



AGENDA REPORT

CITY OF SAN CLEMENTE

CITY COUNCIL MEETING

910 Calle Negocio
2nd Floor
San Clemente, California
www.san-clemente.org

Meeting Date: March 19, 2024

Agenda Item: 9D

Submitted By: City Manager

Prepared By: Andy Hall, City Manager

Subject:

DRAFT SAN CLEMENTE COASTAL STRATEGIC PLAN

Fiscal Impact:

None at this time.

Summary:

The City has prepared a draft *Coastal Strategic Plan* which describes ongoing and planned high priority coastal projects and programs to be implemented to protect and restore the City's sandy beach and shoreline.

Background:

Coastal erosion is a significant problem in San Clemente which threatens the public beaches, coastal public access, existing structures, critical public infrastructure, and the fundamental quality of life in the City.

Protection of the sandy, walkable public beach is a top community priority. The sandy beach is essential to a quality of life in San Clemente. San Clemente's beach is an important asset and amenity. The beach supports long-term community vitality and character.

Many of City's coastal programs and projects that are underway and included in the draft 2024 *Coastal Strategic Plan* were identified in the City's *2021 Coastal Resiliency Plan* and as such remain principal elements of a comprehensive plan to ensure the coastline is preserved and protected today and for future generations of residents and visitors.

There are 4.7 miles of shoreline in the City (i.e., 24,816 linear feet). For planning purposes, the City goal is the development of a comprehensive, long-term, Citywide coastal resiliency strategy that provides benefits to all residents and visitors.

Discussion:

The intent of the draft *Coastal Strategic Plan* (included as Attachment 1) is primarily to inform the community of the City's efforts and plans to protect and restore the City's sandy beach and shoreline for the benefit of all. Secondly, the Coastal Strategic Plan is intended to further the community conversation on advancing beach sand replenishment and retention projects in San Clemente.

Restoring sand to the City's beaches has been identified by the Council as a top City priority. Additional priorities include keeping the sand in place through installation of sand retention

systems and collaborating with residents, businesses, and regional, state, and federal partners to develop additional regional coastal resiliency projects.

The *Coastal Strategic Plan* includes two categories of projects including capital projects and ongoing programs and efforts that are non-capital in nature.

In summary, the range of funding needed in the City to develop and sustain these programs in the next 50 years is currently estimated at \$170M - \$200M with a target annual revenue need of \$4M.

In advancing a comprehensive, long-term, citywide beach sand replenishment and retention strategy, the establishment of a *Coastal Strategic Plan* is a crucial step in defining key projects and programs necessary to advance important City objectives as embodied within the Plan.

Key recommendations in the draft *Coastal Strategic Plan* include establishing a Capital Improvement Program (CIP) in the upcoming fiscal year that begins July 1, 2024. Establishing a dedicated CIP will support the City's efforts to implement the projects and programs identified in the draft *Coastal Strategic Plan*.

Developing long term, sustainable funding strategies is a fundamental pre-requisite to implement the projects in the *Coastal Strategic Plan*. The City is currently conducting a comparative economic analysis of various funding mechanisms and tools available to generate the necessary revenue to support the projects and programs identified herein.

Funding strategies being evaluated include a transaction use tax, sales tax, transient occupancy tax, parcel tax and other options such as a geologic hazard abatement district. The economic analysis is intended to provide data to support the advancement of the City's preferred strategies and revenue generation opportunities for implementation of strategic coastal projects and is anticipated to be complete in Spring 2024.

Additional information and updates will be presented to the City Council in the months ahead.

Council Options:

- Receive and file.

- Continue the item with direction given to staff.

Environmental Review/Analysis:

This is an informational item only and is not a "project" as defined by CEQA State CEQA Guidelines Section 15378.

Recommended Actions:

Staff Recommendation

Receive and file the Administrative Report dated March 19, 2024, and on file with the City Clerk.

Attachment:

1. Draft City of San Clemente Coastal Strategic Plan

Notification:

None.



~ Draft ~

City of San Clemente

Coastal Strategic Plan



Introduction and Purpose

The City has prepared a first draft Coastal Strategic Plan which describes ongoing and planned high priority City coastal projects and programs and technical data needs and associated costs.

The purpose of this draft Coastal Strategic Plan is first and foremost to inform the community of the City's efforts to protect and restore the shoreline. Secondly, this plan has been prepared to obtain community input on the path forward for advancing beach sand replenishment and retention projects in San Clemente and the South Orange County region. This Plan is intended to be a living document that is periodically updated over time.

Restoring sand to the City's beaches has been identified by the Council as a top City priority. Additional priorities include keeping the sand in place through installation of sand retention systems and working collaboratively with residents, businesses and regional, state and federal partners to develop additional regional coastal resiliency projects.

