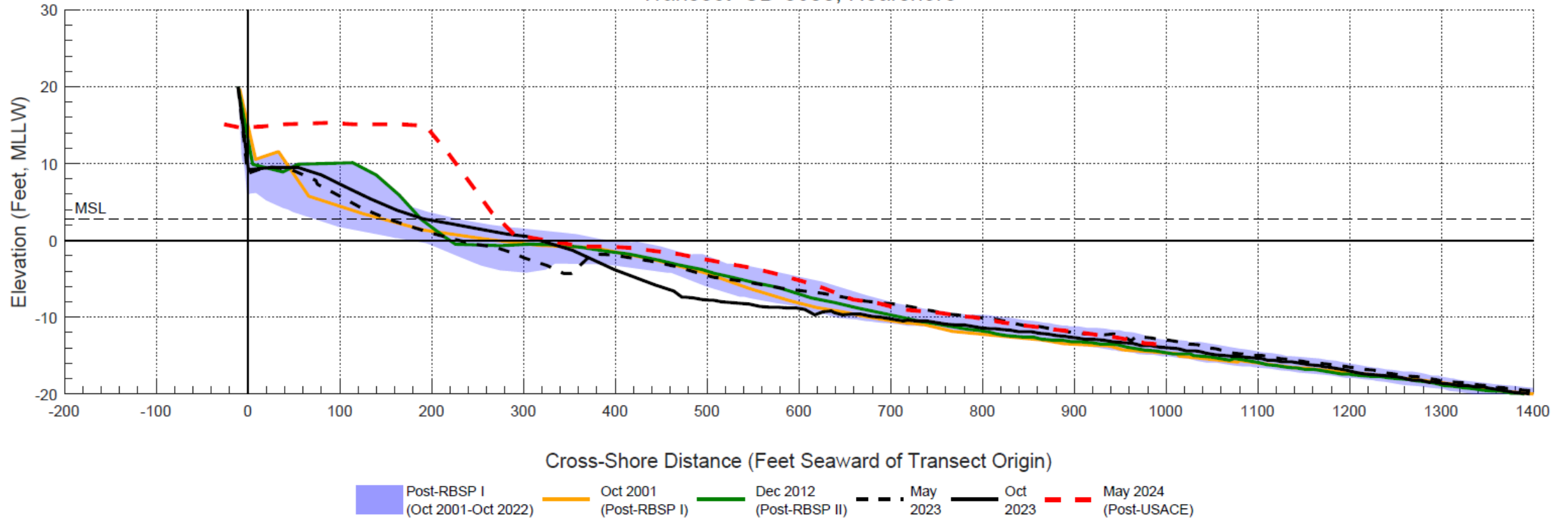
## Shorezone Volume Summary

Transect	Annual Change (cy/ft)	Post-RBSP I (cy/ft)
	Fall 22-Fall 23	Fall 00-Fall 23
SD-0610	-46	-
SD-0600	-15	38
SD-0597	5	-
SD-0595	-20	-



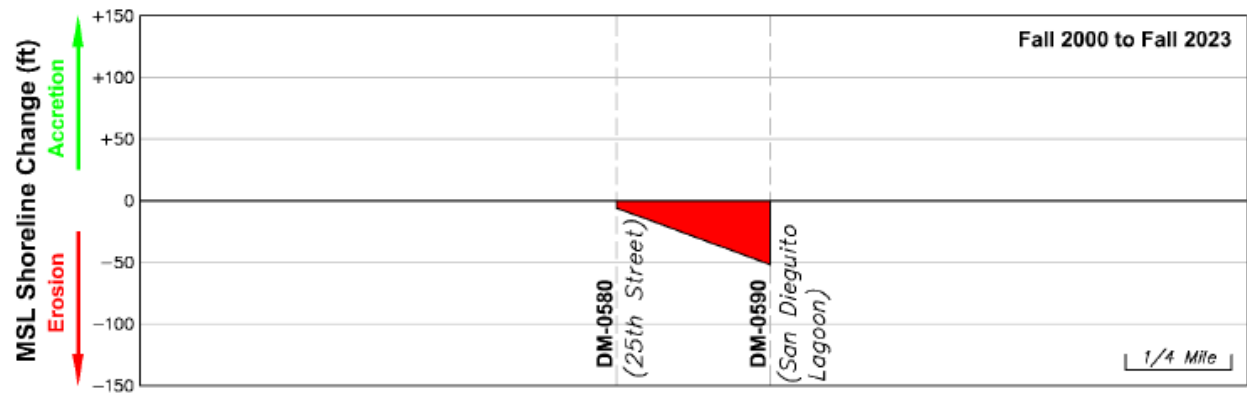


Transect SD-0600, Nearshore

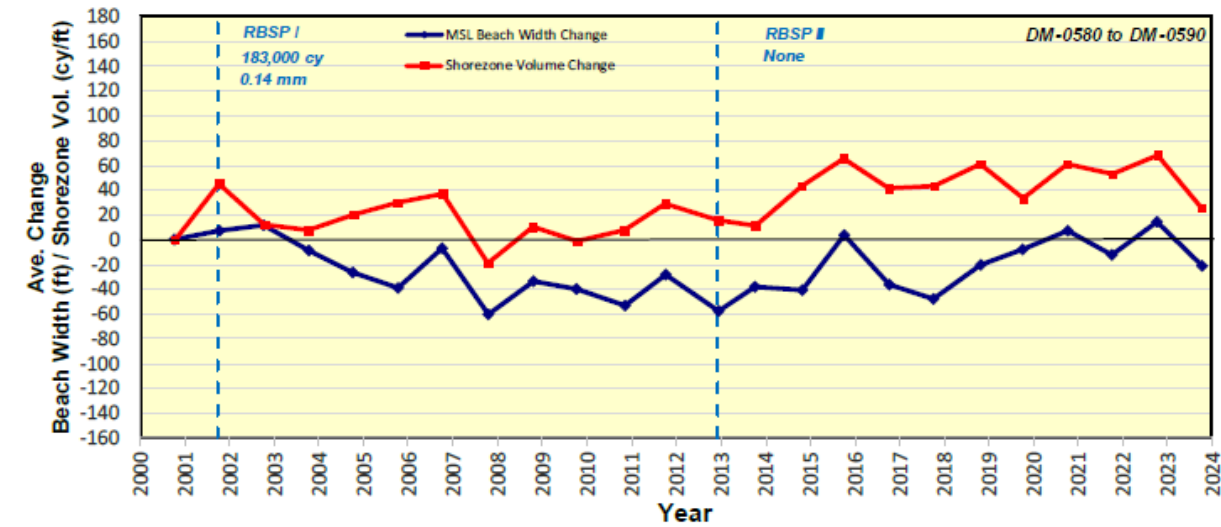


# Del Mar Sub-Reach

Post-RBSP I MSL Shoreline Change (Fall 2000 to Fall 2023)



Average MSL Beach Width and Shorezone Vol. Change Relative to Pre-RBSP I Condition



## Net Change: Fall 2000 to Fall 2023

MSL Beach Width: -21 ft  
Shorezone Vol: +25 cy/ft

## Trend: Fall 2000 to Fall 2023

MSL Beach Width: 0.0 ft/yr  
Shorezone Vol: +2.0 cy/ft/yr

Transect DM-0580 (October 14, 2023)



Location Map



## MSL Beach Width Summary

Transect	Fall 2023 Beach Width (ft)	Seasonal Change (ft)		Annual Change (ft) Fall 22-Fall 23	Post-RBSP I (ft) Fall 00-Fall 23
		Winter (Fall 22-Spr. 23)	Summer (Spr. 23-Fall 23)		
DM-0590	65	-59	25	-34	-52
DM-0580	209	-103	67	-36	-6
DM-0560	135	-92	3	-89	-
DM-0565	58	-	-	-	-

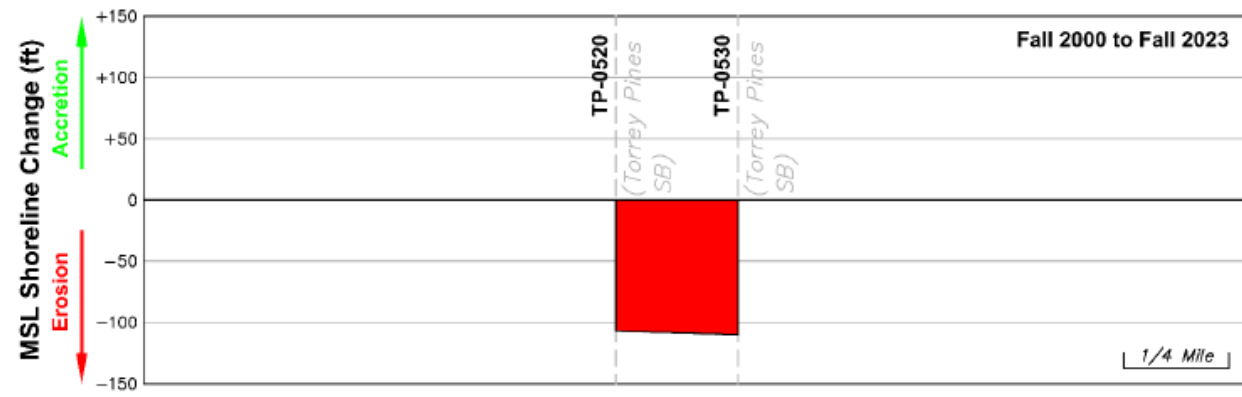
## Shorezone Volume Summary

Transect	Annual Change (cy/ft)	Post-RBSP I (cy/ft)
	Fall 22-Fall 23	Fall 00-Fall 23
DM-0590	-49	19
DM-0580	-40	28
DM-0560	41	-
DM-0565	-62	-

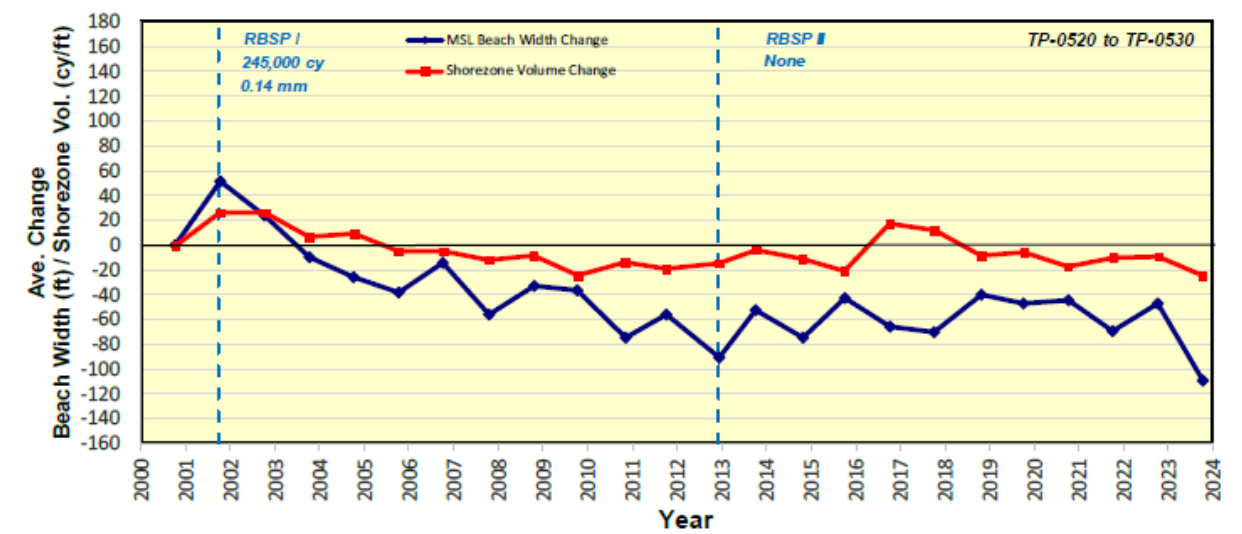


# Torrey Pines Sub-Reach

Post-RBSP I MSL Shoreline Change (Fall 2000 to Fall 2023)



