



# City of Oceanside

300 North Coast Highway,  
Oceanside, California 92054

## Staff Report

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DATE: February 4, 2026

TO: Honorable Mayor and City Councilmembers

FROM: City Manager's Office

### **TITLE: ACCEPTANCE OF THE INFORMATIONAL PRESENTATION ON SHIFTING OCEANSIDE HARBOR DREDGING AND SAND PLACEMENT PROGRAM FROM SPRING TO FALL**

#### **RECOMMENDATION**

Staff recommends the City Council receive an informational presentation regarding a potential shift in the U.S. Army Corps of Engineers Oceanside Harbor Channel annual dredging and sand placement program from spring to the fall, intended to extend shoreline benefits, enhance coastal resilience, and increase operational predictability.

#### **BACKGROUND AND ANALYSIS**

The annual Oceanside Harbor Channel dredging program serves two primary purposes: maintaining safe navigation within the Small Craft Harbor and Federal Boat Basin, and nourishing City beaches with sand removed from the Harbor Channel. Since its construction in 1942 and more consistently since the Small Craft Harbor construction in 1963, the Harbor Channel has needed to be routinely dredged to remove sediment build-up from the harbor navigation channel. For many decades, the harbor dredging has occurred either every other year or annually, with dredging typically done in the spring. Since the 1960s when the decision to dredge in spring was made, there have been major scientific advances to our understanding of currents, wave patterns, and sediment transport.

Over the past 25 years, studies and evaluations have been conducted by the U.S. Army Corps of Engineers (USACE) and the City, aiming to capitalize on new advances in coastal processes and to improve the efficiency of the dredging program. In 2000, the USACE completed a technical evaluation on the quality and efficiency of the Oceanside dredging program and its effects on the City's shoreline, effectively concluding that to maintain the channel more dependably, dredging should take place in winter or in fall ahead of the shift in swell direction. Winter or fall dredging would more likely direct sand to flow in the opposite direction, away from the Harbor Channel and thereby distributing the sand naturally to southern areas of Oceanside. In 2021, the City completed a Beach Sand Feasibility Study (GHD 2021), which also concluded that sand from the Harbor dredging could more effectively sustain beaches if placed further south and in fall rather than spring.

Thus, the efforts made to date by City staff have been to further discuss, coordinate and implement the technical recommendations that have come from these and many other studies on the Harbor, its dredging, and the overall effect on coastal processes in Oceanside.

Recent site-specific studies have refined the City's understanding of how seasonal wave direction and sediment movement along Oceanside's coastline influence both Harbor shoaling and beach nourishment outcomes. These studies have also confirmed the ability of the USACE's dredging contract to accommodate a shift from spring to fall (Rincon 2025). In parallel, advances in Harbor Channel monitoring technology, including the USACE's installation of a real-time shoaling radar system on the Harbor Channel dredging and continued loss of sand volumes from southern Oceanside beaches, make this an opportune time to evaluate a shift to fall dredging under current coastal conditions.

### Fall Dredging Key Benefits

- **More Effective Sand Use:** Fall placement allows for direct pipeline delivery into the primary sand placement area at the Pier without having to spend time building up sections of the beach, maximizing the benefits near the pier and downtown access points. In comparison, the current spring dredge schedule requires the dredge contractor to spend multiple days and up to 40,000 cubic yards of material to build up sections of the beach north of the pier to accommodate placement of the dredge pipe.
- **Increased Coastal Protection:** Placing sand before winter storms creates a wider buffer that protects public infrastructure, recreational areas, and private property.
- **Southern Oceanside Beaches Nourished:** Fall sediment transport has greater potential to enable southward movement of placed sand, supporting beaches to the south that are most impacted by erosion and limited coastal access.
- **Predictable Operations:** A dedicated fall work window minimizes delays caused by Oceanside's current position at the end of USACE's Southern California dredging cycle, enabling public beach use, events, and programming of the beach to still take place in the fall with predictable timing. With the regularity of a fall dredge schedule, the City can work with event planners to minimize impacts to existing programming and events, either shifting the dates in fall to accommodate the predictable dredging window and moving events into the newly available spring timeframe.
- **Swifter Dredge and Sand Placement Program:** Fall placement is more efficient because there are less environmental restrictions (i.e., no schedule restrictions associated with grunion or nesting birds) and wider late-summer beach conditions that will more readily facilitate pipeline placement.
- **Economic and Community Value:** Efficient sand placement strengthens recreational opportunities, supports tourism, and enhances the local economy. Changing the dredge schedule would allow for additional beach event programming during the April/May time frame, a popular time for beach visitation that has historically been off-limits to special events programming due to the dredge schedule.