The City is currently conducting a comparative economic analysis of various funding mechanisms and tools available to generate the necessary revenue to support the projects and programs identified herein. Funding strategies being evaluated include a transaction use tax, sales tax, transient occupancy tax, parcel tax and other options such as a geologic hazard abatement district. The economic analysis is intended to provide data to support the advancement of the City's preferred strategy(ies) and revenue generation opportunities for implementation of strategic coastal projects and is anticipated to be complete in Spring 2024.

Coastal Strategic Planning Context

Many of City's coastal programs and projects that are underway were identified in the City's 2021 Coastal Resiliency Plan and as such remain important elements of a comprehensive coastal strategic plan to ensure the coastline is preserved and protected today and for future generations of residents and visitors.

There are 4.7 miles of shoreline in the City (i.e., 24,816 linear feet) which encompasses both City beaches and State Beaches.

- 1.9 miles of City of San Clemente Beaches
- 1.15 miles of California State Parks / State Beaches
- 1.65 miles = @ 0.93 miles at Capistrano Shores & 0.72 miles at Cyprus Shore

In order to nourish all beaches in the City, the City will need to add between 2 million and 9 million cubic yards of sand depending on the optimal beach width desired. For planning purposes, the following assumptions are used.

- Each square foot of beach to be created requires an estimated 1.5 yd.³ of sand
- Multiplying the length of the San Clemente shoreline (24,816 feet) x the desired added beach width, one can derive the target quantity of beach sand needed.

For example:

- 50 additional feet of beach requires 2,000,000 yd.³ of sand
- 100 additional feet of beach requires 4,000,000 yd.³ of sand
- 150 feet of additional beach requires 6,000,000 yd.³ of sand
- 200 feet of beach with requires 7,500,000 yd.³ of sand
- 250 feet of additional beach width requires 9,000,000 yd.³ of sand

As a reference point, SANDAG typically uses 250 feet of additional beach width for regional planning purposes as this is the design volume required to be resistant to 100-year coastal storm wave events.

Identification of additional sand sources is a top priority. Preliminary estimates indicate that the borrow site off of the Santa Margarita River Mouth (Camp Pendleton), has an estimated 20 million cubic yards of sand. This site was initially used by the USACE project though the sand is below a layer of cobble and a secondary borrow site at Surfside Sunset is currently being pursued.

Other agencies will be interested in accessing various sand sources offshore so it is prudent to locate other sand sources that can be used to sustain a City-wide, long term, comprehensive sand nourishment program. Additional sand-retention strategies are also being pursued to keep the sand in place including those in the “Nature Based Coastal Project Feasibility Study” initiated in late 2022 and is expected to be complete in late 2025.

Overview of the Coastal Strategic Plan

Following are descriptions of projects and planning efforts identified as top, near-term City priorities for Fiscal Years 23/24 through 25/26.

The first category of projects are capital projects. The second category describes ongoing programs and efforts that are non-capital in nature.

In Summary, the range of funding needed in the City to develop and sustain these programs in the next 50 years is currently estimated at \$170M - \$200M with a target annual revenue need of \$4M.

In advancing a comprehensive, long-term, citywide beach sand replenishment and retention strategy, this document is an important step in defining key projects and programs necessary to advance important City objectives as embodied within this Coastal Strategic Plan.

Key recommendations include establishing a Coastal Strategic Plan Capital Improvement Program (CIP) in the 24/25 City Budget with dedicated funding to implement coastal resiliency projects listed below. Developing long term, sustainable funding strategies is a fundamental pre-requisite to implement the projects in the Coastal Strategic Plan.



Capital Projects

San Clemente Shoreline Sand Replenishment Project



The U.S. Army Corps of Engineers (USACE) 50 Year Coastal Storm Damage Reduction Project involves placement of 251,000 cubic yards of sand in the center of the city, north & south of the Municipal Pier. This project is congressionally authorized to repeat every 5-6 years for the next 50 years.

Goals and Outcomes: Implementation of a long-term beach sand replenishment program at the City's main beach with planned placement of 2 million cubic

yards of sand over 50-year project life.

Estimated Cost: Fully funded for initial event in 2023/2024. Future renourishment events dependent on securing funding. Current 50-year cost is \$240M and would be generally cost shared 50/50. Some costs, such as the required periodic cost updates, are not cost shared with the City and are paid for solely by the USACE. The current Non-Federal 50-year cost is \$120M for 8 planned renourishment events.

Implementation Notes: First event initiated in December 2023 and paused due to sediment quality issues. It is expected that a second borrow site will be needed to complete the first event in 2024. The City is currently working with the USACE to permit use of a borrow site offshore of the Surfside Sunset beaches in Orange County.