Average MSL Beach Width and Shorezone Vol. Change Relative to Pre-RBSP I Condition



## Net Change: Fall 2000 to Fall 2023

MSL Beach Width: -109 ft  
Shorezone Vol: -24 cy/ft

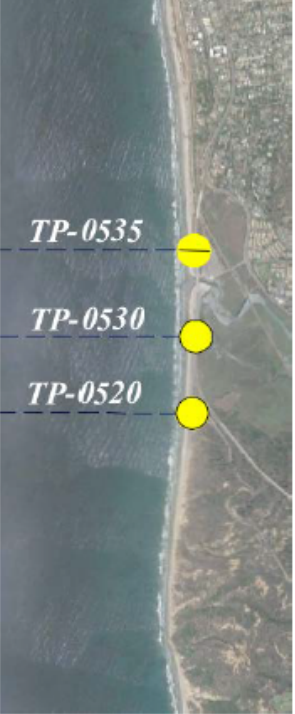
## Trend: Fall 2000 to Fall 2023

MSL Beach Width: -3.6 ft/yr  
Shorezone Vol: -0.9 cy/ft/yr

Transect TP-0530 (October 13, 2023)



Location Map



## MSL Beach Width Summary

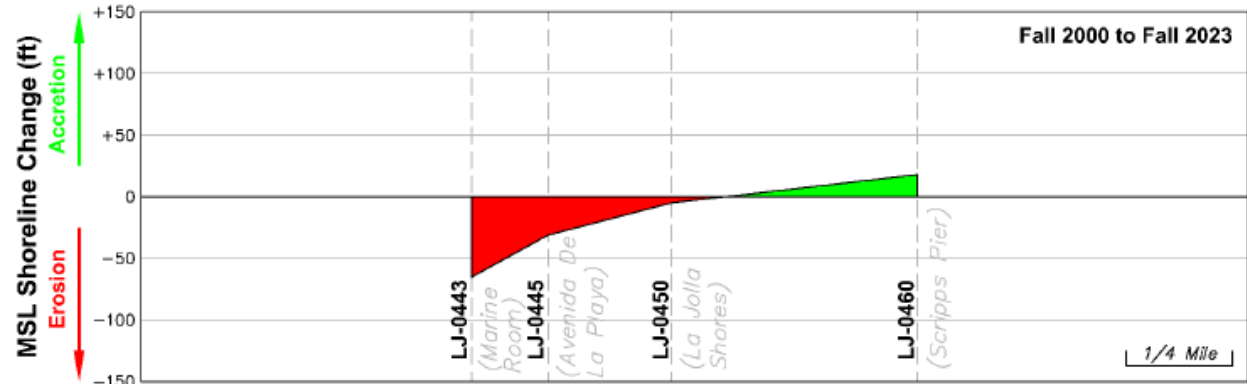
Transect	Fall 2023 Beach Width (ft)	Seasonal Change (ft)		Annual Change (ft)	Post-RBSP I (ft)
		Winter (Fall 22-Spr. 23)	Summer (Spr. 23-Fall 23)	Fall 22-Fall 23	Fall 00-Fall 23
TP-0530	100	-63	6	-57	-110
TP-0520	80	-72	5	-67	-107

## Shorezone Volume Summary

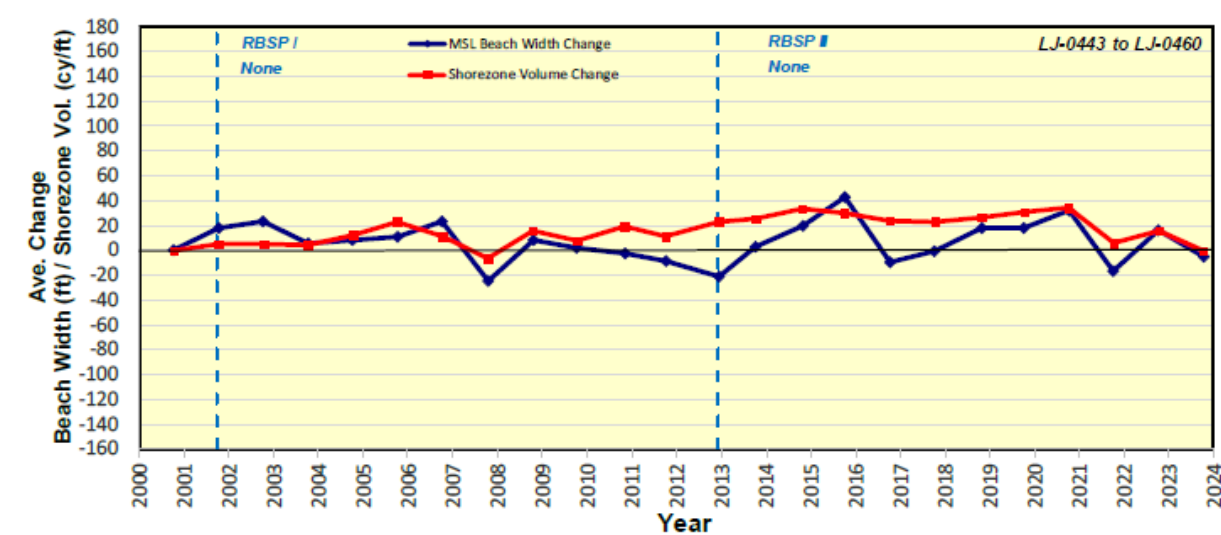
Transect	Annual Change (cy/ft)	Post-RBSP I (cy/ft)
	Fall 22-Fall 23	Fall 00-Fall 23
TP-0530	-13	-2
TP-0520	-18	-52

# La Jolla Sub-Reach

Post-RBSP I MSL Shoreline Change (Fall 2000 to Fall 2023)



Average MSL Beach Width and Shorezone Vol. Change Relative to Pre-RBSP I Condition



## Net Change: Fall 2000 to Fall 2023

MSL Beach Width: -5 ft

Shorezone Vol: 0 cy/ft

## Trend: Fall 2000 to Fall 2023

MSL Beach Width: 0.0 ft/yr

Shorezone Vol: +0.8 cy/ft/yr

Transect LJ-0450 (October 12, 2023)



Location Map



## MSL Beach Width Summary

Transect	Fall 2023 Beach Width (ft)	Seasonal Change (ft)		Annual Change (ft) Fall 22-Fall 23	Post-RBSP I (ft) Fall 00-Fall 23
		Winter (Fall 22-Spr. 23)	Summer (Spr. 23-Fall 23)		
LJ-0460	202	-122	95	-27	18
LJ-0450	274	-65	65	0	-5
LJ-0445	170	-31	7	-24	-31
LJ-0443	53	-47	-5	-52	-65

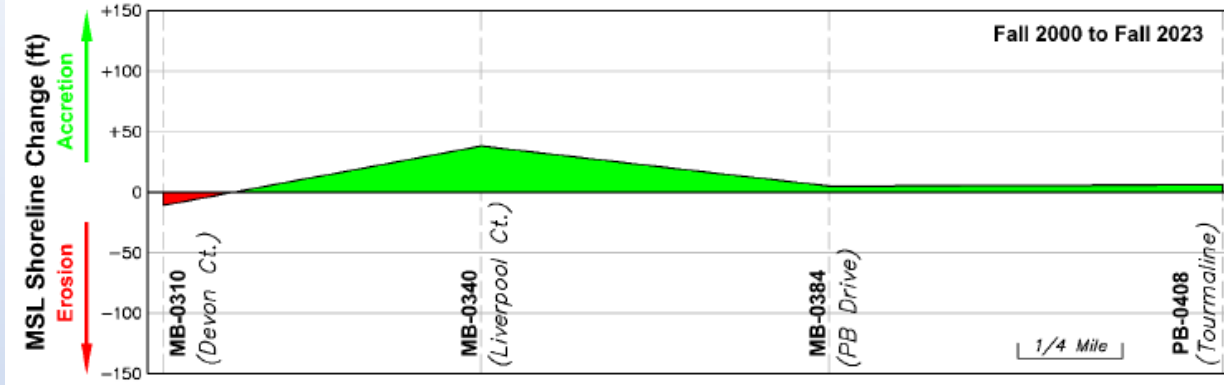
## Shorezone Volume Summary

Transect	Annual Change (cy/ft)	Post-RBSP I (cy/ft)
	Fall 22-Fall 23	Fall 00-Fall 23
LJ-0460	-31	0
LJ-0450	-4	13
LJ-0445	0	-4
LJ-0443	-12	-33

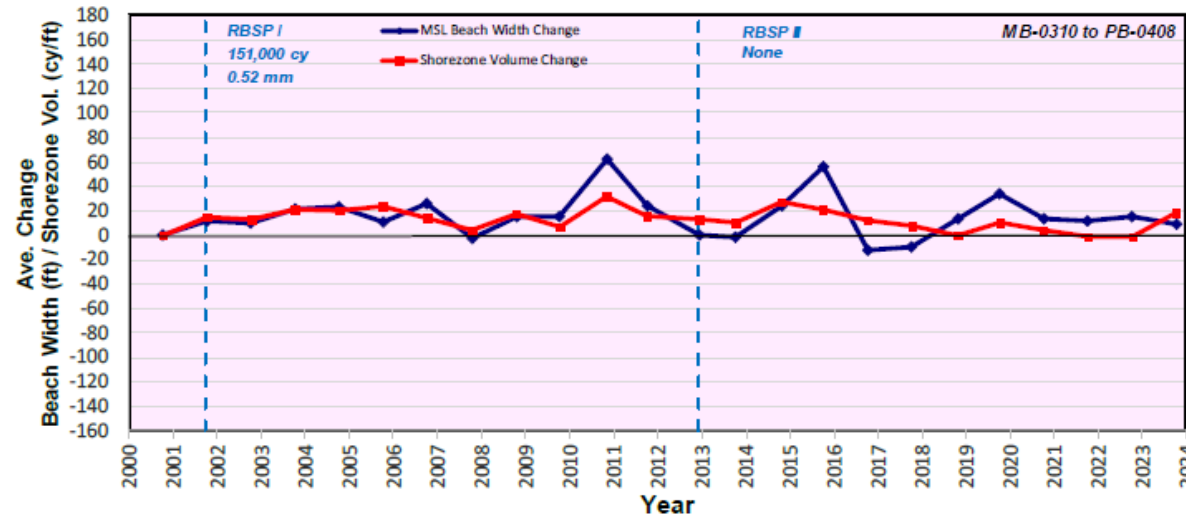


# Mission Beach Sub-Reach

## Post-RBSP I MSL Shoreline Change (Fall 2000 to Fall 2023)



## Average MSL Beach Width and Shorezone Vol. Change Relative to Pre-RBSP I Condition



### Net Change: Fall 2000 to Fall 2023

MSL Beach Width: +9 ft  
Shorezone Vol: +18 cy/ft

### Trend: Fall 2000 to Fall 2023

MSL Beach Width: 0.0 ft/yr  
Shorezone Vol: -0.4 cy/ft/yr

## Transect MB-0340 (October 17, 2023)



## Location Map



## MSL Beach Width Summary

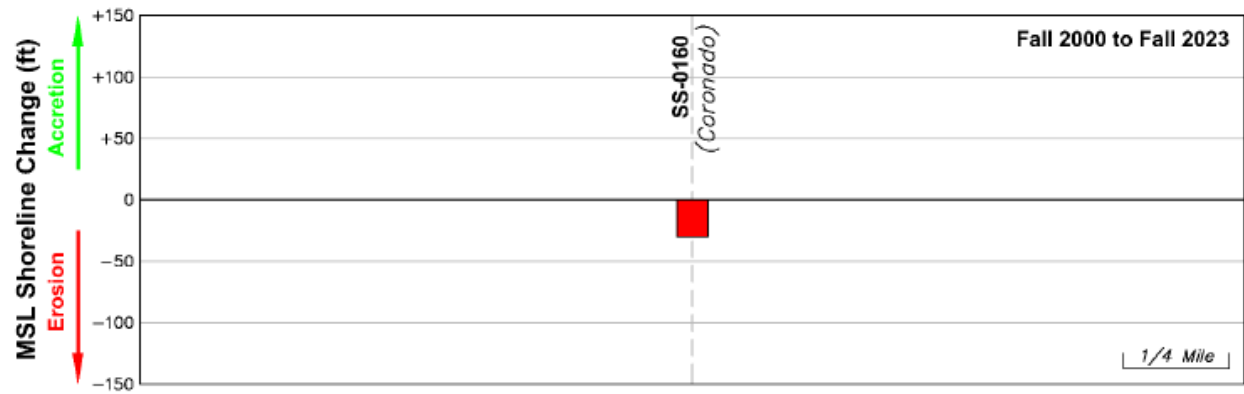
Transect	Fall 2023 Beach Width (ft)	Seasonal Change (ft)		Annual Change (ft) Fall 22-Fall 23	Post-RBSP I (ft) Fall 00-Fall 23
		Winter (Fall 22-Spr. 23)	Summer (Spr. 23-Fall 23)		
PB-0408	197	-51	72	21	6
MB-0384	249	-30	36	6	5
MB-0340	232	-46	45	-1	38
MB-0320	242	-71	44	-27	-
MB-0310	279	-106	53	-53	-11

