

The Case for Coastal Resilience Investment

Quantifying Oceanside Beach as an Economic Asset

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1.0 Oceanside Beach – A Vital Economic Engine

Introduction

Oceanside Beach is a defining natural and economic asset for the City of Oceanside, attracting millions of visitors annually and contributing significantly to the region’s tourism economy, quality of life, and public services.

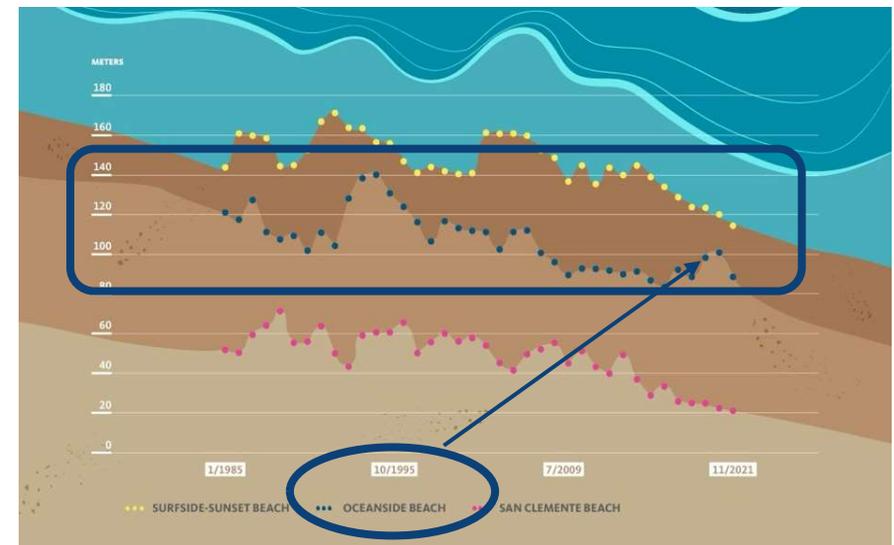
Each year, the beachfront attracts nearly 25 million visits and generates over \$2.5 billion in direct visitor spending¹. These dollars ripple across the local and regional economy, sustaining thousands of jobs and producing critical tax revenues that fund essential City services.

Yet this valuable asset is at risk. Chronic beach erosion, sea level rise, and sediment supply disruptions threaten to narrow the shoreline, degrade infrastructure, and reduce tourism-driven economic activity.

A landmark study published by the University of California, Irvine, confirms that Oceanside Beach has lost approximately 40 meters (140 feet) of sand width since 1985.

The following Figure 1 excerpted from UC Irvine data², offers a striking visual validation of long-term shoreline loss and serves as a fundamental guide for decision-making for the City of Oceanside. These physical changes jeopardize city-owned assets including maintenance, safety, and recreation facilities on and adjacent to the Strand. Continued impacts to beach quality and access pose a threat to beach visitation and related spending, business resilience, and property values.

Figure 1: Oceanside’s Beach Width Loss, 1985 to 2021



Source: UC Irvine Samueli School of Engineering, 2024

¹ Economic Impact Analysis findings are supported by the detailed assumptions and calculations presented in Appendix B,

² www.universityofcalifornia.edu/news/why-california-beaches-are-shrinking-and-what-we-can-do-to-save-them.

These physical changes jeopardize city-owned assets located along The Strand, including public restrooms, lifeguard towers, and recreation facilities. In parallel, tourism revenue, property values, and local employment remain vulnerable to any disruptions in beach quality, access, or size.

In the summer of 2021, the Oceanside City Council adopted a plan to stabilize its beach by partnering with Resilient Cities Catalyst (RCC) to co-develop a long-term sustainability strategy³.

Figure 2: City of Oceanside Beach



Source: Oceanside Chamber of Commerce, 2025

RCC’s mission is to create catalytic change to help cities solve their most pressing resilience challenges through capacity building, facilitating state and federal funding, and creating networks to share best practices across the country.

To help other coastal communities facing similar challenges to learn from Oceanside’s experience, RCC commissioned this independent economic impact analysis and funding evaluation to:

1. Quantify the economic value of Oceanside Beach in the context of current coastal zone management challenges and risks.
2. Assess the fiscal and economic risks of inaction under a “No Build” or do-nothing scenario, where no measures are taken to address beach sand loss.
3. Evaluate potential funding mechanisms that could support long-term coastal resilience infrastructure improvements.

RCC is sponsoring this study to catalyze broader, long-term community dialogue about the role of coastal resilience in fiscal resilience. By testing the relationship between the costs of inaction and an innovative range of short-, mid-, and long-term funding alternatives, this study equips City leaders, stakeholders,

³ See Appendix A for background information on the RE:BEACH Pilot Project and RCC’s regional resilience programs.

and community members with a new context for evaluating the public return on coastal resilience infrastructure investment.

Executive Summary

This Economic Impact Study quantifies the value of Oceanside Beach as a critical driver of the local and regional economy and evaluates the consequences of continued beach loss under a “No Build” scenario.

A conservative estimate—a 10% decline in annual visitation due to erosion and reduced access—would result in approximately \$250 million in annual economic losses to Oceanside through reduced tax revenues, lower property values, and decreased visitor spending.

The study concludes that the benefits of preserving Oceanside’s beaches—both to the City’s tax base and the regional economy—significantly outweigh the costs envisioned by Phase I of Oceanside’s proposed RE:BEACH Pilot Project⁴.

It also identifies a range of potential funding sources to advance coastal resilience infrastructure improvements in a fiscally responsible and publicly supportable way, along with strategies to strengthen Oceanside’s capacity for stakeholder outreach, State and Federal grant management and sustained long-term funding.

⁴ Refer to Appendix A: Oceanside RE:BEACH Pilot Project Background for details regarding project costs.

Economic Value of Oceanside Beach

With an estimated 25 million visitor days annually, the beach supports over \$2.5 billion in annual spending, sustaining jobs, local businesses, and municipal revenues across Oceanside’s tourism, retail, and hospitality sectors.

Meeting long-term coastal resilience needs will require more than a single funding source. A layered strategy combines local revenues, regional partnerships, state and federal grants, and innovative fees or incremental taxes to build a balanced and sustainable financing framework.

By concurrently exploring diverse funding streams, local governments can ultimately reduce reliance on General Fund support, avoid extraordinary tax increases, and ensure that the costs of shoreline protection and infrastructure investment are spread fairly and predictably over time.

2.0 Oceanside Beach Economic Impact Findings

Economic Activity Focus Areas

The study's key finding is that **Oceanside's Beachfront drives economic activity in the Downtown Commercial Core**. The analysis examined Oceanside Beach and Oceanside's Downtown Core (defined in this study as the Primary and Secondary Economic Activity Areas, respectively) by integrating mobility data, land use patterns, and visitor spending flows.

Figure 3: Oceanside Primary and Secondary Economic Impact Study Areas



⁵ www.Placer.ai is a location analytics company that aggregates anonymized mobile location data related to foot traffic and consumer behavior.

Using Placer.ai⁵, the study identified spatial and behavioral connections between beach visitation and commercial activity in adjacent zones. This place-based approach quantifies the beach's role in driving economic activity beyond the shoreline and into the Oceanside's business core.

In the context of this study, the Placer.ai data is aggregated to inform estimates of beach visitor traffic, economic impact of Oceanside Beach, and Public Return on Investment (ROI) of public infrastructure alternatives.

Primary Economic Activity Area: Oceanside Beach

Oceanside Beach serves as the City’s premier economic development anchor, offering a combination of natural, recreational, and commercial assets that attract millions of annual visitors and support a wide range of local businesses. The Primary Economic Activity Area includes three miles of accessible beachfront, iconic amenities such as the Oceanside Pier and Strand, and a diverse mix of hotels, vacation rentals, shops, and restaurants. This concentration of assets generates substantial visitor spending, particularly in hospitality, dining, and recreation, forming the foundation of Oceanside’s tourism economy.

Public infrastructure in the beach zone—including lifeguard towers, public restrooms, volleyball courts, and the amphitheater—enhances the visitor experience and supports event-based tourism, such as beach festivals, surf competitions, and cultural gatherings.

Proximity to the harbor, marina, and coastal rail access further amplifies the beach’s role as a regional draw. Together, these physical, recreational, and service-oriented amenities contribute not only to direct economic output, but also to the City’s brand as a vibrant, family-friendly, and increasingly upscale coastal destination.

Figure 4: Oceanside Beach, California



Source: Adobe Stock; Willdan, 2025

In fact, the Oceanside Beach Primary Economic Activity Area has attracted more businesses and employees than the Downtown Core, as detailed in Figure 3.

Oceanside’s Beach is anchored by restaurants, boutiques, galleries, retail shopping centers, and service-based businesses—capturing a significant share of tourism-related spending and playing a critical role in extending beach visitor spending into the broader local economy.

These assets make the beach a critical driver of business retention, investment, and revenue generation for the broader Oceanside economy.

Secondary Economic Activity Area: Downtown Core

The Secondary Economic Activity Area—the Downtown Core—was analyzed as the primary beneficiary of visitor spillover from Oceanside Beach into the City’s commercial base. Using Placer.ai mobility data, the study tracked how beachgoers move into the commercial core to shop, dine, and participate in local events.

Oceanside’s Beachfront is not only a recreational destination but also a central economic catalyst for both the Primary and Secondary Economic Activity Areas shown in Figure 3.

Data from Placer.ai confirms that nearly **89% of beach visitors also shop or dine in Oceanside’s Downtown Core**, creating a strong spatial and fiscal linkage between the shoreline and citywide commerce.

Figure 5: Oceanside Downtown Commercial Core



Source: Adobe Stock; Willdan, 2025

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This finding strongly correlates the relationship between beachfront visitation and spending in Oceanside’s Downtown Core and beyond.

Regional Economic Benefits of Oceanside Beach

An economic impact analysis of beach-related visitor spending reveals that Oceanside Beach is a foundational driver of the city’s tourism economy, supporting more than **\$2.5 billion** in direct annual visitor spending and serving as a gateway to broader economic activity throughout the region.

When accounting for indirect and induced effects—such as supplier purchases and household spending by tourism-supported employees—the beach generates an estimated **\$4.82 to \$5.84 billion in total annual economic output across the region**. This includes thousands of jobs and millions in business revenues, also generating substantial tax revenues that fund critical public services and programs.

This strong spatial and behavioral link demonstrates that the vitality of the beach directly supports commercial activity and tax generation beyond the shoreline.

Disruptions to beach access and quality—including rising sea levels, more frequent tidal flooding, and prolonged shoreline erosion—can diminish the visitor experience and reduce time spent in adjacent commercial areas. These gradual environmental shifts pose long-term risks to both tourism and downtown economic activity.

3.0 Oceanside Beach Erosion Trends & Projections

Existing Conditions

Oceanside’s iconic beachfront is vanishing. Once a wide and vibrant stretch of sand, the City’s coastline now faces intensifying threats from sea level rise, chronic erosion, and a long-term decline in sediment supply. This section presents validated data from scientific and engineering sources to quantify beach loss—supporting the underlying premise that coastal erosion presents both environmental and fiscal risks for the City of Oceanside.

Ongoing shoreline erosion, particularly south of the pier, presents a growing threat. Contributing factors include historical changes to sediment flow from harbor construction, more frequent high tide flooding, and rising sea levels.

These physical changes jeopardize city-owned assets located along The Strand, including public restrooms, lifeguard towers, and recreation facilities. In parallel, tourism revenue, property values, and local employment remain vulnerable to any disruptions in beach quality, access, or size.

This context reinforces the importance of proactive investment in sand nourishment and retention strategies to preserve both physical and economic resilience.

Beach Erosion Impacts

Beach erosion trends impacting Oceanside Beach are well documented. A 2021 study prepared by GHD Engineering USA⁶ documents how the loss of beach width has already impacted public access, recreational use, intertidal habitat, and coastal aesthetics.