City will need to identify a dedicated funding source/revenues to ensure full participation in this 50 year federally cost shared project. Future renourishment events beginning in FY28/29 are cost shared 50/50 federal and non-federal. City would need to seek State Parks funding support again and ideally develop a dedicated funding source to ensure project delivery. City will need to apply for State Parks grant funding in FY25/26. USACE will need City funds to initiate PED in 2027 in order for the project to remain on schedule for renourishment @ year 6 (i.e., 2030 / 2031).



Capital Projects

SANDAG Regional Beach Sand III Project

Goals and Outcomes: The goal in developing this project is to supplement the USACE project by placing sand in other areas of the City that do not directly receive sand under the USACE project. This project supports development of a regional beach sand program Similar to USACE beach sand project but likely in different locations in the City. The City is currently participating in Phase 1 which will include a draft and final feasibility study, literature review of borrow site data and economic appendix.

Estimated Cost: The Actual Phase 1 cost to the City was \$109,512. Phase 2 cost to the City is TBD. Phase 3 cost to the City is TBD.

Implementation Notes: Initiated in Fall 2023. City signed an MOU with SANDAG for Phase 1 of RBSP III. Phase 1 is anticipated to be complete in Spring 2025. This will be a multi-year / multi-phase project that could deliver additional sand to the City in an estimated 3-5 years after environmental and permitting tasks are complete in Phase 2.

Nature Based Coastal Project Feasibility Study

Goals and Outcomes: The goal is to define preferred sand retention structure concepts that are based on replicating natural features and/or using natural materials to the maximum extent. Goal is to identify appropriate sand retention projects for long term sand retention in the City to retain sand added by USACE project, SANDAG project, SCoup projects, South OC sand project, etc.

Estimated Cost: Currently funded through a \$300,000 grant to the City. Next phase costs to be determined in late 2024 or early 2025 based on preferred design concepts that emerge from the study. For reference:

- Oceanside is estimating \$50M cost for RE:BEACH pilot project
- Moffat & Nichol estimating \$75M per structure at North Beach

Implementation Notes: Initiated in Fall 2022. Cost estimates to be developed in Draft Feasibility Study (i.e., project economic analysis). Costs to be defined based on Council direction on preferred designs/locations.



Capital Projects

Sand Clemente Sand Compatibility & Opportunistic Use Program (SCOUP)

Goals and Outcomes: Completion of streamlined environmental review and permitting tasks to support placement of opportunistically available sediments on the City’s beaches, via ruck and rail, as they become available. All San Clemente beaches will be included & available to receive sand under this program initiated in February 2024.

Estimated Cost: Formal direction provided by Council on 2/20/24 to proceed with program development. Costs to be determined based on comparison to other SCOUP program implementation costs and receipt of proposals from experienced & qualified contractors and are estimated to range from \$500,000 to \$900,000 to reestablish the program, completed environmental documentation and obtain regulatory permits.

Implementation Notes: City had SCOUP program in place from 2005-2017 and this effort will build on the previous program. When beach compatible material is identified, costs would be determined and could include sampling (SAP), monitoring and trucking costs. Could include material from Santa Ana River, sand delivery via rail and landslide material. City staff have requested cost proposals from companies experienced in developing SCOUP programs for other jurisdictions.

Sand Delivery Via Rail

Goals and Outcomes: Facilitates additional beach sand placement opportunities in the City to restore sandy beaches. Sand delivery via rail is an important tool for the City given the proximity of the railroad along the City’s shoreline and railroad coastal resiliency planning efforts currently underway.

Estimated Cost: Per OCTA in Fall 2023, cost is \$375,000 for 15 k. cu. yds cubic yards of sand if delivered via rail car (side dump).

Implementation Notes: City coordinating with OCTA as an important opportunity given the ROW in City. This project could utilize SCOUP permits. Cost for 250k. cu. yds would be \$6.2M with linear scaling – source is Prado Dam. Cost does not include environmental or permitting if required beyond SCOUP permits initiated in 2024. City and OCTA remain in ongoing discussions about opportunities to collaborate to support mutual goals of shoreline protection and the protection of critical public infrastructure which includes the sandy beach.



Capital Projects

Regional Beach Nourishment Projects with South OC Agencies

Goals and Outcomes: Regional beach sand nourishment and retention projects developed in collaboration with others including County of Orange, Dana Point, State Parks, OCTA, Caltrans and others.

Estimated Cost: TBD

Implementation Notes: The Draft South OC Regional Coastal Resiliency Strategic Plan expected to be published in March 2024. The City is collaborating with other South OC agencies to develop regional project. While this project is in a conceptual stage only as of March 2024, it is likely this effort will move forward in 2024 given the high level of interest in restoring the sandy beach in the region.