## Shorezone Volume Summary

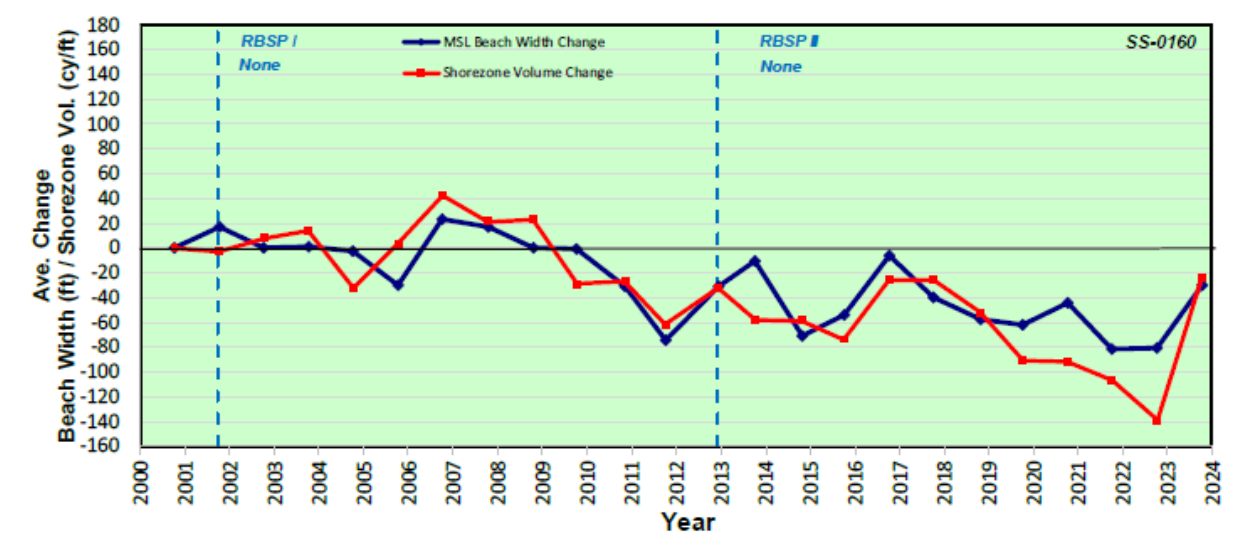
Transect	Annual Change (cy/ft) Fall 22-Fall 23	Post-RBSP I (cy/ft) Fall 00-Fall 23
PB-0408	-10	-16
MB-0384	52	44
MB-0340	56	72
MB-0320	3	-
MB-0310	-26	-29

# Coronado Sub-Reach

Post-RBSP I MSL Shoreline Change (Fall 2000 to Fall 2023)



Average MSL Beach Width and Shorezone Vol. Change Relative to Pre-RBSP I Condition



## Net Change: Fall 2000 to Fall 2023

MSL Beach Width: -30 ft  
Shorezone Vol: -24 cy/ft

## Trend: Fall 2000 to Fall 2023

MSL Beach Width: -3.4 ft/yr  
Shorezone Vol: -4.8 cy/ft/yr

Transect SS-0160 (October 12, 2023)



Location Map



~1 mile

## MSL Beach Width Summary

Transect	Fall 2023 Beach Width (ft)	Seasonal Change (ft)		Annual Change (ft)	Post-RBSP I (ft)
		Winter (Fall 22-Spr. 23)	Summer (Spr. 23-Fall 23)	Fall 22-Fall 23	Fall 00-Fall 23
SS-0160	737	-23	74	51	-30

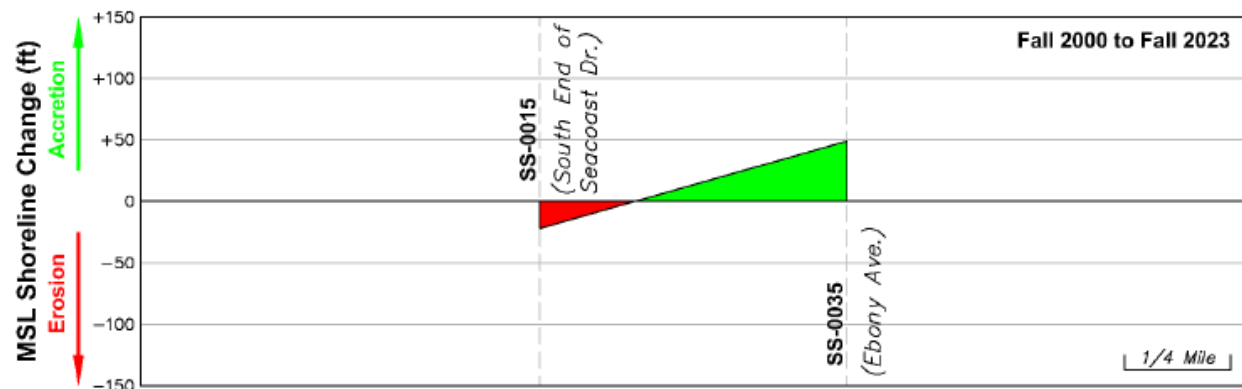
## Shorezone Volume Summary

Transect	Annual Change (cy/ft)	Post-RBSP I (cy/ft)
	Fall 22-Fall 23	Fall 00-Fall 23
SS-0160	115	-24

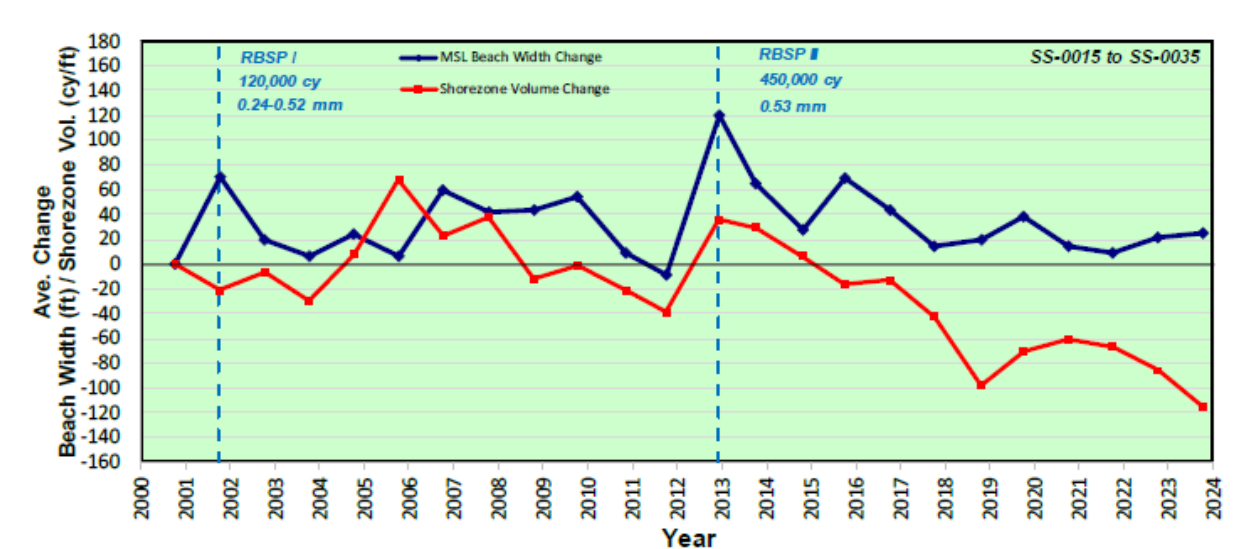


# Imperial Beach Sub-Reach

Post-RBSP I MSL Shoreline Change (Fall 2000 to Fall 2023)



Average MSL Beach Width and Shorezone Vol. Change Relative to Pre-RBSP I Condition



## Net Change: Fall 2000 to Fall 2023

MSL Beach Width: +25 ft  
Shorezone Vol: -115 cy/ft

## Trend: Fall 2000 to Fall 2023

MSL Beach Width: -0.1 ft/yr  
Shorezone Vol: -4.3 cy/ft/yr

Transect SS-0035 (October 14, 2023)



Location Map



## MSL Beach Width Summary

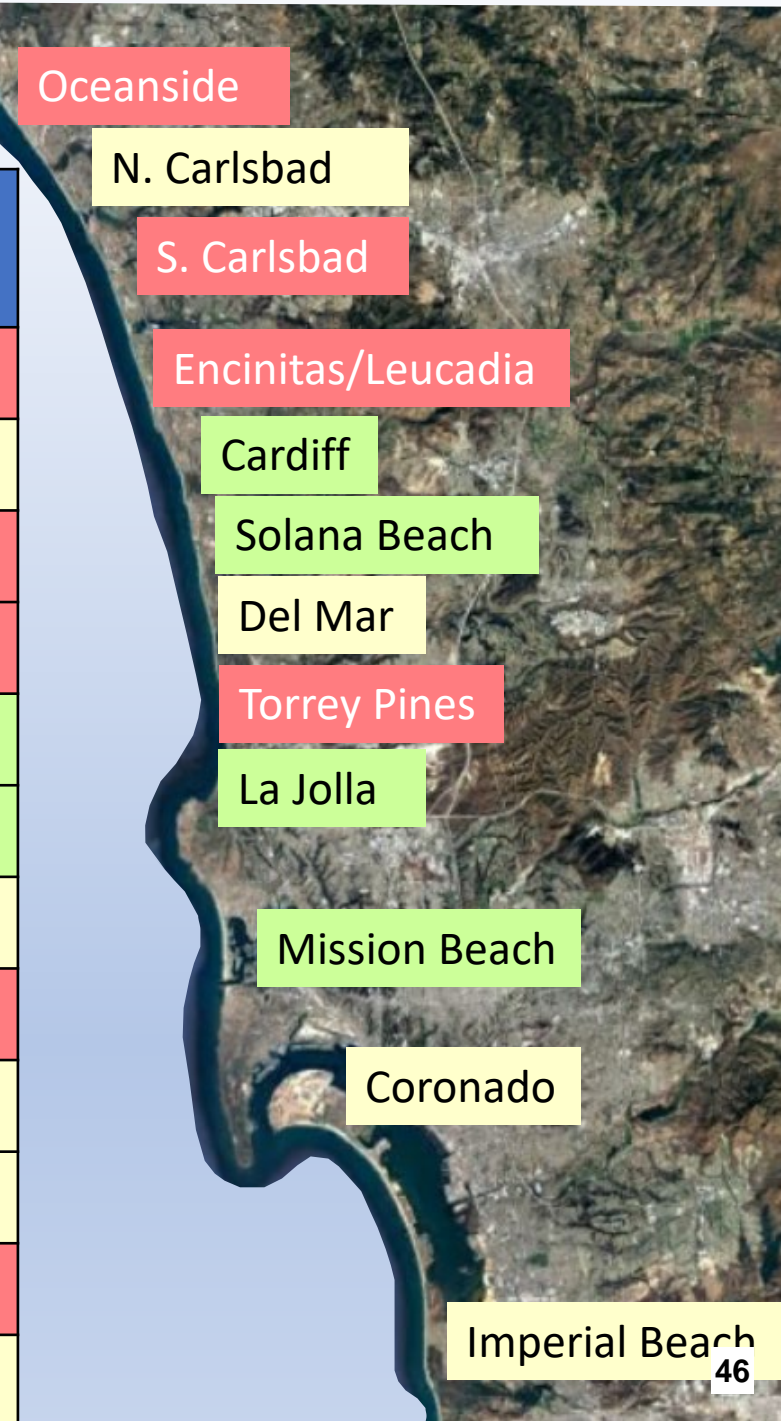
Transect	Fall 2023 Beach Width (ft)	Seasonal Change (ft)		Annual Change (ft) Fall 22-Fall 23	Post-RBSP I (ft) Fall 00-Fall 23
		Winter (Fall 22-Spr. 23)	Summer (Spr. 23-Fall 23)		
SS-0050	300	-113	116	3	-
SS-0035	267	-61	132	71	49
SS-0025	224	-114	103	-11	-
SS-0015	0	-101	8	-93	-22