Shifting dredging and sand placement to the fall presents an opportunity to extend the benefits of dredging across more of Oceanside's coastline, improve coastal resilience, and establish greater predictability for both dredging operations and community programming. The U.S. Army Corps of Engineers has committed to implementing a trial of this adjusted dredge schedule in 2026, on condition of receiving funding for the supplemental dredging from Congress. They have further indicated that, should the shift to fall operations prove incompatible with the established dredge cycle or with the City's needs, the option to revert to spring dredging remains available. Staff recommends continued collaboration with USACE and local stakeholders to carefully plan and implement this pilot

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adjustment, beginning with the upcoming operational cycle in fall 2026.

## **FISCAL IMPACT**

Implementing a fall dredging program will have no notable fiscal impact to the City. If a shift to fall dredging proceeds this year, the USACE will request supplemental funding from Congress to dredge the Harbor Channel twice during this dredge year (i.e., April and September 2026).

## **COMMISSION OR COMMITTEE REPORT**

The Harbor and Beaches Advisory Commission received staff's informational presentation at a special scheduled meeting on January 5<sup>th</sup>, 2026.

Discussion occurred on the dredging depths and other parameters, the 2026 sand volume expectations, the results of recent channel depth surveys, and methods of measuring success of the switch to fall sand placement. A key focus of the discussion was the benefit of shifting sand placement to the fall season, which aligns with natural sediment delivery from the watershed to the coast. Fall placement is expected to promote offshore sandbar formation during winter and spring, supporting natural beach recovery during lower-energy summer wave conditions. As a result, sandy beach conditions are anticipated to be maintained throughout the summer season.

Additional discussion at the Harbor and Beaches Advisory Committee meeting focused on the potential for fall sand placement to more effectively transport sediment to chronically eroded beaches in southern Oceanside. Committee members inquired about various options to direct sand placement to southern reaches of the shoreline and Staff discussed available coastal management tools, including the City's Sand Compatibility Opportunistic Use Program (SCOUP), noting the implementation challenges associated with opportunistic sand sources. The discussion continued, with Staff summarizing that shifting the Harbor dredging program to fall placement made available a more reliable and cost-effective method of potentially providing sediment to southern Oceanside beaches, particularly during periods of strong northwest swells or El Niño conditions.

Additional comments offered by one member of the public and by a Committee member questioned the availability of sand for summer beach use. Staff discussed the natural processes at play in Oceanside and how natural process could aid in yielding improved beach conditions during the summer months. During winter, higher-energy wave conditions from northwest swells transport available beach sand into the nearshore environment where sand bars temporarily form. These submerged sand bars act as sediment reservoirs, dissipating wave energy during periods of elevated wave activity. As wave energy decreases in late spring and summer, prevailing lower-energy, longer period waves reverse this sediment transport and gradually move sand landward from the offshore bars back onto the beach. This seasonal onshore migration results in natural beach accretion, widening the beach and restoring beaches without mechanical intervention. With the current spring dredging program, the sand is, instead, transported northward into the channel, which requires mechanical intervention to bring the sand back to the beach.

**CITY ATTORNEY'S ANALYSIS**

Not applicable.

Prepared by: Jayme Timberlake, Coastal Zone Administrator

Submitted by: Jonathan Borrego, City Manager

**ATTACHMENTS:**

1. Staff Report