Figure 6: Oceanside Beach Sand Loss



Source: Surfrider Association, 2024

⁶ City of Oceanside Beach Sand Replenishment and Retention Device Project Feasibility Analysis of Project Alternatives (“Phase I Study”), GHD Engineering USA, Sections 3, 4, 9.3, 10, 12, Appendix A, and C.

A broader coastal erosion study by UC Irvine⁷ further illustrates the rate and degree of Oceanside’s sand loss. The study tracked changes in beach width across Orange County and Northern San Diego County from Long Beach to La Jolla (where Oceanside resides) using high-resolution aerial and satellite imagery spanning decades.

The approach involved systematically marking shoreline positions at 100-meter transects every 10 years over the past century, allowing for precise measurement of beach retreat or accretion on a per-littoral-cell basis.

The research reveals that despite periodic sand replenishment, many beaches in southern Orange County—including Oceanside—have continued to narrow significantly due to changes in net sediment transport patterns and upstream development impacts.

Over the last 40 years, Oceanside Beach lost 40 meters (140 feet) of beach width (decreasing from 120 meters in 1985 to approximately 80 meters in 2024). Notably, South Oceanside has lost a greater share than areas north of the Pier.

The findings challenge prevailing assumptions about southward sand movement, demonstrating instead a northward trend in

many locations, and offer strong empirical support for the hypothesis that Oceanside Beach is in long-term decline.

Future Impacts

According to multiple technical studies conducted by GHD USA Engineering (2021) and the City’s 2018 Sea Level Rise Vulnerability Assessment, the sea level along the San Diego coast is projected to rise approximately 0.6 to 1.0 feet by 2050 and up to 3.5 feet by 2100 under high-emissions scenarios.⁸ These conditions are expected to result in tidal inundation, storm flooding, wave impact, and erosion.

These sea level rise-related risks directly affect Oceanside’s Primary Economic Activity Area—the beachfront—by threatening public infrastructure, recreational access, and shoreline stability, while also impacting the Secondary Economic Activity Area—the downtown commercial core—through reduced visitor foot traffic, declining retail and hospitality activity, and long-term erosion of tax-generating economic vitality. As highlighted in interviews with GHD USA Engineering⁹, these impacts are more than cosmetic: the loss of sand means the loss of natural physical protection from wave run-up and storm-driven flooding.

⁷ Why California’s Beaches Are Shrinking, And What We Can Do To Save Them, June 28, 2024.

⁸ Refer to Appendix D: Sea Level Rise Technical Background for more information.

⁹ Nick Sadrpour, Senior Coastal Scientist and RE:BEACH Pilot Project Engineer, GHD USA Engineering.

This exposes low-lying city infrastructure, such as The Strand, lifeguard stations, maintenance facilities, and public restrooms, to increased risk of damage during high tides and storm events.

While property values may not show near-term declines—since they are often not reassessed until flooding occurs or transactions are attempted—the long-term fiscal risks associated with deferred action are validated by these Coastal Management studies.

Oceanside Beach is an Important Economic Asset

Preserving the physical and recreational integrity of Oceanside Beach is not merely a matter of environmental or public access stewardship—it is a critical strategy for fiscal resilience, long-term property value retention, and safeguarding the City's core tax base.

Table 1: Projected Sea Rise Impacts and Related Economic Disruptions

Sea Rise Impacts	Fiscal & Economic Disruptions
Increase in Number/Scale of Flooding Days	Reduced beach visitation and recreational use; Canceled/rescheduled destination events
Coastal Erosion	Loss of beachfront width impacting visitor experience; Declines in visitor spending
Damage to Public Infrastructure	Increased repair and replacement costs for lifeguard towers, restrooms, parking, and signage
Loss of Protective Sand Buffer	Higher risk of flood damage to nearby hotels and waterfront businesses
Reduction in Property Values	Lower property tax revenues over time as flood exposure is priced into valuations
Insurance Limitations or Withdrawal	Increased cost or unavailability of coverage for tourism-related and small business properties
Utility Disruptions from Saltwater Intrusion	Impact to city services and operational costs
Interruption of Beach Access Routes	Reduced hotel stays and downtown foot traffic
Perception of Coastal Risk	Slower new business investment or relocation hesitation
Compounding Impacts on Workforce Stability	Greater volatility in seasonal employment and job retention

Source: City of Oceanside, CA; State of California Sea Rise Guidance 2024; Oceanside Vulnerability Analysis 2018; GHD USA Engineering; Willdan, 2025

4.0 No Build Scenario: What's at Risk?

A "No Build" scenario implies a "business as usual" or passive approach to addressing sand erosion and coastal zone management practices. This would allow the projections provided around sea level rise and sand erosion to proceed without adaptive measures taken.

Under a "No Build" scenario, the City would continue to experience beach erosion, reduced recreational access, and increasing vulnerability of public assets to coastal flooding. These conditions would trigger a reduction in visitor days for both the Primary and Second Areas, which in turn impacts to property values, tourism-dependent businesses, municipal revenues, and city-owned infrastructure.

From a policy and jurisdictional perspective, the City's focus is on coast management, where it holds both land ownership and maintenance responsibilities. Infrastructure such as the San Luis Rey River flood channels or regional rail corridors may fall under County or Federal jurisdictions, but beach nourishment and coastal protection fall squarely within the City's purview.

According to GHD USA Engineering, given the limited availability of estuarine habitat and constrained inland floodplains, proactive beach stabilization represents the City's most direct and effective resilience tool.

The following analysis profiles the potential fiscal and economic consequences of inaction—what could be lost if the City of Oceanside does not move forward with coastal resilience infrastructure improvements.

Property Tax Loss Scenarios

A "No Build" scenario assumes continued coastal erosion and sea level rise without intervention. Over time, this would degrade shoreline access, damage infrastructure, and reduce the desirability and market value of real estate within Oceanside's most economically productive coastal areas. The result could be a sustained loss of assessed property values, decreased private investment, and long-term erosion of the City's tax base.

Currently, the Primary Study Area—which includes beachfront parcels and directly adjacent development—generates approximately \$10.1 million in annual property tax revenue. The Secondary Study Area, encompassing Oceanside's downtown commercial core and surrounding mixed-use neighborhoods, contributes an additional \$6.1 million annually. Combined, these two zones support more than \$16.2 million in total annual property tax revenue—a foundational funding source for essential City services, operations, and infrastructure.

The following Table 2 provides a breakdown of land use composition across these economic activity areas.

Table 2: Oceanside Land Use by Economic Activity Area, 2024

Land Use Type	% in Primary Study Area	% in Primary Study Area
Single Family Residential	20.30%	42.00%
Multi-Family Residential	16.50%	20.40%
Condominium	35.80%	4.30%
Other Residential	0.00%	0.00%
Vacant	0.60%	1.40%
Commercial	8.80%	5.20%
Shopping Centers	0.60%	11.30%
Hotel/Motel/Resorts	8.90%	0.60%
Other	<u>8.40%</u>	<u>14.80%</u>
Total	100.00%	100.00%

Source: City of Oceanside, CA: ParcelQuest; Willdan, 2025

This breakdown highlights the high concentration of condominiums, hotels, and multi-family housing in the primary Oceanside Beach area, which are particularly sensitive to beach access, ocean views, and recreational quality.

The Downtown Core is more heavily weighted toward single-family homes and shopping centers, which also benefit from beach proximity but may be less immediately affected by shoreline loss.

Hotel/motel and commercial properties represent more than 17% of the Primary Study Area's land use, placing a significant portion of the property tax base at risk.

Any deterioration in beach condition—such as narrowing shorelines, repeated flooding, or loss of public amenities—could result in declines in lodging demand, lease rates, and redevelopment interest, all of which would negatively affect property assessments and future revenue potential.

While property values often remain stable until direct impacts such as flooding or insurance withdrawal occur, the City may begin to experience revenue loss within a decade due to market uncertainty, investment hesitation, and increased risk perception. These fiscal pressures will likely be amplified by broader economic volatility in the hospitality, residential, and tourism-serving retail sectors.

To illustrate the magnitude of this risk, the table below presents modeled loss scenarios based on current property tax revenue levels. A 5% to 20% decline in assessed value across these areas could result in annual losses ranging from \$810,000 to \$3.25 million, and cumulative 10-year losses of \$8.1 million to \$32.5 million. Even modest reductions in visitor spending due to beach erosion, flood closures, or loss of event programming could have outsized fiscal consequences.

Table 3: Property Tax Loss Scenarios, 2024 Snapshot

Annual Property Tax Loss (\$M)	Primary Area	Secondary Area	Primary + Secondary Areas	10-Year Tax Loss
5% Loss	\$ 0.51	\$ 0.31	\$ 0.81	\$ 8.13 M
10% Loss	\$ 1.01	\$ 0.61	\$ 1.63	\$ 16.26 M
20% Loss	\$ 2.02	\$ 1.23	\$ 3.25	\$ 32.52 M

Source: City of Oceanside, CA: ParcelQuest; Willdan, 2025

City TOT & Sales Tax Revenues

Transient Occupancy Tax (TOT) and Sales & Use Tax revenues are particularly sensitive to changes in visitor behavior. Oceanside collected approximately \$17.9 million in TOT revenue and an approximately \$50.4 million in sales tax revenue in FY2024—together comprising roughly \$68.0 million in tourism-driven annual tax revenue.

Table 4: Sea Level Rise Impacts – City of Oceanside TOT & Sales Tax Loss Scenarios

Assumed Visitor Spending Loss Scenarios ¹	Approximate Spending Loss	Annual City TOT Revenue Loss	10-Year TOT Cumulative Loss	Annual City Sales Tax Loss	10-Year City Sales Tax Loss
5% Loss	\$126.8 M	\$0.9 M	\$9.0 M	\$25.0 M	\$6.3 M
10% Loss	\$253.6 M	\$1.8 M	\$5.0 M	\$50.0 M	\$12.7 M
20% Loss	\$507.3 M	\$3.6 M	\$10.0 M	\$100.0 M	\$25.4 M

¹Hypothetical "No Build" Scenario losses based on professional opinions developed by consulting team.

Source: City of Oceanside; Visit Oceanside; Placer.ai; Willdan, 2025

Disruptions to visitor spending pose a serious threat to Oceanside’s fiscal resilience.

Total Annual Citywide TOT Revenue = \$17.9 M

Total Annual Combined TOT and Sales Tax Revenue = \$68.0 M

These losses not only represent foregone revenue—they also constrain the City’s ability to invest in resilience, maintain infrastructure, and deliver community services.

Impact on Harbor Operations

Oceanside Harbor is a critical economic asset managed directly by the City. With an annual operating budget of \$9.6 million, the harbor supports a mix of public and private uses—including marina operations, commercial slips, hotel accommodations, condominiums, and small businesses. Unlike beach-oriented areas that depend primarily on tourism and visitor spending, the harbor operates more like a city-owned enterprise utility, generating economic value through its ongoing operations, infrastructure maintenance, and leaseholder activity.

By using operational expenditures as the foundation for economic modeling, the analysis captures the harbor’s ongoing role in sustaining local employment, business-to-business transactions, and household spending throughout the region.

Table 5: Oceanside Harbor: Existing Commercial Property Inventory

Property Name	# of Units	Type
Del Mar Condominiums	78	Units
Marina Suites Hotel	65	Rooms
Harbor Recreational/Commercial Slips	890	Slips
Harbor Guest Slips and Leaseholds	88	Slips
Harbor Administration Office Space	Not available)	Sq Ft

Source: City of Oceanside; Willdan, 2025

As a city-owned enterprise, the harbor functions similarly to a public utility, generating economic activity through its operational footprint rather than visitor-driven spending alone. This spending supports a range of marine-based businesses, recreational boating, harbor-side dining, and tourism services.