## Shorezone Volume Summary

Transect	Annual Change (cy/ft) Fall 22-Fall 23	Post-RBSP I (cy/ft) Fall 00-Fall 23
SS-0050	-2	-
SS-0035	68	-91
SS-0025	47	-
SS-0015	-125	-139

# Summary

Sub-Reach	Fall 2023 Ave. MSL Beach Width	Shoreline Change Trend Fall 2000 to Fall 2023	
Oceanside	117 ft	-2.2 ft/yr	Eroding
N. Carlsbad	148 ft	+0.9 ft/yr	Stable
S. Carlsbad	91 ft	-1.8 ft/yr	Eroding
Leucadia/Encinitas	121	-3.0 ft/yr	Eroding
Cardiff	184 ft	+3.9 ft/yr	Accreting
Solana Beach	217 ft	+4.8 ft/yr	Accreting
Del Mar	163 ft	0.0 ft/yr	Stable
Torrey Pines	91 ft	-3.6 ft/yr	Eroding
La Jolla	204 ft	0.0 ft/yr	Stable
Mission Beach	239 ft	0.0 ft/yr	Stable
Coronado	737 ft	-3.4 ft/yr	Eroding
Imperial Beach	134 ft	-0.1 ft/yr	Stable



# Future Sand Management Considerations

Sub-Reach	Consecutive Years w/ MSL BW Gain Relative to Pre-Project			Ideal Re-nourishment Interval Based on Past Project Performance	Considerations
	RBSP I	RBSP II	Other (e.g., SELRP)		
Oceanside	4	4	-	5-yrs	<i>sand retention candidate; sand bypass management</i>
N. Carlsbad	11	12	-	10-yrs	<i>understand communication w/ Oceanside; sand bypass management</i>
S. Carlsbad	0	0	-	< 5-yrs	<i>Sand retention candidate; modified placement site/multiple sites</i>
Leucadia/Encinitas	3	1	-	< 5-yrs	<i>sand retention candidate; quantity matters</i>
Cardiff	11	4	3	5-10 yrs	<i>grain size matters</i>
Solana Beach	6	6+	6	5-10 yrs	<i>grain size less important</i>
Del Mar	1	-	-	<i>more info needed</i>	<i>use coarser sand</i>
Torrey Pines	2	-	-	<i>more info needed</i>	<i>use coarser sand</i>
La Jolla	-	-	-	<i>n/a</i>	<i>stable</i>
Mission Beach	6	-	2	5-yrs	<i>grain size matters?</i>
Coronado	-	-	-	<i>more info needed</i>	<i>coastal squeeze south of Hotel Del</i>
Imperial Beach	2	9	4	5-10 yrs	<i>quantity matters</i>

September 5, 2024

## Regional Beach Sand Project III: Phase I Update

### Overview

At its May 5, 2022, meeting, SANDAG staff outlined the necessary steps, and the funding required for RBSP III. The first step, referred to as Phase 1, is to update the 2007 feasibility study and economic analysis performed for RBSP II for the San Diego region. On November 8, 2023, SANDAG awarded AECOM as the prime consultant to perform RBSP III Phase I – Preliminary Planning Activities, which is anticipated to be completed in the Spring of 2025. On May 23, 2024, SANDAG executed Amendment 1 with AECOM to include Orange County cities within the Oceanside Littoral Cell including the cities of San Clemente and Dana Point. This report will provide a status update on where the Project Team is with Phase I work.

### Key Considerations

To date, the Project Team performed the following actions for Phase I work:

- Performed field site visits in the Fall of 2023 at all the RBSP II receiver beach sites to evaluate the visible conditions of the surrounding areas and beaches.
- Reevaluated RBSP II beach receiver site footprint plans/designs and created recommendations for each individual participating coastal jurisdiction.
- Submitted proposed recommendations in early 2024 to each coastal jurisdiction and other stakeholders on the draft footprint designs and requested feedback.
- Met with coastal jurisdiction that requested virtual meetings (Imperial Beach, Coronado, Oceanside, San Diego, Encinitas, and Port of San Diego) to discuss the rationale for the proposed recommendations for the footprint designs and sand volume quantities to revise accordingly.
- Received confirmation from all eight coastal jurisdiction on the revised beach receiver site footprint plans/designs and created revised footprint maps (Attachment 1).
- Requested beach attendance data from the coastal jurisdiction to begin to analyze data for the economic analysis.
- Performed a field visit in the Summer of 2024 to potential receive beach sites in the cities San Clemente and Dana Point to evaluate the visible conditions of the surrounding areas and beaches.
- Submitted proposed recommendations in the Summer of 2024 to the cities of San Clemente and Dana Point and other stakeholders on the draft footprint designs and requested feedback. Both cities confirmed and approved the proposed footprint designs and sand volume quantities with minor revisions (Attachment 1).

### Action: Discussion

The SPWG members are asked to review the proposed quantities, footprints and preliminary results from the economic analysis for Regional Beach Sand Project (RBSP) III for each coastal jurisdiction and provide feedback and recommendations to proceed.

### Fiscal Impact:

None.

### Schedule/Scope Impact:

The Project Team will continue to work on next steps, including finalizing the economic analysis for Phase 1 for RBSP III. Phase I will be complete in the Spring of 2025.



- Prepared the draft methodology for Economic Analysis based on previous RBSP's and United States Army Corps of Engineers methodology regarding beach nourishment planning.
- Prepared the draft economic analysis results for the San Diego region and continue to gather beach attendance data to analyze the Orange County cities portion.

### **Next Steps**

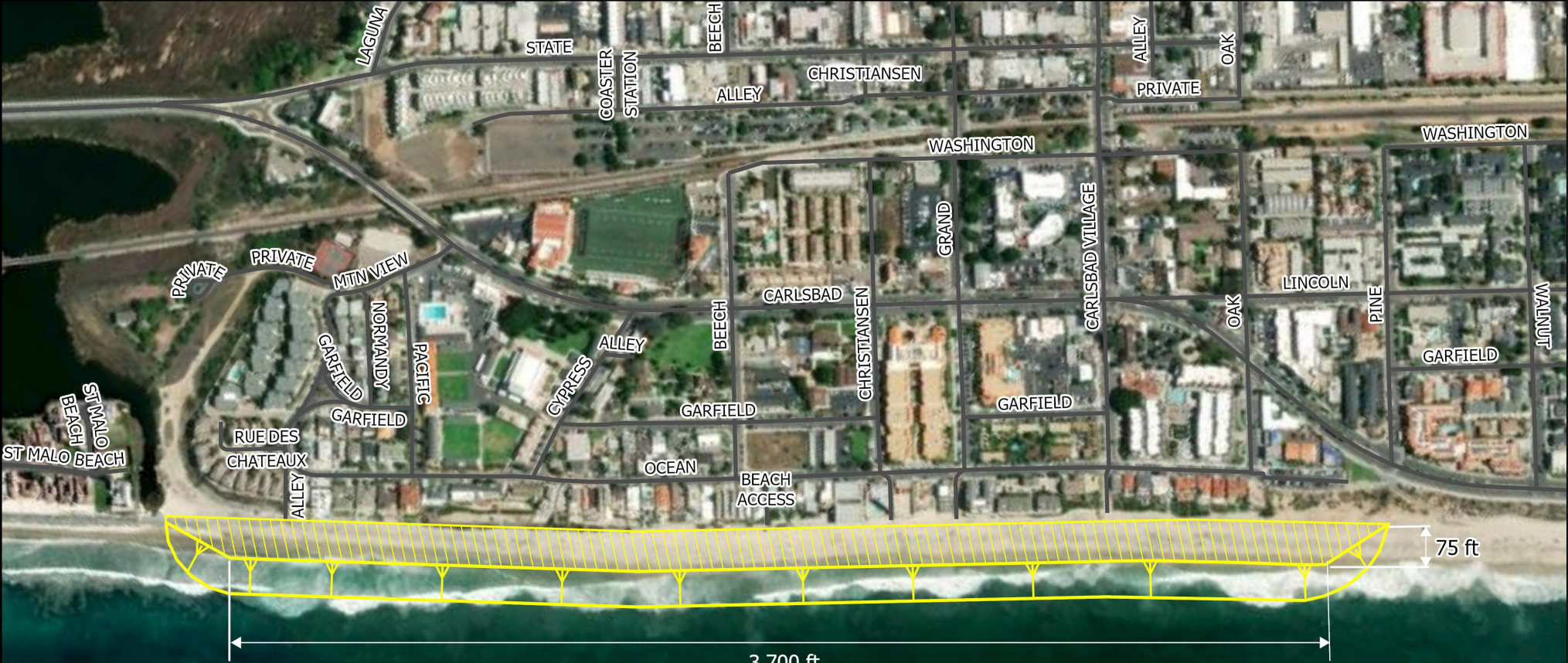
The Project Team will continue to finalize the planning documents including the methodology, sand volume quantities and alternate methods, and the economic analysis for Phase I – Preliminary Planning Activities. A final draft of the Feasibility Study and Economic Analysis will be circulated for review in early Spring of 2025 and any updates will be provided to the Shoreline Preservation Working Group.

### ***Keith Greer, Deputy Director of Environmental Compliance and Climate***

- Attachments:
1. Revised Beach Receiver Site Footprint Plans for:
    - A. City of Oceanside
    - B. City of Carlsbad
    - C. City of Encinitas
    - D. City of Solana Beach
    - E. City of Del Mar
    - F. City of San Diego
    - G. City of Coronado
    - H. City of Imperial Beach
    - I. City of San Clemente
    - J. City of Dana Point







3,700 ft

75 ft

Attachment B

**LEGEND**

**RBSP III PROPOSED**

- RBSP III Proposed Placement
- Berm
- Road

# NORTH CARLSBAD RECEIVER SITE

BEACH FILL VOLUME = 240,000 C.Y.

1 INCH = 1000 FEET



05.21.2024

REGIONAL BEACH SAND PROJECT III







**LEGEND**

**RBSP III PROPOSED**

- RBSP III Proposed Placement
- Berm
- Road

# SOUTH CARLSBAD NORTH RECEIVER SITE



05.21.2024

REGIONAL BEACH SAND PROJECT III

BEACH FILL VOLUME =  
300,000 C.Y.

1 INCH = 500 FEET











CARDIFF RECEIVER SITE

**SANDAG**

BEACH FILL VOLUME = 300,000 C.Y.