Marine Safety Headquarters Study

Goals and Outcomes: Supports rebuilding of the City’s Marine Safety Headquarters and will help to identify opportunities and constraints that the City can use to advance building design and location for this critical public safety facility.

Estimated cost: \$30k

Implementation Notes: The Marine Safety Headquarters rebuild project is current in the design phase which was initiated in 2021. This study is necessary to determine the optimal building

design and location. Completion of this study is essential to advancing the City's project and completion is targeted for 2024-2025.



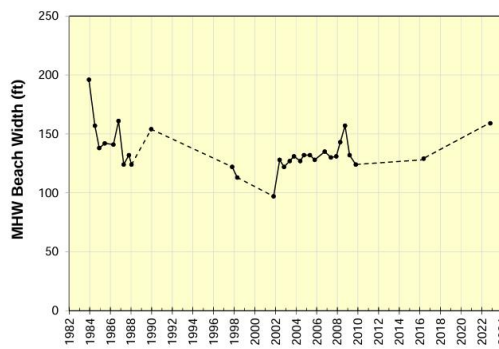
Planning Efforts & Technical Analyses

Annual Shoreline Monitoring Program

Goals and Outcomes: The general objective of the monitoring program is to document changes in the condition of the shore zone between Dana Point Harbor and San Mateo Point, thereby providing a basis for evaluating the impacts of both natural events and beach replenishment operations. The program includes semi-annual beach profile surveys at 12 representative coastal sites each Fall (October) and Spring (May).

Estimated Cost: Fully funded in calendar years 2022 through 2025 through a grant to the City. City to assume ongoing program costs beginning in 2026 when grant funding concludes. 3.3% annual cost escalation rate should be assumed per Coastal Frontiers. FY 25/26 cost = \$82,778. FY 26/27 cost = \$85,210.

Implementation Notes: The City re-established this program in Fall 2022 which builds on a longer-term historical data set going back to 1982. High-resolution data set collected each fall and spring. The City's shoreline monitoring program collects data at 12 transect locations from north of San Juan Creek to Cottons Point. The City's program tracks regional beach width from the back of the beach to the depth of closure ~ 30 feet of water depth to ensure the entire shoreline profile is captured including offshore sand bars that are below water in winter.



Offshore Sand Source Investigation

Goals and Outcomes: The goal is to find beach quality sand in large volumes to support a comprehensive, long term beach nourishment in the City and possibly the greater region.

Estimated Cost: ~ \$800k (via grant funding)

Implementation Notes: Tandem approach of a grant request and request to USACE for “Planning Assistance to the States” (PAS). Draft grant application submitted to CCC in Fall 2023. This would be a one-time cost and costs are currently assumed to be covered by a CCC grant or USACE PAS. Pursuing this grant opportunity for City to do the work if USACE “Planning Assistance to the States” (PAS) does not occur or is not timely.

Planning Efforts & Technical Analyses

South OC Coastal Resiliency Working Group

Goals and Outcomes: Overarching goal is to develop a comprehensive regional beach sand & retention program that is South OC focused. The group would work together to identify regional projects that could supplement the USACE project and nourish other beaches in the City. It is anticipated that the South OC Regional Coastal Resiliency Strategic Plan anticipated in Spring 2024 will seek to formalize the relationship between agencies.

Estimated Cost: No additional cost. Participation cost embedded in Coastal Administrator contract. Future costs anticipated when a “project” is identified.

Implementation Notes: This group is comprised of agency staff and was initiated in 2023 to promote staff level regional coastal resiliency collaboration. No costs until such time as a “project” is identified. It is anticipated that this group will continue to work together as the agencies develop a regional coastal resilience governance structure involving elected officials formalizing the collaborative relationships.

SANDAG Oceanside Littoral Cell Technical Task Force

Goals and Outcomes: Supports regional coordination and collaboration on beach sand projects, shoreline monitoring and other technical studies. This group meets quarterly.

Estimated Cost: No additional cost. Participation cost embedded in Coastal Administrator contract.

Implementation Notes: Underway as of 2023. Includes San Clemente, Oceanside, Carlsbad, Encinitas, Solana Beach, Del Mar, San Diego, County of Orange, State Parks, Dana Point, OCTA, Camp Pendleton and other regional partners including Scripps and UCI.

On Call Coastal Engineering Services

Goals and Outcomes: Ensures technical expertise is readily available to the City on an as-needed basis.

Estimated Cost: \$25,000 / year

Implementation Notes: Coastal Frontiers is under contract to the City for technical support.