This analysis models the economic impact of harbor operations using the City’s total annual spending as the baseline. The \$9.6 million expenditure includes costs associated with staffing, harbor infrastructure maintenance, utilities, public safety services, and administrative functions.

Table 6: Economic Impact: Harbor Operations, 2024 Snapshot

	Multiplier	Economic Value	Description
Direct	1	\$9.6 million	\$9.6M in operating expenses (wages, services, maintenance, etc.).
Indirect	0.5–0.8	\$4.8M – \$7.7M	Business-to-business impacts (e.g., spending on vendors, suppliers).
Induced	0.4–0.7	\$3.8M – \$6.7M	Spending by employees in the local economy (housing, groceries, etc.).
Total	1.9-2.5	\$18.2M – \$24.0M	Total Regional Economic Impact Output

Source: City of Oceanside; Port of San Diego; IMPLAN; Willdan, 2025

The analysis follows a standard regional input-output approach (based on IMPLAN modeling¹⁰) to estimate the direct, indirect, and induced impacts of this public enterprise activity.

If sea level rise impacts continue unchecked, it could impair access, damage harbor infrastructure, and disrupt critical harbor-related operations—potentially reducing annual harbor-related economic output by a significant share of the current \$18.2 to \$24 million total. This disruption would not only affect City-managed revenues and cost recovery, but also jeopardize the economic continuity of marine businesses, harbor-side retailers, hospitality operators, and leaseholders.

Table 7: Oceanside Harbor Economic Loss Potential, 2024 Snapshot

Disruption Level	Estimated Loss (Low Output)	Estimated Loss (High Output)
10%	\$1.82M	\$2.40M
25%	\$4.55M	\$6.00M
50%	\$9.10M	\$12.00M
75%	\$13.65M	\$18.00M

Source: City of Oceanside; Port of San Diego; IMPLAN; Willdan, 2025

While a complete loss of output is unlikely, even partial reductions in harbor functionality—such as fewer slip rentals, limited access for visitors and residents, or damaged infrastructure—could reduce the harbor’s annual economic contribution by several million dollars, depending on the severity and duration of impacts.

These risks reinforce the urgency of investing in coastal protection strategies that ensure the harbor remains a resilient, revenue-generating public asset for Oceanside.

Figure 7: Oceanside, CA Harbor



Source: Adobe; Willdan 2025

¹⁰ IMPLAN Economic Impact Data & Modeling is an input-output economic modeling tool that quantifies how spending in one sector of the economy (e.g., tourism or construction) generates ripple effects across other industries.

By tracing direct, indirect, and induced impacts, IMPLAN estimates changes in jobs, income, and tax revenues resulting from a given investment or policy. Source: www.IMPLAN.com, 2025.

Impacts on City-Owned Assets

A “No Build”/“Do Nothing” scenario could result in the permanent loss or costly replacement of critical City-owned facilities located in The Strand and Harbor areas, including recreation centers, lifeguard and maintenance infrastructure, public restrooms, and surface parking spaces.

Based on land and construction replacement estimates detailed in the following Table 8, the total fiscal exposure ranges from \$25.8 million to \$46.5 million. These figures reflect industry-standard unit costs for public-sector building types and land values drawn from regional real estate benchmarks.

Table 8: Potential City-Owned Asset Losses, 2025 Snapshot

Building Replacement Construction Value	Location	Units	Low/\$ (Millions)	High/\$ (Million)
Community Recreation & Safety Facilities (SF)	The Strand	12,548	\$ 4.4	\$ 6.3
Maintenance, Safety & Visitor Comfort Facilities (SF)	Harbor	12,010	\$ 4.2	\$ 6.0
Parking Spaces	Harbor	504	\$ 12.6	\$ 22.7
Subtotal			\$ 21.2	\$ 35.0
Land Replacement Value	Location	Acres	Low/\$ (Millions)	High/\$ (Millions)
Community Recreation & Safety Facilities	The Strand	0.29	\$ 0.29	\$ 0.7
Maintenance, Safety & Visitor Comfort Facilities	Harbor	0.28	\$ 0.28	\$ 0.7
Parking Spaces	Harbor	4.05	\$ 4.05	\$ 10.1
Subtotal			\$ 4.61	\$ 11.5
Total Estimated Replacement Costs			\$ 25.8 M	\$ 46.5 M

Note: Figures exclude replacement of the Community Center

Source: City of Oceanside; Esri Business Analyst; ULI-the Urban Land Institute; CoStar; Willdan, 2025

The analysis includes direct replacement value for over 24,000 square feet of built facilities, 504 parking spaces, and approximately 4.6 acres of City-owned land. These City assets could be permanently compromised by shoreline loss or recurrent flooding.

Notably, this estimate does not include the cost to replace the City’s Community Center, which remains a major asset in the Primary Economic Activity Area. Nor does it capture the indirect economic impact of losing beach-adjacent municipal operations, including public safety, recreational programming, and visitor services.

These losses would also compound reductions in tax revenues from TOT and sales tax collections tied to beachfront tourism and event activity.

This analysis demonstrates that without proactive coastal investment, Oceanside risks not only losing irreplaceable public assets—but also incurring long-term liabilities that could strain the City’s capital budget and delay broader economic recovery.

5.0 Coastal Resilience Infrastructure Funding Tools

Long-term coastal resilience will require a diverse set of reliable and fiscally responsible funding sources. No single mechanism can shoulder the extraordinary costs of shoreline protection, sand restoration, and infrastructure adaptation.

This section evaluates the fiscal potential and political feasibility of a range of tools—from local tax measures and parking fees to development impact fees, state and federal grants, and dedicated General Fund contributions. Each option can be pursued independently or layered together as part of a broader, long-term funding framework designed to reduce reliance on variable General Fund allocations and minimize extraordinary local tax increases, while ensuring the stability needed to protect Oceanside’s beaches and economic base.

Development Impact Fees

Development impact fees, depending how compliant such fees would be with AB 1600 (the enabling legislation for impact fees) could generate significant revenue. However, from the perspective of delivering reliable long-term funding, such revenue is speculative. The timing and amount of impact fee revenue is dependent on the timing and amount of new

development. Consequently, impact fee revenue is not considered a reliable long-term source of funding for bonds.

Sales and TOT Taxes

Given that the City recently adopted an increase in its sales tax rate via Measure X, an additional sales tax increase may not be politically viable now. A potential increase in the TOT tax rate of an additional 1% would generate about \$1.8 million per year.

Downtown/Beach Parking Fees

This study indicates that a relatively modest increase in downtown/beach area parking fees could be reasonably expected to generate \$540,000 per year.

City General Fund Support

The City’s General Fund budget FY2025-26 includes the Coastal Zone Program’s annual operating budget of \$1.3 million (including \$550,000/year for the Oceanside’s existing Beach Restoration Program and \$150,000 for the Shoreline Restoration Program). This evaluation conservatively assumes that the Coastal Zone Program is dedicated to expenditures outside of future capital investment in coastal resilience infrastructure. A key consideration for this assumption is that authorization for Measure X sales tax revenues expires in 2036 (prior to the end of the hypothetical 30-year bond term for coastal resilience infrastructure investment).¹¹

¹¹ Source: City of Oceanside General Fund Budget FY2025-26; Refer to Table 10 for detailed funding sources.

Special Parcel Tax

A voter-approved special parcel tax could be placed within the Oceanside Beach “Primary Economic Activity Area”. This alternative requires further study, including expanding stakeholder outreach to include a focused information campaign regarding the coastal resilience infrastructure investment needs and the broad range of funding tools evaluated by this study.

Federal/State Grants

Federal and state grant programs represent an important source of potential support for future coastal resilience investments. While opportunities such as California’s Public Beach Restoration Grant and potential U.S. Army Corps of Engineers funding could help offset local costs, the timing and scale of these resources are unknown at this time.

Layered Funding Strategy

Meeting Oceanside’s long-term coastal resilience needs will require more than a single funding source. A layered strategy combines local revenues, regional partnerships, state and federal grants, and targeted fees or taxes to build a balanced and sustainable financing framework. The following Table 9 summarizes potential funding alternatives and implementation approaches.

Table 9: Resilience Infrastructure Funding Tools

Funding Tool	Implementation Considerations
Local Sales Tax	Increase Oceanside’s local Sales Tax rate through a new ballot measure
Oceanside TOT Tax	Increase the TOT Tax rate in Oceanside within the Beach area, or allocate a share of the future increment
Parking Fees	Establish new parking fees/increase existing parking fees (where applicable) in the beach area
Development Impact Fees	Include eligible costs of coastal resilience infrastructure in impact fees on new development in the Primary and/or Secondary Beach areas
Oceanside General Fund	In addition to contributions from Measure X, secure dedicated long-term annual support from the City’s General Fund
Oceanside Parcel Tax	Generate new tax revenue through a citizen-led, voter approved Special Parcel Tax in the Primary and/or Secondary Beach areas
Federal/State Grants	In addition to the State of California Public Beach Restoration Grant, USACE is a potential future source for sand maintenance

Source: NHA Advisors; Willdan, 2025

Findings and Conclusions

This study validates the value of Oceanside’s beachfront as a critical economic asset that drives the City’s fiscal health. The City’s FY 2025 Annual Certified Financial Report (“ACFR”) reports Transient Occupancy Tax revenues of \$17.9 million and citywide Sales Tax revenues of \$50.4 million, or roughly \$68.3 million in combined Sales and TOT Tax funding that directly supports essential public services.¹²

Without timely intervention, sea-level rise, sand depletion, and infrastructure degradation threaten this revenue stream, as well as public access, private property, and the City’s identity as a vibrant coastal destination.

The City of Oceanside’s adopted budget principles and Vision Statement underscore a commitment to both economic vitality and environmental stewardship. Beach protection is foundational to both. These objectives are reflected in the City’s FY2025–FY2026 goals, which prioritize long-term economic development and natural resource preservation.

This study validates the premise that the costs of inaction are substantial. Declining visitor activity, reduced property values, and a shrinking tax base could result in tens of millions of dollars in lost revenue and public infrastructure costs over the coming decade. Looking beyond the specific case of Oceanside, the

unprecedented and extraordinary reality of regional and statewide coastal resilience infrastructure costs signal the need for coordinated policy and program solutions extending beyond the capacity of any single jurisdiction.

Protecting beaches, visitor economies, and downtown tax bases from chronic erosion and sea-level rise will require a layered funding strategy that assembles the fullest range of tools: local revenue measures, regional partnerships, state climate and coastal grants, and federal cost-share programs such as those administered by the U.S. Army Corps of Engineers.

To be sustainable, this strategy must also limit reliance on variable General Fund support and minimize extraordinary local tax increases, instead spreading costs across multiple sources of dedicated and external funding. By combining these tools in a balanced, long-horizon approach, coastal communities can begin to address the mounting economic risks of erosion through intentional and fiscally responsible infrastructure interventions supported by broad community consensus.

The following Appendix A (Coastal Resilience Interventions) through Appendix D (Example of a RE:BEACH Funding Scenario) provide the detailed background research, source materials, assumptions and calculations in support of these findings.

¹² Source: City of Oceanside , CA Certified Annual Financial Report, June 30, 2025.

Appendix A: Coastal Resilience Interventions

Introduction

The following section provides an overview of the City of Oceanside’s exploration of coastal resilience investment alternatives including: a brief history of its interconnected relationship with Camp Pendleton/USACE; City of Oceanside’s existing natural resource management policy goals; and Oceanside’s Coastal Zone Management Program activities and funding sources.

Coastal Resilience Interventions

The following overview provides a brief history of the interconnected relationships between Oceanside Beach, Oceanside Harbor, and Camp Pendleton. It is important to understand past, present and future interventions led by the U.S. Army Corps of Engineers (USACE) within the City of Oceanside’s jurisdictional boundaries to fully consider the implications of a “No Build” scenario on the City of Oceanside’s future resiliency from both a coastal management and fiscal perspective.