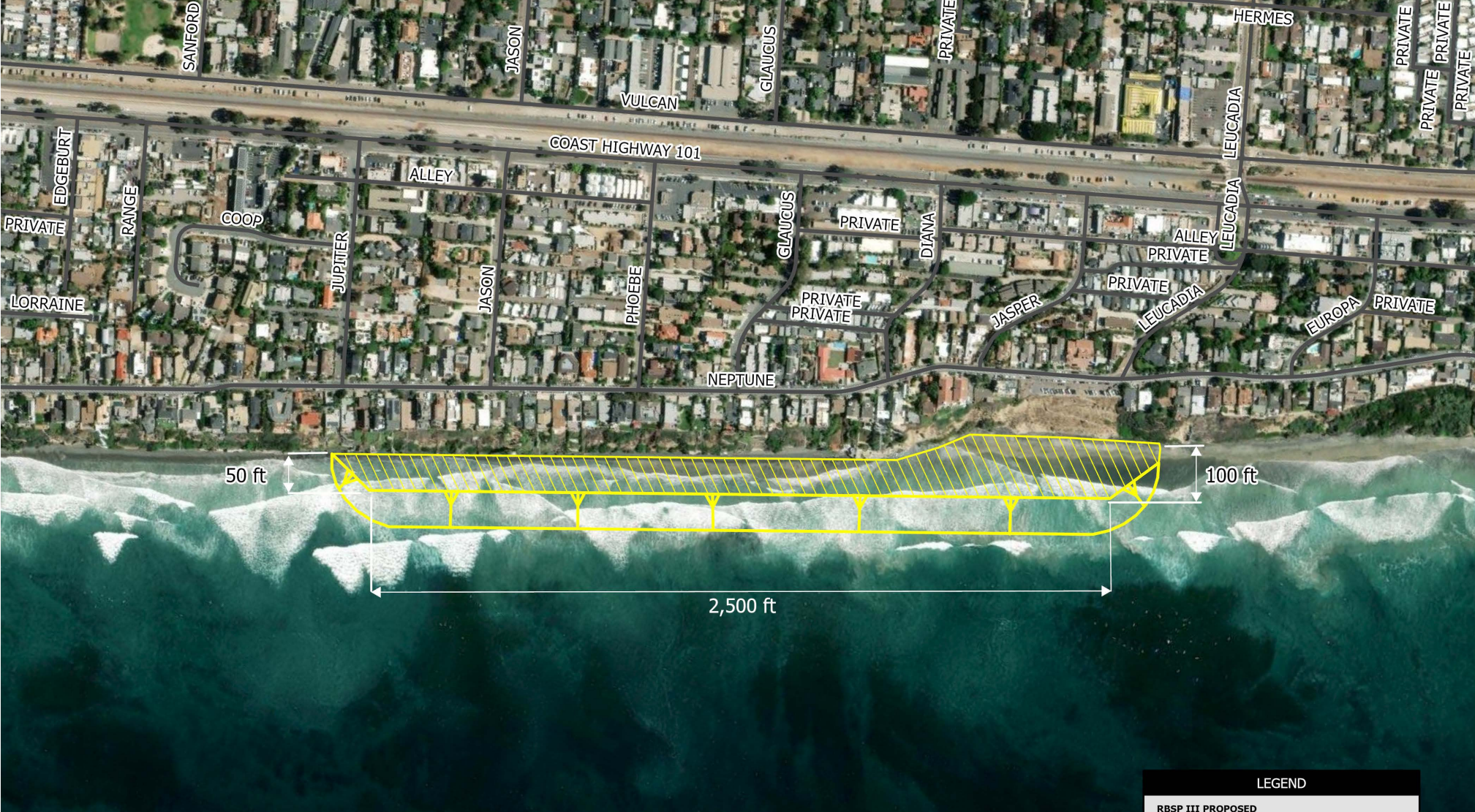
05.21.2024

REGIONAL BEACH SAND PROJECT III

1 INCH = 600 FEET







LEUCADIA RECEIVER SITE

BEACH FILL VOLUME = 132,000 C.Y.

**SANDAG**

05.21.2024

REGIONAL BEACH SAND PROJECT III

1 INCH = 350 FEET







# MOONLIGHT RECEIVER SITE

BEACH FILL VOLUME = 105,000 C.Y.

1 INCH = 400 FEET

**SANDAG**

05.21.2024

REGIONAL BEACH SAND PROJECT III







SOLANA RECEIVER SITE

BEACH FILL VOLUME = 300,000 C.Y.

**SANDAG**

05.21.2024

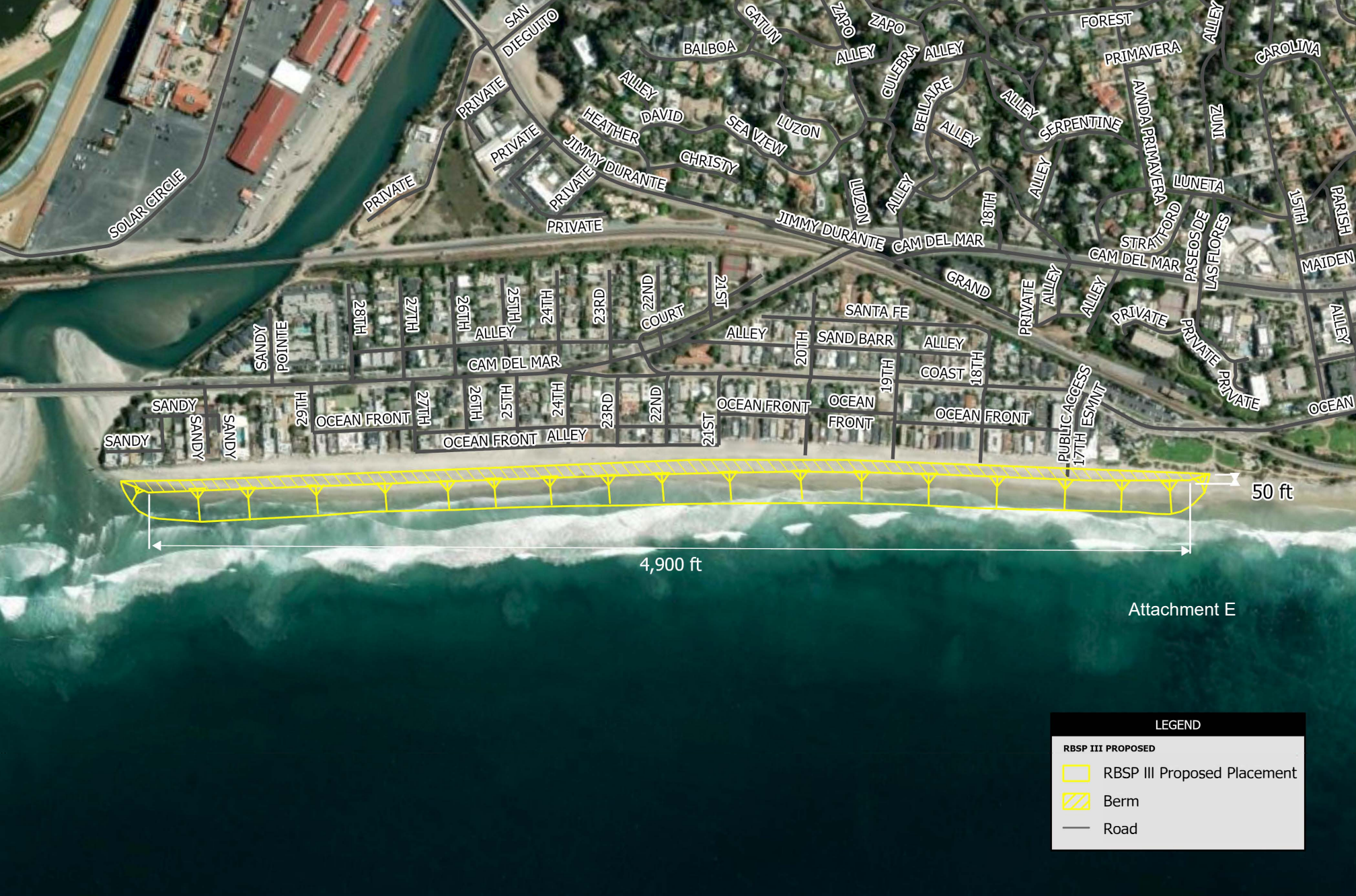
REGIONAL BEACH SAND PROJECT III

1 INCH = 600 FEET

0 250 500 1,000 FT







DEL MAR RECEIVER SITE

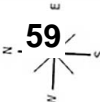
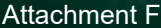
**SANDAG**

05.21.2024

REGIONAL BEACH SAND PROJECT III

Attachment E









**TORREY PINES RECEIVER SITE** BEACH FILL VOLUME = 245,000 C.Y.

**SANDAG**

05.21.2024

REGIONAL BEACH SAND PROJECT III

1 INCH = 400 FEET





## TOURMALINE RECEIVER SITE

**SANDAG**

05.21.2024

REGIONAL BEACH SAND PROJECT III

BEACH FILL VOLUME = 300,000 C.Y.\*

\* quantity may be less if Mission Beach placement also included

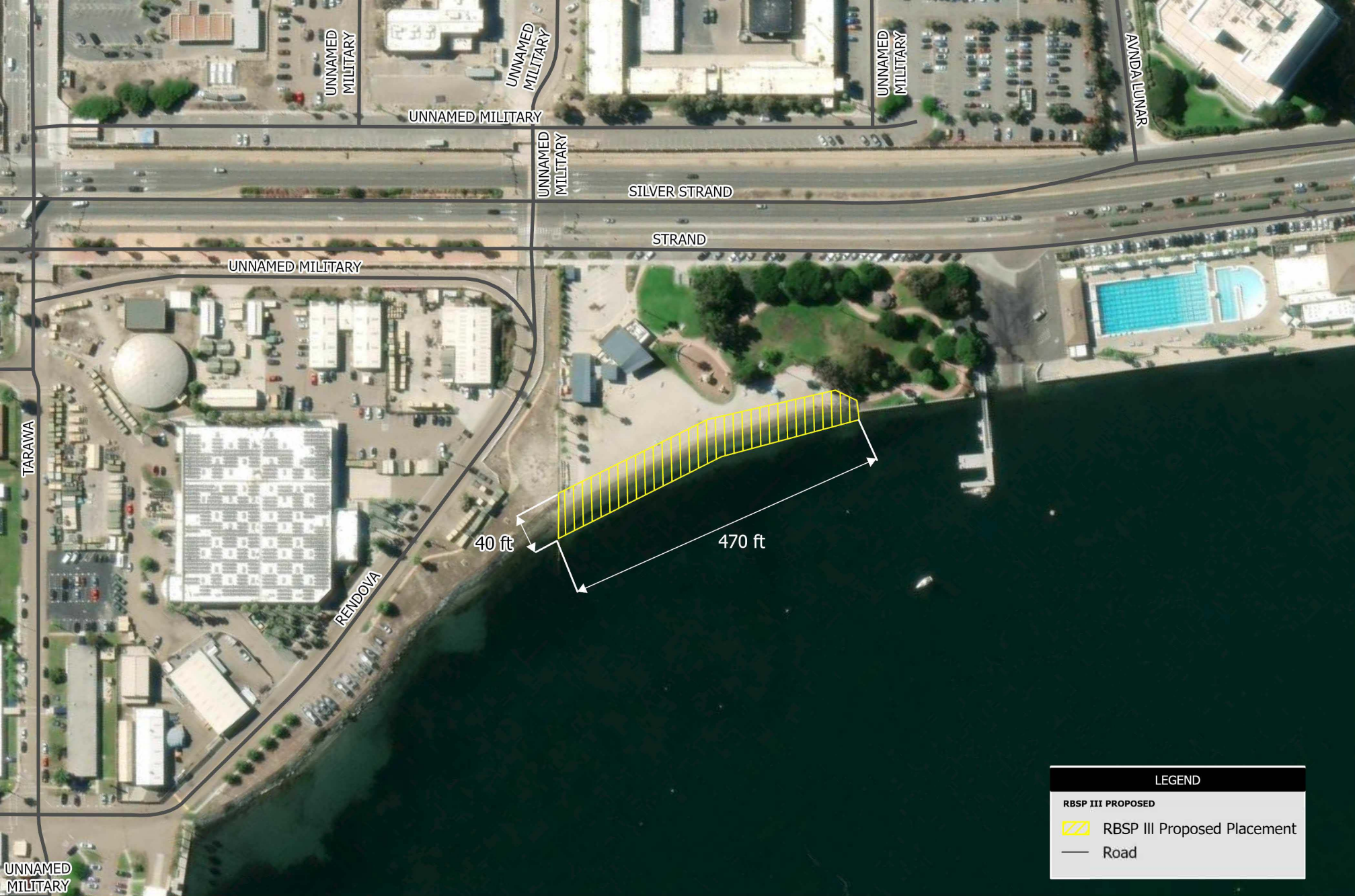
1 INCH = 950 FEET











# GLORIETTA BAY RECEIVER SITE

**SANDAG**

05.21.2024

REGIONAL BEACH SAND PROJECT III

BEACH FILL VOLUME = 10,000 C.Y.

1 INCH = 950 FEET







Attachment H

LEGEND	
<b>RBSP III PROPOSED</b>	
	RBSP III Proposed Placement
	Berm
	Proposed Nearshore Placement Site
	Road





**NORTH BEACH RECEIVER SITE** BEACH FILL VOLUME = 250,000 C.Y.

**SANDAG**

07.19.2024

REGIONAL BEACH SAND PROJECT III

1 INCH = 300 FEET







# SAN CLEMENTE STATE BEACH RECEIVER SITE



07.19.2024

REGIONAL BEACH SAND PROJECT III

BEACH FILL VOLUME = 500,000 C.Y.  
BEACH FILL WITH EXTENSION VOLUME = 800,000 C.Y.

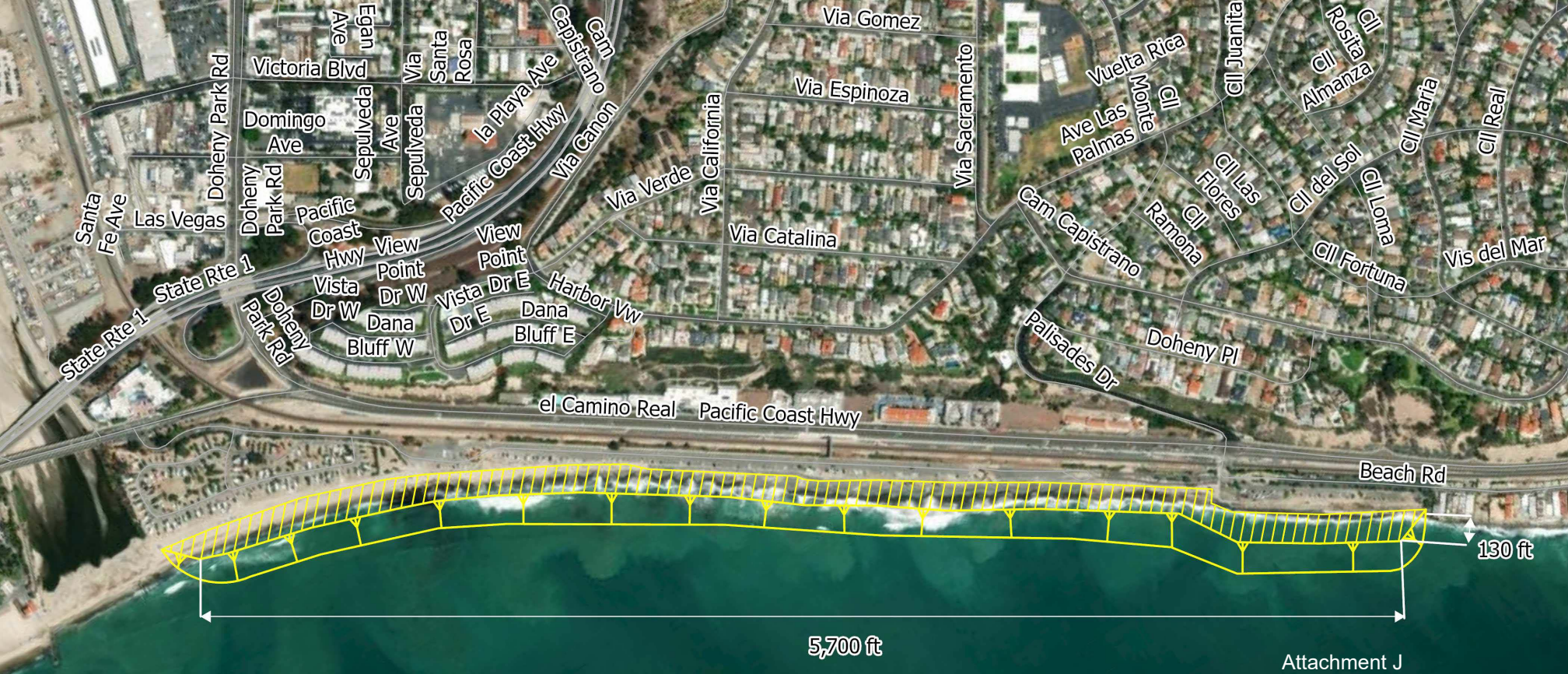
1 INCH = 1000 FEET











LEGEND	
<b>RBSP III PROPOSED</b>	
	RBSP III Proposed Placement
	Berm

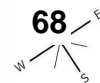
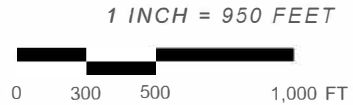
# DANA POINT RECEIVER SITE



BEACH FILL VOLUME = 500,000 C.Y.

07.19.2024

REGIONAL BEACH SAND PROJECT III





# Regional Beach Sand Project III

Feasibility Study Phase

Shoreline Preservation Working Group | Item 5  
AECOM, Moffatt & Nichol, Coastal Frontiers Corporation,  
Merkel & Associates, Phil King  
September 5, 2024

## Agenda

RBSP I/II Background

**RBSP III Overview**

Preliminary Footprints &  
Programmatic/Retention  
Strategies

Economic Analysis

**Offshore Borrow Site  
Investigation**



# Background

- 2001 RBSP
- 2012 RBSP II



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## RBSP III

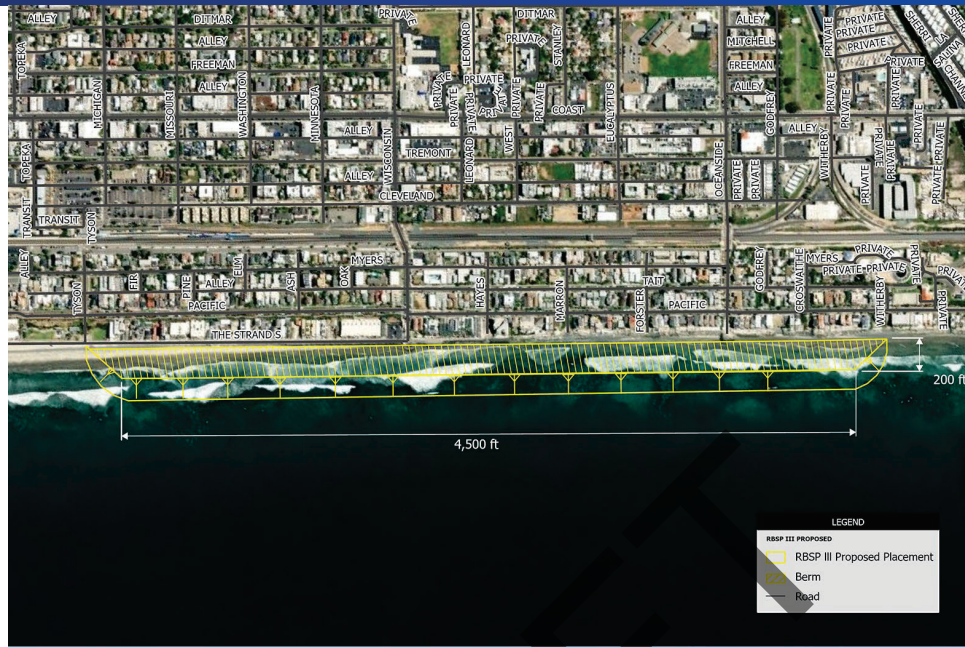
- Feasibility Study Phase
  - Identify placement footprints
  - Evaluate economic costs and benefits
  - Evaluate opportunities for programmatic approach & retention strategies
  - Identify lessons learned
  - Plan for offshore borrow sites



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# Oceanside



OCEANSIDE RECEIVER SITE  
**SANDAG** | 05.21.2024

BEACH FILL VOLUME = 1,000,000 C.Y.

05.21.20

REGIONAL BEACH SAND PROJECT III

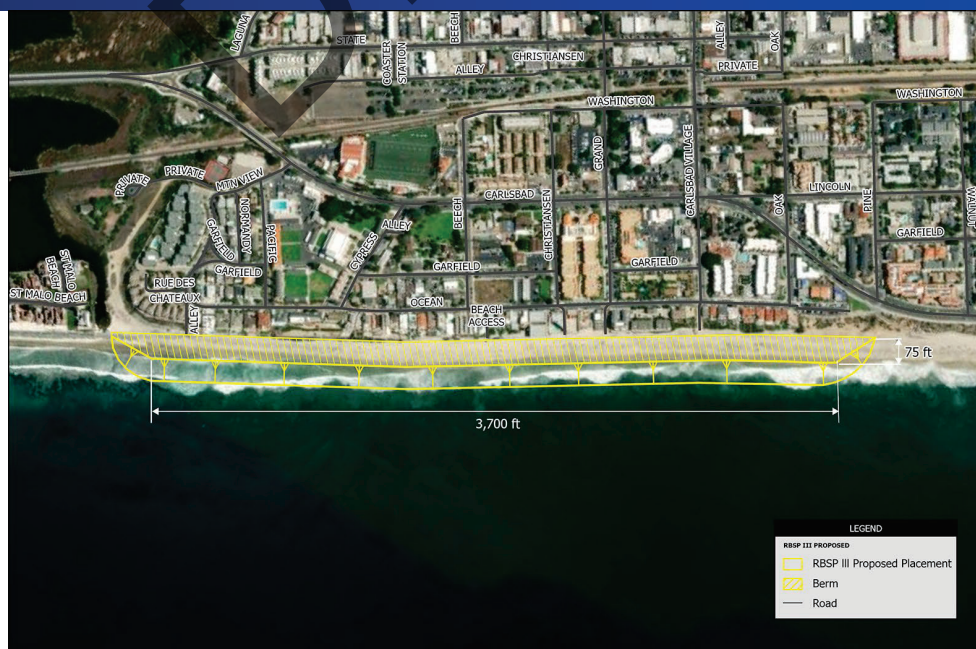
1 INCH = 950 FEET

0 300 500 1,000 FT



**SANDAG** | 5

# North Carlsbad



NORTH CARLSBAD RECEIVER SITE  
**SANDAG** | 05.21.2024 | REGIONAL BOARD

BEACH FILL VOLUME = 240,000 C.Y.