Marine Corps Base Camp Pendleton

The Oceanside Harbor is a shared complex with Marine Corps Base Camp Pendleton. A single navigational entrance branches into two distinct channels into the public harbor and the base marina. The Oceanside Channel provides access to the public **Oceanside Harbor**, including a small craft harbor, fishing pier, and public beaches.

The Del Mar Channel accesses the **Camp Pendleton Del Mar Marina**, which is a facility for qualified patrons and offers services such as boat rentals, storage, and cruises for military personnel.

How Camp Pendleton Interrupts Sand Flow to Oceanside Beach

An important baseline understanding is that dredging activities at Camp Pendleton Harbor disrupt natural littoral drift, trapping sand that would otherwise nourish Oceanside Beach and accelerating erosion along the City’s shoreline.

Littoral drift refers to the natural movement of sand along the coast driven by wave action and currents, which is essential to maintaining healthy, wide beaches. Along Southern California’s coast, sand naturally moves southward with prevailing waves and currents in a process called littoral drift. This steady transport of sand is essential to maintaining wide, healthy beaches such as Oceanside’s Strand.

The construction of Camp Pendleton Harbor (Del Mar Boat Basin and adjacent structures) in the 1940s fundamentally altered this system. The harbor jetties block the southward movement of sand, trapping large volumes on the north side of the harbor and starving the beaches to the south, including Oceanside’s Strand. As a result, sand that would have naturally replenished Oceanside is intercepted, leaving the shoreline more vulnerable to wave attack, narrowing, and chronic erosion.

U.S. Army Corps of Engineers Sand Restoration Support

The City of Oceanside maintains an active relationship with the U.S. Army Corps of Engineers (USACE) through two primary mechanisms: (1) annual harbor maintenance dredging with beneficial beach sand placement, and (2) the San Diego County Shoreline (Oceanside) Mitigation Study under Section 414 of the Water Resources Development Act of 2000.

Harbor Navigation & Maintenance Dredging: The U.S. Army Corps of Engineers regularly dredges an average of 250,000 c/y of sand from the Oceanside Harbor navigation channel (Harbor Inlet) annually to allow for safe passage of boats through the channel. To offset the sand loss resulting from trapped “littoral drift” described above, USACE deposits the beach-quality dredged sand on Oceanside beaches south of the jetty to Tyson St. Park as “in-kind” nourishment. This program is federally funded; typical contracts have ranged from approximately \$3.7 million to \$5 million depending on volumes and market conditions.

However, the quantity dredged is typically far less than the volume of sand that would have naturally bypassed the harbor. The deficit accumulates year after year, leading to progressive beach loss, reduced recreational space, and exposure of critical shoreline infrastructure. This ongoing imbalance explains why Oceanside Beach requires repeated renourishment projects and

why long-term coastal resilience infrastructure solutions are critical for sustaining Oceanside Beach in the decades ahead.

Section 414 Mitigation Study: The San Diego County Shoreline (Oceanside) Mitigation Study is a U.S. Army Corps of Engineers (USACE) effort to mitigate for shoreline erosion and other impacts, resulting from the construction of Marine Corps Base Camp Pendleton Harbor. The construction of Camp Pendleton Harbor has interrupted sediment transport along the coast and contributed to erosion of southward beaches. The study will result in a recommended plan to mitigate impacts and restore shorelines to the conditions that existed before the harbor was constructed in 1942.

The study is authorized under Section 414 of the Water Resources Development Act (WRDA) 2000 (Pub. L. No. 106-541) and is 100-percent federally funded. The authorization directs USACE to develop and screen an array of alternatives, assess environmental impacts and evaluate the least cost alternative to identify a mitigation plan that is environmentally acceptable and meets the study’s objectives. The authorization is for the study only; additional authorization and funding will be required to move to construction.

Authorized under WRDA 2000, this federally funded study evaluates erosion impacts attributed to Camp Pendleton Harbor. Recent federal allocations include \$1.82 million (Infrastructure Investment and Jobs Act) and \$2.27 million (FY2025) to complete

the study and environmental documentation. The outcome is expected to define a federal mitigation plan that could lead to a future federal project with shared construction costs. **Note: This study is not related to RE:BEACH Oceanside.**

City of Oceanside Policy and Program Linkages

The City of Oceanside’s Vision Statement (FY2025 – FY2026) describes a commitment to climate resilience and a City that will be a “safe, culturally diverse community that empowers its citizens to provide an environment that promotes economic development, supports quality education, fosters the cultural arts, and preserves its natural resources.”

In a related policy document, the City’s General Land Use Plan Update (2023) includes several important revisions to “Elements” related to protecting natural resources through Coastal Zone Management.

Coastal Zone Program Overview

Following these policy decisions, the City of Oceanside’s Office of the City Manager created a new Coastal Zone Management Program to “responsibly manage our coastal resources to benefit the community, while improving our natural habitat and resiliency against coastal storms and rising seas.”¹³

The program administers research, grants, projects, and partnerships to advance proactive coastal resilience. A sampling of Oceanside’s coastal resilience initiatives currently underway is provided below.

Regional SANDAG Beach Sand Dredging and Nourishment Projects: In addition to coordinating the USACE Harbor Navigation & Maintenance Dredging activities described above, Oceanside participates in San Diego County’s Regional Beach Sand Project (SANDAG).

San Luis Rey River Mouth and Estuary Restoration Project : The San Luis Rey River Mouth and Estuary Restoration Project proposes to 1) restore the San Luis Rey River estuary by expanding wetland habitat, reestablishing the estuary functionality, and removing barriers to freshwater flows, tidal exchange, fish passage and sediment transport; and 2) enhance and encourage natural beach replenishment and coastal dune development, using low-cost nature-based solutions to increase beach elevations while creating coastal wildlife habitat.

Coastal Dunes Restoration Project: The Coastal Dunes Restoration Project will restore coastal dune habitat along North Strand, San Luis Rey river mouth, and Harbor Beach using "green engineering" to help the coastline hang on to sandy resources.

¹³ <https://www.ci.oceanside.ca.us/government/public-works/beaches-pier/coastal-management>

CoastSnap: Oceanside joined a global citizen science network that harnesses photos to capture changing coastlines. Oceanside has two CoastSnap Stations situated on the Oceanside Pier. Photos are compiled to create time-lapse videos that capture the shoreline’s width as it evolves to provide a vantage point for seasonal and longer-term changes. This data will allow the City of Oceanside to monitor how the shoreline is changing in time and space to inform decisions on the prioritization and funding for future coastline resilience interventions more efficiently.

RE:BEACH Oceanside: The RE:BEACH Oceanside Project (formerly called the Phase 2 Sand Nourishment and Retention Pilot Project) design competition concluded in 2024, with approval of the design concept by City Council. The winning

design aims to restore beaches south of the pier and includes artificial headlands and a reef, combined with sand nourishment.

Coastal Zone Program Budget

The City of Oceanside Coastal Zone Program’s FY 2025-FY2026 budget includes approximately \$1.3 million in annual funding to support shoreline protection, coastal access, and beach management (Table 10).

Of this total, approximately \$700,000 is allocated to existing beach and shoreline restoration activities. This funding was established to provide a dedicated source of predictable resources for the City’s long-standing beach nourishment and maintenance needs. **Note that the Coastal Zone Program budget excludes future anticipated RE:BEACH Oceanside capital/operating costs.**

Table 10: Oceanside General Fund Budget Support: Coastal Zone Program, 2025

Description	FY24/25 Available Balance	FY25/26 Proposed Budget	Proposed Annual Ongoing Funds ¹
Coastal Zone Administration (Staffing)	N/A	\$322,510	\$330,444
Sand Replacement Project (Annual Dredging)	1,202,265	600,000	600,000
Beach Restoration	125,743	300,000	150,000
Shoreline Restoration (Measure X)		500,000	550,000
Sand Replenishment (ARPA)	2,629,135		
Total	\$3,957,143	\$1,400,000	\$1,300,000

¹Future proposed annual ongoing funds assume Coastal Zone Administration expenditures increase with the Consumer Price Index and Shoreline Restoration (Measure X) increases annually according to funds collected/distributed. Source: City of Oceanside, 2025

Appendix B: Economic Impact Methodology

Study Approach

This analysis employed a multi-method approach to assess the economic and fiscal value of Oceanside’s beachfront and the potential impacts of future coastal erosion. The study incorporated qualitative and quantitative methods, including stakeholder interviews, geospatial mobility analysis, property data review, and economic impact modeling.

The goal was to develop a comprehensive understanding of the beach’s contribution to Oceanside’s economy and the risks posed under a “No Build” scenario.

Key data sources included interviews with stakeholders from the City of Oceanside, Visit Oceanside, the Oceanside Chamber of Commerce and Downtown PBID, Save Oceanside Sand, GHD USA Engineering, and residents.

These interviews provided critical on-the-ground insights into tourism patterns, business activity, infrastructure vulnerabilities, and community priorities. Additional sources included Placer.ai mobility data, ParcelQuest property data, the 2024 State of California Sea Level Rise Guidance, the City’s 2019 Coastal Zone Adaptation Plan, Esri demographic and economic datasets, and benchmarking data from peer coastal cities.

Economic Impact Analysis

To estimate the economic contribution of Oceanside’s beachfront, the study modeled direct, indirect, and induced impacts using regional tourism spending data and location-based mobility insights.

Placer.ai data was used to define the movement patterns of beach visitors, confirming that a large share also frequent Oceanside’s commercial core—highlighting the interconnected nature of the City’s primary and secondary economic zones.

Annual visitor spending was calculated using locally sourced and benchmarked tourism data, which was then entered into an input-output modeling framework to estimate the broader regional impact. This included supplier activity (indirect impact) and household spending supported by tourism-driven jobs (induced impact), yielding a comprehensive picture of the beachfront’s role in sustaining business activity and employment across North San Diego County.

To measure the economic contribution of Oceanside’s Beachfront to the local and regional economy, this analysis builds upon prior tourism impact assessments prepared for Visit Oceanside, with three key methodological enhancements:

Geographic Focus: Rather than citywide estimates alone, this study analyzes annual visits within defined Primary and Secondary Economic Activity Areas, using geo-fenced data from Placer.ai to isolate the direct economic influence of the beachfront and the adjacent commercial core.

Expanded Visitor Market Segmentation: Traditional overnight tourism data—focused on visitors traveling from more than 50 miles—was expanded to include spending by a broader range of visitor types. This includes day-trippers, residents, employees, and overnight visitors, all of whom spend time in and around Oceanside’s beach zone throughout the year.

Oceanside Harbor Operations: The analysis includes an adjacent assessment of Oceanside Harbor as a distinct economic generator that supports commercial, recreational, and maritime activities. While some overlap may exist between beachgoers and harbor users, harbor-related economic impacts are evaluated separately to avoid double counting and to recognize the harbor’s unique role as a city-owned asset with its own visitor base and fiscal implications.

Table 11: Beach Visitor Spending Assumptions (Per Visit, 2025 \$)

Visitor Segment	Lodging (\$)	Food & Beverage (\$)	Transportation (\$)	Retail (\$)	Recreation (\$)	Total Spending per Visit
Residents		12.50	2.50	2.50	2.50	20.00
Employees		12.50	5.00	2.50	5.00	25.00
Visitors - Day Trips		20.00	12.50	15.00	15.00	62.50
Visitors - Overnight Stays	125.00	50.00	25.00	25.00	37.50	262.50

Source: Visit Oceanside; Visit California; Port of San Diego; Willdan, 2025

Beach Visitor Spending Analysis

Spending is calculated on a **per-visit basis** (rather than per visitor) to account for multiple trips by frequent users. This approach captures a more accurate and inclusive view of how the beachfront drives local commerce across lodging, dining, retail, recreation, and services.