05.21.2024

REGIONAL BEACH SAND PROJECT III

1 INCH = 1000 FEET



**SANDAG** | 6



# South Carlsbad North



**SOUTH CARLSBAD NORTH RECEIVER SITE** BEACH FILL VOLUME = 300,000 C.Y.  
**SANDAG** | 05.21.2024 | REGIONAL BEACH SAND PROJECT III

1 INCH = 500 FEET  
0 300 500 1,000 FT

# Batiquitos



**BATIKUITOS RECEIVER SITE** BEACH FILL VOLUME = 118,000 C.Y.  
**SANDAG** | 05.21.2024 | REGIONAL BEACH SAND PROJECT III

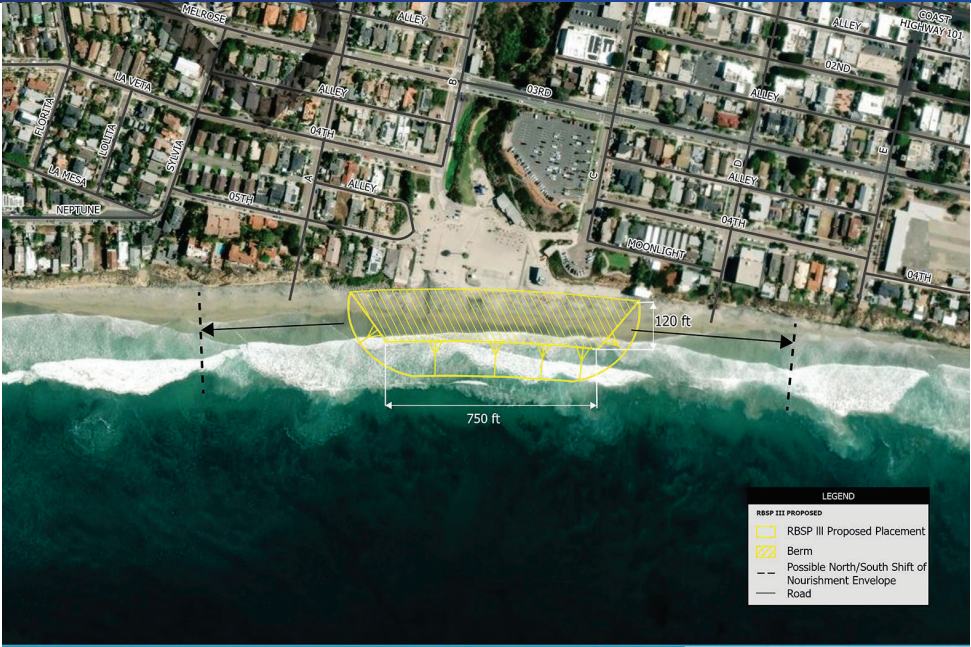
1 INCH = 950 FEET  
0 300 500 1,000 FT



# Leucadia



# Moonlight





# Cardiff



**CARDIFF RECEIVER SITE**

BEACH FILL VOLUME = 300,000 C.Y.

1 INCH = 600 FEET

**SANDAG**

05/21/2024

REGIONAL BEACH SAND PROJECT III

Subject	Interval (ET)	State 1 (%)	State 2 (%)	State 3 (%)	State 4 (%)
A	0-200	85	15	0	0
	200-400	10	90	0	0
	400-600	10	10	80	0
	600-1000	85	15	0	0
B	0-200	0	0	85	15
	200-400	0	0	90	10
	400-600	0	0	80	20
	600-1000	0	0	85	15
C	0-200	45	35	15	5
	200-400	35	45	15	5
	400-600	25	35	35	5
	600-1000	45	35	15	5

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# Solana Beach



## SOLANA RECEIVER SITE

BEACH FILL VOLUME = 300,000 C.Y.

1 INCH = 600 FEET

**SANDAG**

05.21.2024

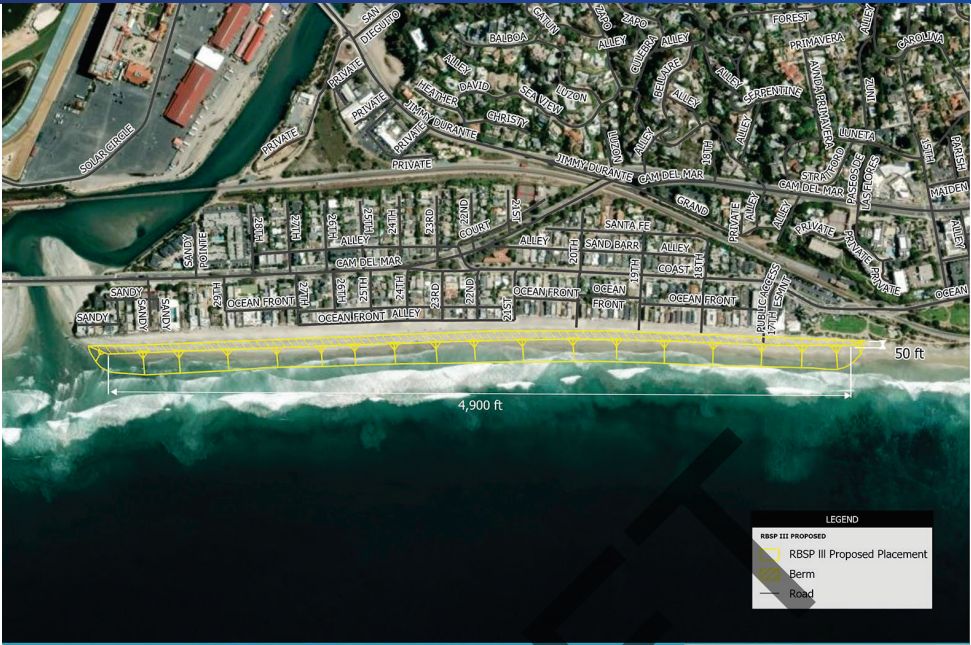
REGIONAL BEACH SAND PROJECT III

0 0.00 0.00 4.000 0.00

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# Del Mar



# Torrey Pines



# Tourmaline

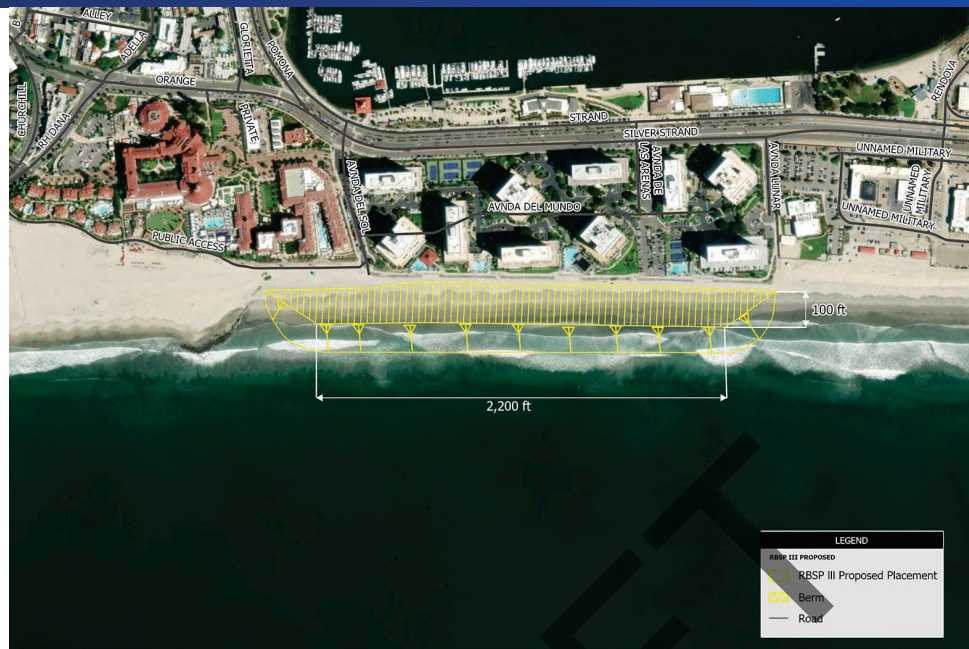


# Mission Beach





# Coronado Shores



CORONADO SHORES RECEIVER SITE  
**SANDAG** | 05.21.2024 | REGIONAL BEACH

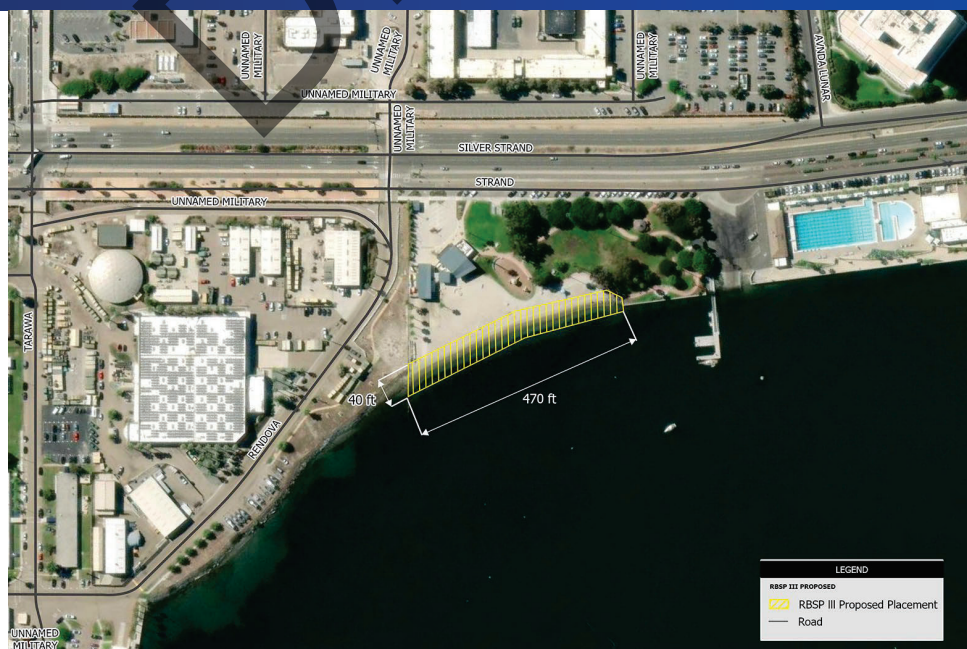
BEACH FILL VOLUME = 200,000 C.Y.

1 INCH = 950 FEET



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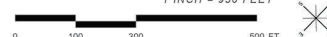
# Glorietta Bay



GLORIETTA BAY RECEIVER SITE  
**SANPAG** | 05.21.2024 | REGION

BEACH FILL VOLUME = 10,000 C.Y.

1 INCH = 950 FEET



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1 INCH = 950 FEET

Year	Number of people (millions)
2000	~1,000
2010	~1,100

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# Dana Point



1 INCH = 950 FEET

Age Group	Male	Female
0-30	~100	~100
31-40	~50	~50
41-50	~10	~10
51-60	~100	~100
61-70	~100	~100
71-80	~100	~100

**SANDAG** | 20





07.19.2024

REGIONAL BEACH SAND PROJECT III

1 INCH = 300 FEET



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# San Clemente State Beach



**SANDAG**

07.19.2024

REGIONAL BEACH SAND PROJECT III

BEACH FILL VOLUME = 500,000 C.Y.

1 INCH = 650 FEET

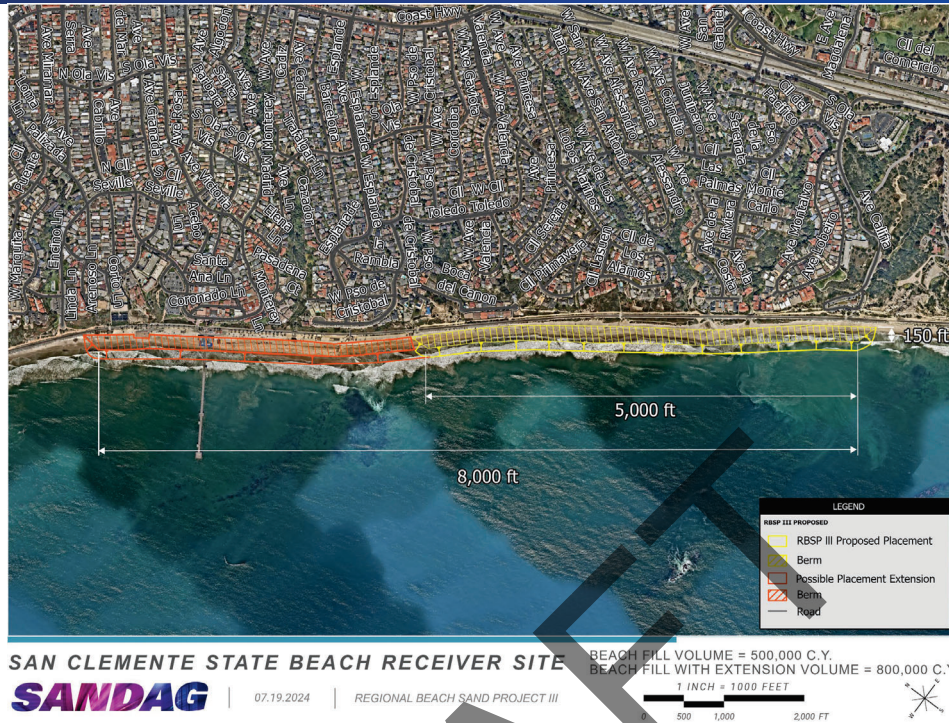
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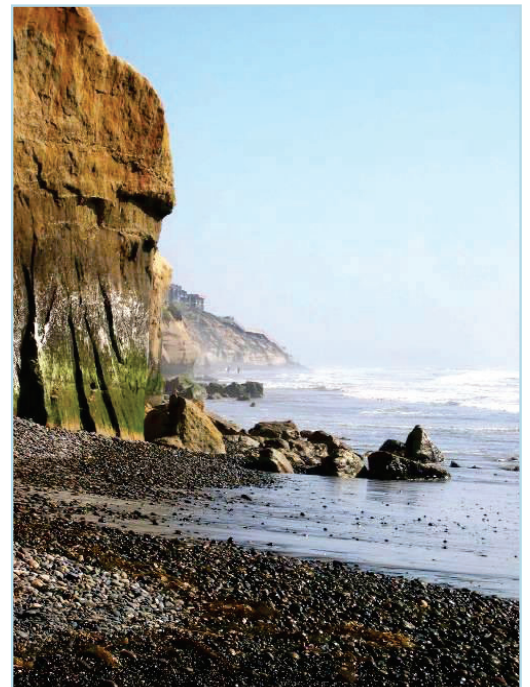


# San Clemente State Beach Extended



## Potential Retention Opportunities

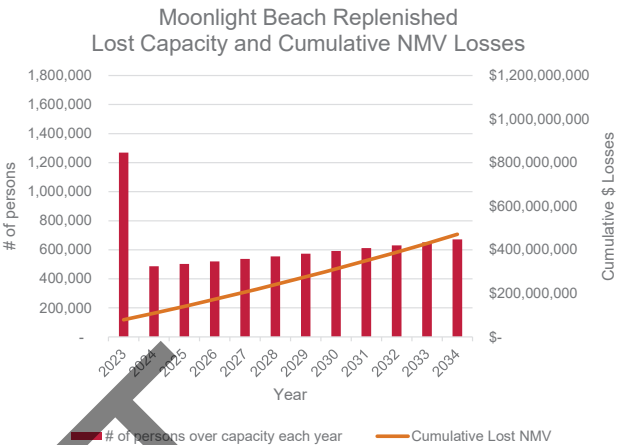
- Oceanside
- South Carlsbad North
- Leucadia
- Coronado





# Economic Methodology

- Assigned a Day Use Value of just over \$60/day
- Examined Daily Attendance
- Examined “Carrying Capacity” @ 100 sq. ft. per person per trip
- Turnover = 3
- Lack of Carrying Capacity = Loss of Economic Value



# Preliminary Benefit/Cost Analysis

## San Diego Region

Benefit	Discount Rate
\$2 billion	undiscounted
\$1.7 billion	3%
\$1.4 billion	7%

- Total undiscounted benefits for both San Diego and Orange County are approximately \$2.2 billion over ten years
- Benefits>>>costs

## Orange County Region

Benefit	Discount Rate
\$185 million	undiscounted
\$154 million	3%
\$77 million	7%

# Potential Offshore Borrow Areas

## Expansions of RBSP II Areas:

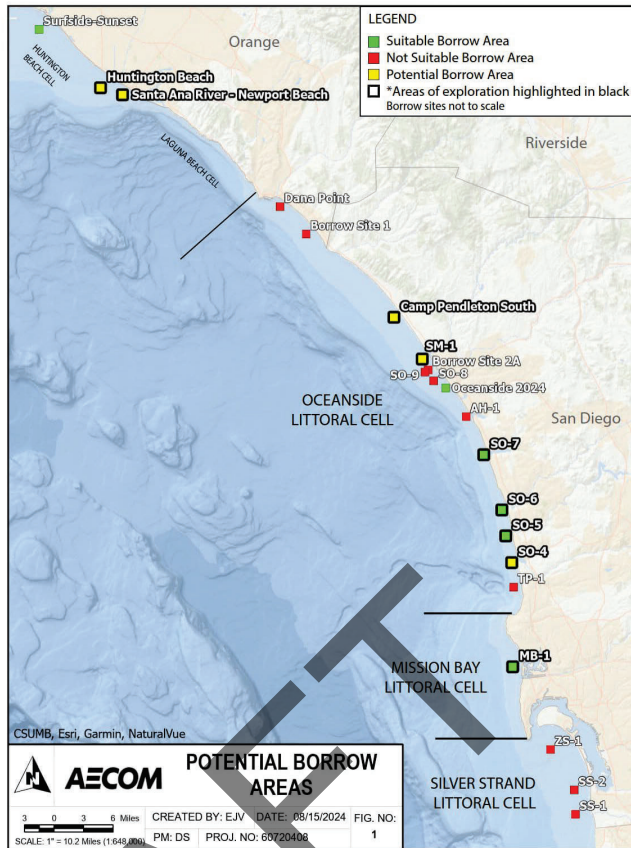
- Del Mar SO-5
- Mission Beach MB-1

## Re-explore North County:

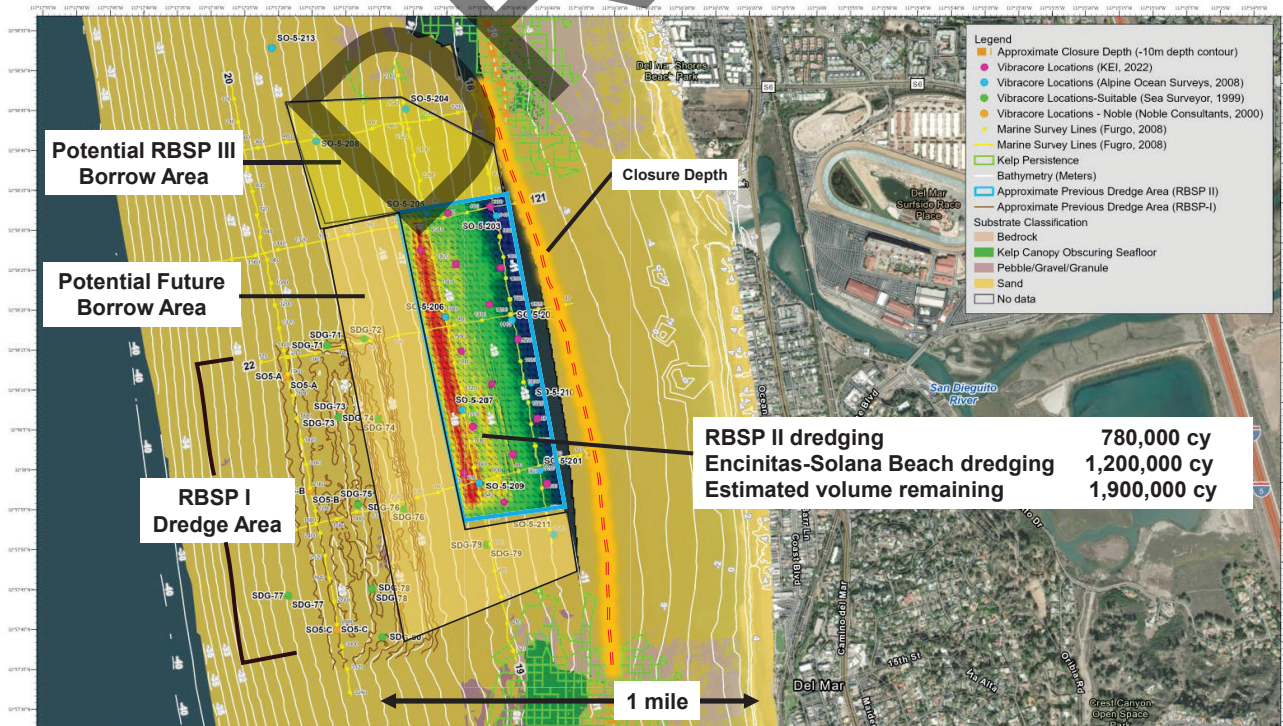
- Torrey Pines SO-4
- San Elijo SO-6
- Encinitas SO-7
- Santa Margarita SM-1

## New Areas:

- Camp Pendleton South
- Newport Beach
- Huntington Beach



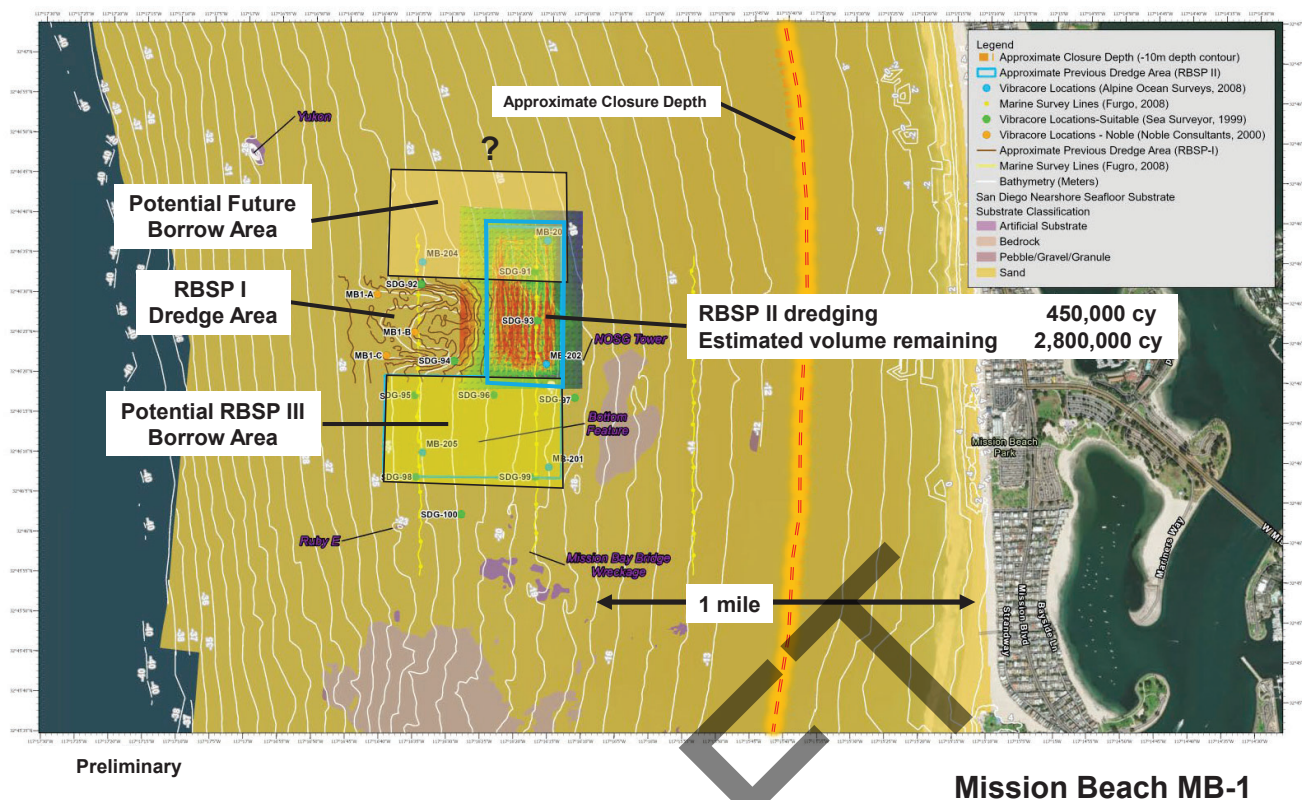
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Preliminary

**Del Mar SO-5**





## Next Steps

- Incorporate feedback from SPWG stakeholders
- Continue to wrap in Dana Point and San Clemente
- Draft Feasibility Study available for review approximately Winter 2025



## Stay connected with SANDAG



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[SANDAG.org](https://SANDAG.org)



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Email: [Courtney.Becker@sandag.org](mailto:Courtney.Becker@sandag.org)

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