Data sources include Visit Oceanside’s Annual Reports, regional travel and mobility datasets, comparable coastal benchmarks, and spending per visit by visitor category.

Placer.ai data confirms that visitors who spend **10 minutes or more** in the beach zone consistently contribute to Oceanside’s broader tourism economy, with an estimated **\$2.54 billion** in annual visitor spending. When accounting for indirect and induced effects, this supports between **\$4.8 billion and \$5.8 billion** in total regional economic activity each year.

Table 12: Summary of Visitor Spending by Economic Activity Area, 2025

Oceanside Beach Visitor Segment	Oceanside Beach Visits (Millions)	Spending per Visit	Total Annual Spending
Residents	2.07 M	\$20.00	\$0.04 B
Employees	1.21 M	\$25.00	\$0.03 B
Visitors < 50 mi (Day Trippers)	5.59 M	\$62.50	\$1.00 B
Visitors 50 mi+ (Overnight Stays)	15.97 M	262.50	\$1.47 B
Total	24.84 M		\$2.54 B

Source: Visit Oceanside; Visit California; Port of San Diego; Placer.ai; Willdan, 2025

Table 13: Oceanside Beach Annual Visitor Spending and Regional Economic Output Visitor Spending

Economic Output	Multiplier	Economic Value (Low)	Economic Value (High)	Description
Direct	1	\$2.54 B	\$2.54	Spending directly at hotels, restaurants, shops, etc.
Indirect	0.45x-0.7x	\$1.27 B	\$1.78 B	B2B purchases by tourism-serving businesses (e.g., linen suppliers, food distributors)
Induced	0.4x-0.6x	\$1.01 B	\$1.52 B	Household spending by employees in tourism-supported jobs
Total	1.9-2.3 B	\$4.82 B	\$5.84 B	Total Regional Economic Output

Source: Visit Oceanside; Visit California; Port of San Diego; Placer.ai; Willdan, 2025

Oceanside Harbor Operations

In addition to the beachfront’s role as a tourism and fiscal asset, Oceanside Harbor functions as a city-owned enterprise that supports commercial, recreational, and maritime activities. To estimate the economic contribution of the harbor, this analysis uses the City of Oceanside’s reported \$9.6 million in annual operational spending as the baseline for modeling regional economic impacts. This figure includes expenditures related to harbor maintenance, staffing, public safety, infrastructure, and marine services.

Unlike the beach-focused analysis, which relies on visitor spending, the harbor analysis follows a public enterprise model, using operational spending to assess direct, indirect, and induced economic impacts. This distinction allows for a clear evaluation of the harbor’s standalone economic value while avoiding overlap with tourism-based spending tied to the beachfront.

The results help illustrate how continued beach erosion—if left unaddressed—could disrupt harbor operations and diminish the economic output supported by this vital waterfront asset.

Harbor Operations Spending Assumptions

The Oceanside Harbor contributes approximately \$18.2 million to \$24.0 million in annual Harbor operations economic output.

Table 14: Total Annual Regional Economic Output – Oceanside Harbor Operations (2024 Snapshot)

Economic Output	Multiplier	Economic Value (Estimated)	Description
Direct	1	\$9.6 million	\$9.6M in operating expenses (wages, services, maintenance, etc.).
Indirect	0.5–0.8	\$4.8M – \$7.7M	Business-to-business impacts (e.g., spending on vendors, suppliers).
Induced	0.4–0.7	\$3.8M – \$6.7M	Spending by employees in the local economy (housing, groceries, etc.).
Total	1.9-2.5	\$18.2M – \$24.0M	Total Regional Economic Output

Source: City of Oceanside; Port of San Diego; IMPLAN; Willdan, 2025

Appendix C: Fiscal Impact Methodology

Introduction

The fiscal analysis estimates how reductions in beach size, access, or quality may affect the City of Oceanside’s tax revenues, including transient occupancy tax (TOT), sales tax, and property values. By comparing projected fiscal outcomes under two scenarios—implementation of the RE:BEACH Pilot Project versus a “No Build” alternative—the analysis quantifies the financial risks of inaction and the potential return on proactive coastal investment.

The fiscal framework serves a dual purpose: it communicates the long-term revenue risks posed by beach erosion and sea level rise, and it identifies local funding sources to support RE:BEACH capital and operating costs. These include Measure X revenue, potential grant matches, and tax revenues tied to beach-related economic activity.

While the economic impact analysis captures broader regional benefits of coastal tourism, the fiscal analysis narrows its focus to the City’s general fund exposure. It estimates potential losses in visitor-driven revenue and City-owned asset replacement costs, particularly along The Strand and the Harbor.

To support this, the analysis models hypothetical declines in tax revenues under a “No Build” scenario, alongside a partial inventory of vulnerable commercial properties subject to erosion and flood risk. The results provide a quantitative baseline to

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guide long-term capital planning, coastal infrastructure investment, and funding strategy development.

City of Oceanside Tax Revenues

While the City of Oceanside benefits from a diverse range of tax revenues, this study focuses on three sources most directly linked to beach-driven visitor activity:

Property Taxes: Based on the assessed value of residential, commercial, and tourism-serving properties in and around the beachfront and commercial core.

Sales and Use Taxes: Generated by spending on goods and services throughout the city, heavily influenced by beach visitation and downtown commercial activity.

Transient Occupancy Taxes (TOT): Collected from hotels and short-term rentals, TOT revenues are highly sensitive to changes in overnight tourism volumes.

Other sources—such as Utility Users Taxes, Business License Fees, and miscellaneous revenue—were noted but excluded due to data limitations or minimal correlation to beachfront activity.

Beach-Related Tax Revenue Modeling

Property Tax Estimates were derived using assessed value data from ParcelQuest for both the Primary Economic Activity Area (beachfront) and Secondary Area (downtown commercial core).

Sales and TOT Revenue Risks were modeled using tourism behavior and spending trends drawn from Placer.ai mobility data and Visit Oceanside reports.

Asset Replacement Costs for vulnerable City-owned facilities (e.g., lifeguard stations, restrooms, maintenance yards) were calculated using standard cost assumptions for public infrastructure.

Together, these inputs allow for a conservative but credible estimate of the fiscal risk facing the City under a No Build scenario. With over \$16 million in annual property tax revenues linked to Oceanside’s beach economy—and additional TOT and sales tax revenues at risk—the analysis reinforces the financial rationale for advancing the RE:BEACH Pilot Project as a safeguard for long-term municipal revenue stability.

Property Tax Revenue Snapshot – FY2024

In fiscal year 2024, the total secured assessed value of properties within the Oceanside Beach Primary and Secondary Economic Activity Areas was estimated at **\$6.28 billion**, with approximately **\$3.90 billion** located directly along the beachfront and **\$2.37 billion** in the adjacent downtown commercial core.

Based on a 1% base property tax rate, these properties generated an estimated **\$62.75 million** in total property taxes. Of this, the City of Oceanside received approximately **\$10.49 million**, based on its proportional share of the tax levy under the AB8 allocation formula (16.716%).

When combined with estimated unsecured property taxes and Vehicle License Fee (VLF) in-lieu revenue, total annual property tax revenue attributable to these zones is estimated at **\$16.26 million**.

This snapshot underscores the fiscal value of real estate activity tied to Oceanside’s beach and commercial core—and highlights the potential tax revenue at risk should erosion, flooding, or loss of coastal access negatively impact local property values and economic conditions.

Table 15: Potential Property Values & Tax Revenue Impacts, 2024 Snapshot

FY2024 Snapshot	Primary Economic Activity Area: Oceanside Beach (\$M)	Secondary Economic Activity Area: Commercial Core (\$M)	Total Oceanside Beach Activity-Related Property Tax Values (\$M)
Secured Assessed Value	3,904.54	2,370.75	6,275.29
Secured Property Taxes (1%)	39.05	23.71	62.75
City of Oceanside AB8 Allocation (16.716%)	6.53	3.96	10.49
Unsecured Property Taxes (3% of Secured)	0.20	0.12	0.31
Property Tax In-Lieu of VLF (52% of Secured)	3.39	2.06	5.45
Total ANNUAL Property Tax Revenues	10.12	6.14	16.26

Source: ParcelQuest; Esri Business Analyst; Placer.ai; Willdan, 2025

TOT and Sales Tax Revenue Snapshot – FY2024

In FY2024, Oceanside’s beach and adjacent commercial districts generated a significant share of the City’s tourism-related tax revenue, particularly through Transient Occupancy Tax (TOT) and Sales and Use Taxes. These revenues are directly tied to visitor behavior, with hotel occupancy, short-term rentals, restaurant spending, and retail activity all influenced by proximity to the beach.

Using visitor spending patterns derived from Placer.ai mobility data and Visit Oceanside reports, the analysis estimates that Oceanside Beach-related visitation supported approximately **\$2.54 billion** in annual spending. Given the high concentration of tourism-serving businesses in the Primary and Secondary Economic Activity Areas, a substantial portion of this revenue can be attributed to beach-driven visitation.

These receipts fund essential city services—from public safety to park maintenance—and represent a critical revenue stream that is vulnerable under a “No Build” scenario. Loss of beach access, quality, or infrastructure could result in declines in lodging demand and downtown commerce, placing long-term strain on the City’s general fund. The RE:BEACH Pilot Project is not only a coastal protection strategy, but also a fiscal resilience measure.

Table 16: Oceanside Beach Sales & Use Tax and TOT Snapshot – FY2025

Category	Value	Assumptions & Sources
Estimated Annual Visitor Spending	\$2.54 billion	Estimated by Willdan using Placer.ai mobility data, Visit Oceanside reports, and tourism spending benchmarks
Estimated TOT Revenue (0.7% of spending)	\$17.9 million	Derived using average TOT rate applied to lodging-related spending; confirmed in City of Oceanside FY2024 Annual Certified Financial Report (ACFR)
City Share of Sales Tax Revenue (1.5% of taxable sales)	\$50.4 million	City of Oceanside FY 2024 Annual Certified Financial Report
City of Oceanside FY 2024 Taxable Sales	\$1.89 billion	California State Board of Equalization for FY 2024

Source: City of Oceanside; California State Board of Equalization; Visit Oceanside; Placer.ai; Willdan, 2024

Fiscal Cost Assumptions

The following table provides the detailed assumptions and calculations regarding the hypothetical replacement costs of City-Owned assets located on or adjacent to Oceanside Beach considered potentially at risk of loss due to coastal erosion and flooding.

Table 17: Oceanside Beach City-Owned Assets

Building Construction	Location	Units	Low \$/Sq Ft	High \$/ Sq Ft	Low/\$	High/\$
Community Recreation & Safety Facilities (SF)	The Strand	12,548	\$ 350	\$ 500	\$ 4,391,800	\$ 6,274,000
Maintenance, Safety & Visitor Comfort Facilities (SF)	Harbor	12,010	\$ 350	\$ 500	\$ 4,203,500	\$ 6,005,000
Parking Spaces	Harbor	504	\$ 25,000	\$ 45,000	\$ 12,600,000	\$ 22,680,000
Subtotal					\$ 21,195,300	\$ 34,959,000
Land	Location	Acres	Low \$/Acre	High \$/Acre	Low/\$	High/\$
Community Recreation & Safety Facilities	The Strand	0.29	\$1,000,000	\$2,500,000	\$ 288,062	\$ 720,156
Maintenance, Safety & Visitor Comfort Facilities	Harbor	0.28	\$1,000,000	\$2,500,000	\$ 275,712	\$ 689,279
Parking Spaces	Harbor	4.05	\$1,000,000	\$2,500,000	\$ 4,049,587	\$ 10,123,967
Subtotal					\$ 4,613,361	\$ 11,533,402
TOTAL ESTIMATED REPLACEMENT COSTS					\$ 25,808,661	\$ 46,492,402

1/ Land area replacement factor assumes 1.25 to 1.5 × building area for site needs to account for circulation, landscaping, utilities, ADA access, and operational zones.

2/ 1 acre = 43,560 Sq Ft

3/ Surface parking space replacement assumes: 350 Sq Ft

4/ Analysis assumes that the existing Community Center would not be replaced due loss from sea rise (approximately 20,000 square feet, \$7.5 M in building costs and \$11.1 in land acquisition costs).

Source: City of Oceanside; San Diego County Assessor's Office; California Department of Finance; CoStar; Willdan, 2025

Appendix D: Example of a RE:BEACH Pilot Project Funding Scenario

RE:BEACH Pilot Project Overview

To address the need for proactive coastal zone interventions, the City of Oceanside partnered with Resilient Cities Catalyst to launch the RE:BEACH Oceanside Project (formerly called the Phase 2 Sand Nourishment and Retention Pilot Project).

The City undertook an international design competition, with approval of the design concept by City Council in 2024. The winning design aims to restore beaches south of the pier and includes artificial headlands and a reef, combined with sand nourishment.

Data and information gathered by the baseline monitoring program will be used to update the City's coastal management policy documents, including the City's Sea Level Rise Adaptation Plan and Local Coastal Program.

RE:BEACH has also been named the official pilot project of the region through the San Diego Association of Governments (SANDAG), under the guidance of the Coastal Sediment Management Plan (2009) and Shoreline Preservation Working Group.

While not a USACE program, the City-led RE:BEACH pilot project will complement federal efforts by testing innovative sand-retention strategies. The pilot project is also expected to

generate technical data that can strengthen Oceanside's position in securing long-term state and federal investment.

The existing conditions and verified future projections profiled in the preceding section validate the need for the City of Oceanside's investment in coastal zone infrastructure interventions.

The following section provides an evaluation of a broad array of potential funding tools in the context of the RE:BEACH Pilot Project's anticipated Phase I implementation costs as one example of coastal resilience infrastructure interventions that may be explored. This approach is intended to catalyze public discussion regarding the costs and benefits of these alternatives.

The funding alternatives and cost estimates presented in this appendix are **illustrative and exploratory in nature**. They are intended solely to inform a broader public dialogue about potential approaches to financing long-term coastal resilience investments in Oceanside.

These scenarios should not be interpreted as recommendations, commitments, or definitive financing plans. Future funding strategies will require additional technical analysis, policy guidance, stakeholder engagement, and governing body direction before any decisions are made.

RE:BEACH Funding Needs

Implementing the RE:BEACH Pilot Project is estimated to require \$55.0 million in capital costs and up to \$1.5 million in operations and maintenance costs going forward, as shown in Table 18 below. These investments are necessary to design, construct, monitor, and maintain the proposed sand retention and nourishment infrastructure, with the goal of stabilizing Oceanside’s beach and preserving access to public assets, revenue-generating commercial zones, and coastal neighborhoods.

Protection of Oceanside’s entire coastline will require potential adaptive management and mitigation projects in addition to the RE:BEACH Pilot Project.

There are no firm estimates of the potential cost of RE:BEACH phases beyond the Pilot Project at this time, but preliminary estimates are that future phases may cost over an additional \$200 million. This study does not evaluate potential funding for future RE:BEACH phases.

Table 18: RE:BEACH Pilot Project Funding Needs (2025 Estimate, Pay-Go Basis)

Pilot Project Costs (\$ M)	Phase I			Phase II							TOTAL
	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	
RE:BEACH Capital Costs (Infrastructure)	\$18.33	\$18.33	\$18.33	\$0	\$0	\$0	\$0	\$0.00	\$0.00	\$0.00	\$55.00
Operating Costs (Sand Restoration Program)	\$0.00	\$0.00	\$0.00	\$0	\$0	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$7.50
Total	\$18.33	\$18.33	\$18.33	\$0	\$0	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$62.50

Source: City of Oceanside; Resilient Cities Catalyst; NHA Advisors; Willdan, 2025

To inform the City’s consideration of a combination of federal, state, and local funding sources, the following analysis tests the fiscal feasibility of the sources that can be leveraged now.

The potential funding sources identified offer potential long-term revenues that are both stable and predictable.

These findings are grounded by broad input from subject matter experts, City of Oceanside staff, and community stakeholders. However, none of the findings in this analysis should be considered as recommendations.

The Role of Debt in Funding RE:BEACH

A scenario that excludes some form of debt funding for RE:BEACH implementation is not feasible. If the City funded RE:BEACH capital costs over the 3-year construction period on a pay-go basis through a TOT increase, the TOT rate would need to approximately double. Such an increase would be catastrophic for Oceanside’s hospitality industry.

Even with the State Public Beach Restoration Program Grant (“State Grant”), the annual cash flow requirements for the remaining capital cost of RE:BEACH amount to \$11+ million per year for three years, or a 60% increase.

A “Pay Go” approach is further complicated by the need to fund approximately \$1.5 million per year in long-term maintenance and operations costs.

Consequently, in this analysis it is assumed that the initial capital costs for RE:BEACH are funded through a 30-year bond issue. This approach results in level long term costs for the RE:BEACH Pilot Project. Leveling long term costs makes it much easier to develop long term stable funding sources for RE:BEACH.

The following scenarios quantify hypothetical minimum, and maximum annual budget needs to fund the local share for RE:BEACH—structured to produce an estimate of level annualized capital and operating costs, for the long term.

Target RE:BEACH Annual Budget Needs

This evaluation considered two scenarios for the Pilot Project’s annual long-term budget needs without and with the potential \$21.5 million State Grant funds:

Scenario 1: No State Grant

Scenario 2: With State Grant

The following Table 19 below shows that combined with annual maintenance costs of \$1.5 million per year, the combined annual long term budget target for RE:BEACH would be \$5.45 million per year (or \$5.5 million per year rounded up for the purposes of this analysis).

Table 19: RE:BEACH Annualized Costs—Scenario 1: No Grants

Annualized Costs—Scenario 1: No Grant	US \$
Total upfront capital costs	55,000,000
= Annual debt service on 30-Year bond for \$55 million	3,950,000
+ Annual long term maintenance costs	1,500,000
= Combined annual debt service and maintenance costs	5,450,000
Total Annualized Costs (Rounded Up)	~ 5,500,000

Source: City of Oceanside; NHA Advisors; Willdan, 2025

The following Table 20 shows the second scenario for the annual target budget for RE:BEACH, assuming the City is awarded the \$21.5 million State Public Beach Restoration Program Grant.

This grant would reduce the local share capital costs for RE:BEACH from \$55 million to \$33.5 million. Long term maintenance costs would remain the same. The \$1.5 million per year long term maintenance costs would remain the same.

Consequently, estimated annual debt service on a 30-year bond issue for RE:BEACH decrease from \$3.95 million per year to \$2.37 million per year, as shown in Table 20. The overall annual RE:BEACH budget target decreases to about \$3.9 million per year, rounding up.

Table 20: RE:BEACH Annualized Costs—Scenario 2: With State Grant

Annualized Costs—Scenario 2: With State Grant	US \$
Total Upfront Capital Costs	55,000,000
Less State Public Beach Restoration Program Grant	(- 21,500,000)
= Capital Costs Net of State Grant	33,500,000
TOTAL ANNUALIZED COSTS	
Annual Debt Service (\$33 million, 30-Year Bond)	2,370,000
+ Annual Long Term Maintenance Costs	1,500,000
= Combined Annual Debt Service + Maintenance Costs	3,870,000
Total Annualized Costs (Rounded Up)	~3,900,000

Source: City of Oceanside; NHA Advisors; Willdan, 2025

Potential Funding Sources

As with many forward-looking pilot projects that involve innovative infrastructure investment, the City of Oceanside should pursue a diverse portfolio of funding strategies. Priority should be given to City-controlled tax revenue sources that can be activated in the near term and used to leverage state and

federal grants, as well as potential philanthropic matching opportunities. This analysis evaluates the following potential funding sources for RE:BEACH:

- State and Federal grant funding
- TOT tax rate increase
- Sales tax increase
- Parking fees
- Development impact fees
- General Fund support
- Voter approved parcel tax

The policy considerations and conditions of feasibility for each are provided in the following discussion.

Potential Grant Funding

In April 2025, the California Coastal Commission unanimously approved a \$1.835 million grant for the City of Oceanside. The funding will initiate a Baseline Monitoring Program, spearheaded by the local firm GHD Engineering USA.

This program will play a crucial role in: (1) tracking current shoreline conditions by establishing a baseline of data on the state of Oceanside's beaches; and (2) using the data collected to refine the final RE:BEACH project design for maximum effectiveness. These funds will not be deployed to fund project construction.

As stated previously in the debt scenarios analysis, the City applied for a State Grant for \$21.5 million. The State Grant funding decisions are integrated into the state's budget-making

process, to be announced when the Governor's proposed budget is released in January 2026 at the earliest, with final confirmation of funding in June 2026.

In addition to the State Grant, it is possible that Proposition 4's \$1 billion+ authorization for sea level rise-related funding could be used for RE:BEACH.

Historically, the US Army Corps of Engineers funds and manages beach sand replenishment along the nation's coastlines. USACE has a Congressional authorization to undertake a baseline study of the need and potential "Federal Interest" in beach sand replenishment for the San Diego County shoreline. However, this study requires a 50% local share match yet to be funded by the potential local share partners in the County. This type of study is typically a long process, taking 10 to 20 years before any implementation.

All three of these potential grant sources would be almost exclusively for capital costs, such as the \$55 million for RE:BEACH. However, it is very likely that the long-term costs of maintaining Oceanside's beach will require funding from local sources.

TOT Tax Rate Increase

As Oceanside's coastal revitalization efforts—including the RE:BEACH Pilot Project—strengthen the City's appeal as a tourism destination, one viable source of long-term funding is the incremental growth in Transient Occupancy Tax (TOT) revenue.

The City currently levies a 10% TOT on gross room revenues from hotels, motels, and short-term rentals, with all major generators located within the Primary Study Area.

In addition, surcharges in addition to the 10% TOT rate are levied on both vacation home rentals and hotel/motels to fund Visit Oceanside.

The following Table 21 provides hypothetical estimated revenues from a 1% Increase in the Citywide TOT Tax Rate based on the existing baseline 10% City TOT tax levy and the following variables:

- FY 2024 annual TOT revenue to the City's General
- Estimate gross room revenues City-wide (including Vacation Home Rentals) for FY 2024
- Annual potential revenue for RE:BEACH from a City-wide increase in the TOT rate from 10% to 11%.

Table 21: Future TOT Increment Assumptions

TOT Assumptions	US \$
FY 2024 Annual TOT Revenue	17,888,224
Estimated Gross Room Revenues	178,882,240
Estimated Revenues from a 1% Increase in the Citywide TOT Tax Rate	1,788,822

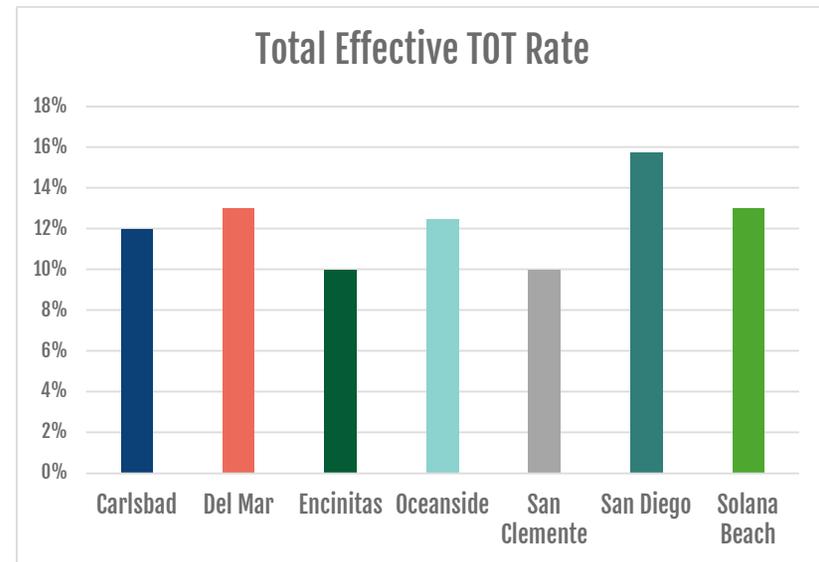
Source: City of Oceanside; NHA Advisors, 2025

The following Figure 8 compares Oceanside’s baseline TOT rate to nearby coastal cities. Note that with the Visit Oceanside TOT

surcharge, the combined TOT in Oceanside is in the range of 11.5% to 12.5%, with 9% baseline and 1.5% (short-term rental properties) to 2.5% (hotels).

An increase in the baseline 10% TOT rate to 11% would increase the combined TOT rate to a range of 12.5% to 13.5%, giving Oceanside amongst the highest TOT rates among San Diego County coastal cities.

Figure 8: Peer City Comparison – TOT Rates, 2025



¹Oceanside’s TOT rate is 11.5% (short-term properties) to 12.5% (hotels).

²San Diego's TOT rate is 13.5 to 15.75%.

Source: City of Oceanside; NHA Advisors; Willdan, 2025

Sales Tax Increase

The City's voter recently adopted Measure X, increasing the City's combined sales tax rate by 0.5% (1/2 cent) through 2036 when the Measure X sales tax authorization expires. Measure X brought the combined sales tax rate in Oceanside from 7.75% to 8.25%. below shows how much of an additional increase in the combined sales tax rate in Oceanside, citywide, to deliver full funding for both a \$5.5 million per year annual budget and a \$3.9 million per year annual budget.

Table 22: Sales Tax Increase Required to Generate RE:BEACH Funding (Hypothetical), 2025

Sales Tax Assumptions	
Gross taxable sales in Oceanside: Retail, Food & Beverage Outlets (FY 2024)	\$1,886,024,539
Sales Tax Increase Required for \$5.5 million/year RE:BEACH annual budget	0.29%
Sales Tax Increase Required for \$3.9 million/year RE:BEACH annual budget	0.21%

Source: City of Oceanside; NHA Advisors, 2025

As shown above, if the sales tax rate in Oceanside were increased to a combined rate of 0.29%, the \$5.5 million/year annual RE:BEACH target budget could be fully funded.

Because the bulk of the City's taxable sales outlets are not directly related to the beach, it is unclear that a voter approved sales tax measure is realistic for this purpose.

Parking Fees

Oceanside's current beach-area parking rates are either free or priced below market when compared to peer coastal cities. A modest increase of \$2.00 per hour—applied to key beach-dependent areas such as the Strand, Breakwater Way, and Tyson Street lots—could generate substantial new revenue while maintaining affordability relative to nearby destinations like Carlsbad and Encinitas. The City could potentially evaluate increasing parking fees for day use citywide as well.

Assuming 500 paid beach-area spaces and an average of 3 hours of use per day during a 180-day high-use season, this could yield approximately \$540,000 annually in new funds (500 spaces × 3 hours × \$2 × 180 days).

Oceanside Parking Revenue Strategy

A parking revenue strategy can be designed to specifically exclude changes to existing local/resident parking permit programs.

Careful wording and clear messaging on new paid parking designations in public areas will be critically important for successful stakeholder engagement and consensus building around parking as a potential RE:BEACH Oceanside funding.

For purposes of this analysis, it is assumed that an additional parking fee, as discussed above, would generate \$540,000 per year towards both the \$5.5 million per year and the \$3.9 million per year RE:BEACH budget targets.

General Fund Support for RE:BEACH

Given the potential long term revenue loss to the General Fund from future loss of beach sand, the City could consider providing some additional General Fund support.

As noted in Table 4: Sea Level Rise Impacts – City of Oceanside TOT & Sales Tax Loss Scenarios, the City's General Fund could take an annual revenue loss of \$6.8 million per year in TOT and sales tax from a 10% reduction in beach visits.

The loss of property tax is excluded from this estimate because the connection between a reduction in beach visits and declining assessed valuation is less direct than beach visits and TOT and sales tax.

As detailed in Table 10, the City's General Fund budget (FY 2025-26) supports the Coastal Zone Program, including \$700,000 per year for Beach Restoration Program and Shoreline Restoration Program activities. For purposes of this study, it is assumed that these existing activities will continue and will not be displaced or replaced by RE:BEACH operating costs for sand restoration or infrastructure maintenance. Instead, **RE:BEACH implementation will require additional General Fund support beyond the Coastal Zone Program's current commitments.**

On this basis and for purposes of this analysis, it is assumed that the City of Oceanside will provide an **additional long-term contribution of \$500,000 per year** to fund RE:BEACH implementation. These funding options could be sourced from Measure X funds, or from other General Fund monies after the expiration of Measure X in 2036.

Development Impact Fees

Downtown Oceanside is experiencing a wave of reinvestment and residential development, with approximately 2,000 multifamily housing units proposed, planned, or under construction. This development activity presents an opportunity to establish development impact fees to partly fund the capital costs of RE:BEACH. Note that under State law only capital costs for public infrastructure required by new development can be funded by development impact fees.

Analysis of Downtown Oceanside multifamily development trends identified several large-scale mixed-use developments approved or under construction in Downtown Oceanside, signaling a strong absorption demand and underscore the relevance of the ramp-up schedule in the funding model.

These pipeline developments—totaling over 970 units—align closely with the City's RHNA target of 5,443 new housing units (2021–2029). As of July 2025, these developments include the properties detailed in the following Table 23.

Table 23: Oceanside Pipeline Housing Development, 2025

Project Name	Units	Details
Sunsets Mixed Use Project	180 Units 5 Floors	Approved in 2023; adjacent to the Transit Center ¹⁴
901 & 801 Mission Avenue Projects	500 Units (combined plans; multiple parcels)	Mission Avenue adaptive reuse/infill development ¹⁵
Jefferson Ocean Creek	295 Units 4 Floor Garden Apartment	Occupancy expected in early 2026 ¹⁶

Source: Individual projects (See Footnotes); NHA Advisors; Willdan, 2025

Note that while Development Impact Fees (DIFs) are a common mechanism for funding infrastructure improvements associated with new development, they are not assumed as a funding source in this analysis for the RE:BEACH Pilot Project due to their limitations under California’s Mitigation Fee Act (AB 1600).

DIFs must demonstrate a direct nexus and proportionality between the new development and the specific infrastructure being funded.

In the case of beach renourishment and long-term coastal resilience, establishing a sufficiently direct connection to

individual development projects—particularly for recurring operational needs—is challenging.

Note also that DIFs can be paid through Mello-Roos special taxes on new development. However, for purposes of this analysis, DIFs paid from cash or from a Mello Roos special tax are excluded. While important, that revenue stream is considered too speculative to include in the funding scenarios analyzed in this report.

Governance Practices and Funding

In this context, the use of a climate resilience district (“CRD”) merits consideration. NHA originally developed this idea in 2021 in work under a grant for the Resources Legacy Fund.

However, as enacted by the legislature, NHA does not identify any benefit for local public entities facing climate change challenges due to the following reasons:

- CRD designation conveys no new statutory authority on local public entities that they do not already have.
- It requires formation of an enhanced infrastructure financing district (“EIFD”).

An EIFD is basically a way to legally restrict what would otherwise be general purpose property taxes allocated to a City’s General Fund for special projects.

¹⁴ North County Pipeline (www.ncpipeline.substack.com), 2025.

¹⁵ The Coast News Group, 2025.

¹⁶ San Diego Business Journal, 2025.

Like Tax Increment Financing (TIF), future increases in assessed valuation will generate incremental new property taxes that are isolated from the General Fund to pay for special projects. Only the City originating the EIFD can pledge such taxes, along with the County the City is located in.

Consequently, to the best of our knowledge, there is only one CRD operating in California at this time. Counties do not want to commit their General Fund property taxes to City projects, and Cities do not want the extra administrative and cost burden of managing their own property taxes through a CRD.

Another financing mechanism that draws a lot of attention in the climate change adaptation space are Geologic Hazard Abatement Districts (GHAD). These are unique special districts created under California's complex set of laws regarding special assessments on property, dating back to 1911.

Special assessments only require what is called a "majority protest" process for the parcel owners being assessed. No actual ballot measure election is required. However, California law mandates that such assessments can only be levied for projects that only benefit the parcel being assessed. If there is any "general benefit" for any other parcel owner or person, then the assessment cannot be levied.

Consequently, assessment districts, including GHADs are used sparingly to address issues such as utility undergrounding in a specific neighborhood, or a landslide threatening a specific

neighborhood. Climate change adaptation projects are very much "general benefit" projects. Beach sand replenishment and sea level rise adaptation in general have too much "general benefit" to be done through an assessment district or GHAD.

The City is considering creating a dedicated **Oceanside Beach Restoration Fund**. Given the wide variety of potential revenue sources for long term funding of RE:BEACH, setting up a dedicated single "bucket" for these revenue sources is a good policy. Establishing a dedicated Oceanside Beach Restoration Fund would ensure transparency and help build public trust, while reinforcing the linkage between beach use and long-term resilience investment.

Calculating the Funding Gap

The combined annual revenue from TOT, parking, and the City's General Fund contribution is \$2.85 million/year. As noted previously, a potential sales tax increase and/or development impact fee revenues are not included in this analysis.

Depending on whether the State Grant is awarded to the City, the City of Oceanside will need between \$1.1 to \$2.7 million per year in additional annual revenue. Such additional revenue can come from (1) other grant sources, such as a Prop 4 grant, or (2) a voter-approved parcel tax.

The analysis below looks at the potential of a voter approved parcel tax for making up any long-term funding gap for the

RE:BEACH Pilot Project. This analysis is included for illustrative purposes and is not a recommendation.

Potential Voter Approved Parcel Tax in Primary Area

For California cities, a voter approved parcel tax is commonly used as an alternative to an increase in sales tax or TOT. Parcel taxes are not ad valorem taxes. They are levied directly against parcels, generally as a fixed annual exaction, based on commonly available metrics. These metrics include lot size, location, building area and type of land use.

Until recently, enactment of a parcel could only be done through a ballot measure with a successful 2/3 vote. However, parcel taxes can now be enacted through a simple majority ballot measure—**on the condition that the Special Parcel Tax measure is placed on the ballot through a citizen-led initiative.**

The following analysis estimates the amount of a potential parcel tax on a per parcel basis, using only the metric of land use within the Primary Area. This is not a recommendation, but a simplification for illustrative purposes for this report.

With respect to all potential funding sources, and a parcel tax in particular, community stakeholders will expect City leadership to pursue a fairly allocated tax burden. Different stakeholders may have different ideas of fairness.

This analysis has implicit assumptions on how the tax burden is allocated. These assumptions are purely illustrative. Major community engagement is required to develop a tax allocation that will be considered fair by community stakeholders.

The starting point for this illustration is an analysis of land use for properties located within the Primary Economic Activity area. Approximately 8,300 developed parcels allocated across seven commercial and residential land uses fall within Oceanside's primary beachfront area as detailed in the following Table 24.

While this funding mechanism would require voter approval, it offers a locally controlled, geographically targeted source of ongoing revenue aligned with the direct economic and fiscal benefits of the RE:BEACH Project.

Again, the funding alternatives and cost estimates presented in this appendix are **illustrative and exploratory in nature.** They are intended solely to inform a broader public dialogue about potential approaches to financing long-term coastal resilience investments in Oceanside.

These scenarios should not be interpreted as recommendations, commitments, or definitive financing plans. Future funding strategies will require additional technical analysis, policy guidance, stakeholder engagement, and governing body direction before any decisions are made.

Table 24: Primary Economic Activity Area (Oceanside Beach) by Land Use

Land Use Category	Assessed Valuation	Per cent of Total Assessed Valuation	Number of taxable parcels	Per cent of taxable parcels	Average assessed valuation per parcel	Notes
Commercial	517,266,956	13.3%	417	5.0%	1,240,448	
Hospitality (Non-Timeshare)	344,191,288	8.9%	23	0.3%	14,964,839	
Hospitality (Timeshare)	77,335,369	2.0%	4,133	49.6%	18,712	Given half of the parcels are timeshares, a flat tax for all parcels would not work
Multifamily (Non-Condo)	640,337,534	16.5%	463	5.6%	1,383,018	Minimum of 2,000 non-condo multi-family units (Source: ParcelQuest)
Multifamily (Condo)	1,388,765,786	35.8%	1,994	23.9%	696,472	
Single Family	788,548,788	20.3%	621	7.5%	1,269,805	
Other	119,359,019	3.1%	675	8.1%	176,828	“Other” includes vacant parcels
Total	3,875,804,740	100.0%	8,326	100.0%		

Source: ArcGIS; ParcelQuest; City of Oceanside; NHA Advisors; Willdan, 2025

Potential Funding Scenarios

NHA Advisors identified six funding scenarios, driven by (1) the potential State grant (2) the increase in parking fee and (3) a long-term commitment of General Fund revenue.

These choices are presented in the context of illustrating the potential annual budget shortfall for each scenario and filling that shortfall through an appropriate level of parcel tax in the Primary Economic Activity Area only.

No policy recommendations are made with respect to these funding scenarios. They are presented in the spirit of showing plausible pathways for fully funding the Re: Beach Pilot Project. Each scenario shows estimates of the parcel tax required to deliver full funding for RE:BEACH in addition to various supplemental funding sources.

As noted above, NHA Advisors considered the following supplemental funding sources:

- \$21.5 million State Grant
- \$540,000 per year in parking surcharge revenues
- \$500,000 per year in General Fund contribution

Neither a sales tax increase nor revenue from development impact fees are factored in the analysis.

A sales tax increase is not included because (1) the City recently passed Measure X by ballot measure and (2) such a measure would need to be for the entire City boundaries and could not be focused on the Primary Area.

Development Impact Fees are excluded because (1) the pace at which such fees would be paid and available for funding RE:BEACH is not easily predictable and (2) it is not clear under AB 1600 what level of fee could be charged on new development.

Nevertheless, Development Impact Fees are an important potential source of future funding for RE:BEACH.

Table 25 below profiles the key assumptions supporting six RE:BEACH funding scenarios related to a potential new parcel tax. One of the biggest unknowns is whether the City receives the \$21.5 million State Grant.

The second biggest assumption is that the City would vote to increase the TOT tax rate by 1%, at least in the Primary Area. All scenarios in Table 25 assume a 1% increase in the TOT rate in the City.

Table 25: RE:BEACH Funding Gap Scenarios – Total Annual Parcel Tax Values

Scenarios ¹	Scenario 1—No Grant			Scenario 2—With Grant		
	1a	1b	1c	2a	2b	2c
TOT Tax Addition	1%	1%	1%	1%	1%	1%
Parking Revenue (\$)	0	540,000	540,000	0	540,000	540,000
General Fund Contribution (\$)	0	0	500,000	0	0	500,000
Annual Debt Service For Initial Capital Costs (\$)	4,000,000	4,000,000	4,000,000	2,400,000	2,400,000	2,400,000
Long Term Annual Maintenance Costs (\$)	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Total Annual Budget Requirement (\$)	5,500,000	5,500,000	5,500,000	3,900,000	3,900,000	3,900,000
Combined TOT, Parking and General Fund Revenue (\$)	1,750,000	2,290,000	2,790,000	1,750,000	2,290,000	2,790,000
Annual Parcel Tax Requirement (\$)	3,750,000	3,210,000	2,710,000	2,150,000	1,610,000	1,110,000

¹The City of Oceanside applied for a \$21.5 million California Division of Waterways and Boating Public Beach Restoration Program Grant (“State Grant”) to partially fund RE:BEACH Capital Costs.

Source: City of Oceanside; NHA Advisors; Willdan, 2025

Using these scenarios, Table 26 below shows the estimated annual tax rate per land use category according to the assumptions in Table 25 above. There is no parcel tax shown for hospitality industry facilities. Since these properties are already assumed to be paying an extra 1% in the TOT rate, totaling nearly \$1.8 million per year, it is assumed that they would be exempt from a parcel tax for RE:BEACH. Assumed allocations of tax burden by parcels within a given land use category are

based roughly on the relevant percentages of assessed valuation and number of parcels analyzed in the fiscal impact analysis. This allocation is a very important component of any ballot measure for a parcel tax and would need to be carefully considered by the proponents of such a measure. Consequently, the annual parcel taxes by scenario shown in Table 26 should be considered illustrative, and not recommendations.

Table 26: Funding Gap Scenarios – Annual Parcel Tax per Parcel by Land Use

Scenarios ¹	Scenario 1—No Grant			Scenario 2—With Grant		
	1a	1b	1c	2a	2b	2c
TOT Tax Rate Addition	1%	1%	1%	1%	1%	1%
Parking Revenue (\$)		540,000	540,000		540,000	5,400,009
Annual General Fund Contribution (\$)			500,000			500,000
Land Use Category	Annual Tax per Parcel per Year (\$)					
Commercial	1,799	1,540	1,300	1,031	772	532
Hospitality (Non-Timeshare)	n/a	n/a	n/a	n/a	n/a	n/a
Hospitality (Timeshare)	91	78	66	52	39	27
Multifamily (Non-Condo)	1,620	1,387	1,171	929	695	479
Multifamily (Condo)	611	523	442	350	262	181
Single Family	755	646	545	433	324	223
Other	278	238	201	159	119	82

¹ The City of Oceanside applied for a \$21.5 million California Division of Waterways and Boating Public Beach Restoration Program Grant (“State Grant”) to partially fund RE:BEACH Capital Costs.

Source: City of Oceanside; NHA Advisors; Willdan, 2025

This analysis shows that the lowest likely tax rate on residential parcels would result from the best-case scenario of (1) the State grant, (2) the parking surcharge and (3) a General Fund contribution.

Even with all these favorable assumptions combined, Scenario 2c in [Table 26](#) provides a hypothetical estimated annual supplemental parcel tax for single family home equal to more than \$200 per year.

Annual real estate taxes for single-family homes in Oceanside vary widely due to Proposition 13, from a few thousand dollars for homeowners who bought their homes decades ago to well over \$15,000 for recent buyers of higher-valued properties.

For the purpose of this funding evaluation, the following conservative assumptions provide a snapshot of the potential effective property tax increase per parcel:

- Average Assessed Value in Primary Area = \$1.25 million
- Annual Tax ($\$1,250,000 \times 1.25\%$ Combined Tax Rate) = \$15,625
- RE:BEACH Single Family Parcel Tax (Scenario 2c) = \$223
- Effective Single Family Home Property Tax increase ($\$223/\$15,625$) = **1.4%**

Based on NHA Advisor's long experience with ballot measures, such a tax rate is not likely electable if a 2/3 vote is required.

However, if it were done by citizen's initiative and required a simple majority, a successful ballot measure is plausible.

This means that either the RE: BEACH program could not be fully funded, and would need to be deferred, or that additional funding sources are required.

For a successful simple majority ballot measure, conventional wisdom suggests that the tax rate per single family home or condo needs to be below \$100 per year. To accomplish that, another dedicated revenue source is needed such as the following potential options:

- An additional State grant through Proposition 4. The City would need to confirm with the State Coastal Conservancy ("SCC"), which administers nearly all the sea level rise portions of Prop 4, that beach sand replenishment is an eligible purpose. Preliminary indications from SCC staff are that RE: BEACH is eligible for Proposition 4 funding.
- A larger increase in the TOT tax rate.
- A small City-wide increase in sales tax
- An additional General Fund contribution, perhaps in the form of a "loan" secured by future development impact fees.

Policy Justification for RE:BEACH Investment

Oceanside's beachfront is not just a natural amenity—it is a critical economic asset that supports the City's fiscal health. In

Fiscal Year 2024, all hospitality facilities in the City an estimated \$180 million in gross room revenue and \$50.4 million in taxable sales, producing over \$18 million in TOT and sales tax revenues that directly support essential public services. Without timely intervention, sea-level rise, sand depletion, and infrastructure degradation threaten this revenue stream, along with public access, private property, and the City's identity as a vibrant coastal destination.

The City of Oceanside's adopted budget principles and Vision Statement underscore a commitment to both economic vitality and environmental stewardship. Beach protection is foundational to both. These objectives are reflected in the City's FY2025–FY2026 goals, which prioritize long-term economic development and natural resource preservation.

The costs of inaction are substantial. Declining visitor activity, reduced property values, and a shrinking tax base could result in tens of millions of dollars in lost revenue and public infrastructure costs over the coming decade. In contrast, targeted investment through the RE:BEACH Pilot Project could stabilize the shoreline and safeguard this economic engine.

The RE:BEACH Pilot Project represents the City's most viable opportunity to shift from short-term, stopgap nourishment efforts toward a resilient, long-term strategy. It is not a discretionary environmental initiative—it is a fiscal risk mitigation strategy. Without it, Oceanside faces compounding revenue losses that would undermine its ability to fund parks, police, fire, streets, and community services for future generations.

Potential Next Steps

The City and other stakeholders should consider taking the following next steps regarding funding for the RE:BEACH Pilot Project:

1. Explore Prop 4 Funding Sources

The City should take the preliminary step of completing a Proposition 4 Climate Bond “pre-application” as required by the State Coastal Conservancy (SCC) for organizations seeking state grant funding for climate resilience projects. Instead of a full, detailed grant application, the pre-application process is a preliminary phase that allows the SCC to quickly review project proposals and determine if they are a good fit for the available funding.

2. Explore a Parcel Tax

The allocation of parcel taxes by land use category in this analysis is somewhat arbitrary. This is another pivotal policy question that needs careful attention.

A key question to explore is whether the primary economic activity area is a big enough tax base. If the tax base for a parcel tax were expanded the tax levies estimated in this report would decrease. This question is a pivotal policy question for the City. The City needs to determine the appropriate size of the tax base.

3. Explore Parking Fees

The City should consider (1) how much of surcharge for downtown parking could be levied, and (2) what is the best way to levy the surcharge.

4. Conduct California Mitigation Fee Act (AB 1600) Pre Study.

The City should retain a consultant expert in AB 1600 Development Impact Fee studies as required by the Mitigation Fee Act to do a preliminary assessment of RE:BEACH to (1) determine if it would be considered an eligible project and (2) if so, how much of the cost can be passed on to developers.

5. Request USACE Grant Funding

In addition to the USACE Congressional authorization for a General Investigation for beach sand replenishment for the greater San Diego County shoreline region, the City itself has a Congressional authorization for what is called a Mitigation Study under the USACE “Coastal Storm Risk Management” program.

The Mitigation Study is another potential pathway for securing USCE funding for beach sand replenishment. However, the Mitigation Study requires a 50% local match for its costs. The

City could consider securing a Proposition 4 grant for funding this local share requirement.

The City could retain a consultant expert in USACE benefit cost analysis to explore how the Federal interest can be demonstrated. With that analysis, the City could then begin a constructive dialogue with the Los Angeles USACE district.

6. Expand Stakeholder Outreach

Together with Resilient Cities Catalyst and NHA Advisors, the City of Oceanside should consider engaging community stakeholders to:

- Facilitate community dialogue about potential funding mechanisms, including a parcel tax.
- Inform near-term adoption of a fiscally responsible Funding and Implementation Plan to support long-term coastal resilience.

Appendix D: Project Contacts & Disclosures

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Project Funding Plan

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