Agua Hedionda Lagoon Outer Basin Maintenance Dredge and Beach Nourishment

FAQs

1. Why is dredging the Lagoon required?

Maintenance dredging is required to remove a flood-tide shoal in the Agua Hedionda Lagoon - Outer Basin in order to maintain the tidal exchange between the Lagoon and the ocean and provide seawater to support the operation of the Claude "Bud" Lewis Carlsbad Desalination Plant, which provides approximately 10% of the county's water supplies. Similar operations have been performed over the last six decades. Approximately 300,000 cubic yards of sand may be removed from the Lagoon – Outer Basin. In keeping with past operations, the dredged sand will be placed on adjacent beaches: North Beach, Middle Beach and South Beach.

2. Who is responsible for the Lagoon dredging?

Poseidon Resources (Channelside) LP in coordination with NRG are responsible for the Lagoon dredging. Poseidon is the manager of the Claude "Bud" Lewis Carlsbad Desalination Plant. The Desalination Plant uses water from the Lagoon as the source water for the desalination process, producing 50 million-gallons of drinking water each day.

The Lagoon was previously maintained by NRG, owner of the now decommissioned Encina Power Station. The Carlsbad Desalination Plant is located on the same site as the Encina Power Station and utilizes the power plant's intake and outfall facilities for the desalination process. Poseidon has long planned to succeed NRG as the Lagoon's dredging steward.

3. What are some of the uses of Agua Hedionda Lagoon?

The Agua Hedionda Lagoon encompasses over 400 acres of marine, estuarine and wetlands habitat and has long been home to youth recreation activities, including the YMCA Aquatic Park (affectionately known to its patrons as "Camp H2O"), as well as popular activities for visitors of all ages, such as kayaking, swimming, canoeing and paddle boarding. Some of the uses that make up this unique environment include:

Man-Made Marine Estuary – Aqua Hedionda Lagoon is a man-made estuary consisting of 400 acres of inter-tidal wetlands and uplands that are home to a wide variety of fish, invertebrates, animals and birds.

Recreation Beach Areas – The dredged sand will be placed on North, Middle and South Beach encompassing all of Tamarack Beach south to Terra Mar. The lagoon dredging improves the recreational opportunities in this area by replenishing sand on the historically cobblestone beaches.

Claude "Bud" Lewis Carlsbad Desalination Plant – The Carlsbad Desalination Plant produces over 50 million gallons of high-quality and climate-resilient drinking water each day, serving approximately 10% of the region's water demand.

YMCA Aquatic Park – The YMCA Aquatic Park, better known as Camp H2O, is a summer camp geared towards children ages seven to twelve that offers affordable day camp activities including swimming, kayaking, boating and fishing. The camp plays an important role in educating youth about the precious marine environment and the need to preserve the Lagoon for future generations.

Hubbs-SeaWorld Fish Hatchery – Hubbs-SeaWorld Resources Enhancement and Hatchery Program include a 22,000 square-foot fish hatchery on the Lagoon. The Program actively contributes to the restoration of the California white seabass population, adding over 350,000 juveniles annually. Hubbs-SeaWorld has begun to expand its marine restoration activities as a result of additional acreage donated by the Desalination Plant.

Recreational Boating – Boating remains one of the most popular Lagoon activities for residents and visitors alike. California Water Sports offers expert lessons and rents a variety of boats, including kayaks, canoes and paddleboards to the public.

Carlsbad Aquafarm – The Lagoon is home to the Carlsbad Aquafarm, Southern California's only shellfish aquafarm, where over 1.5 million pounds of shellfish are sustainably harvested each year. The farm is a growing contributor to the $1.5 billion U.S. aquafarming industry and the San Diego region's local economy.

Agua Hedionda Lagoon Foundation Discovery Center – Opened in 2006, the Discovery Center offers visitors an opportunity to learn about the Lagoon's native plants and marine life through exhibits and educational programs and hosts more than 8,700 local students each year.

4. When will the dredging project occur?

Dredging operations will be conducted between October 2020 and April 2021 and will last six months. It is anticipated that all work will be conducted during daylight hours and between Monday and Friday. If the schedule is delayed by storm activity, work may be conducted during daylight hours on Saturdays with appropriate authorization. No activities are anticipated during evening hours or on Sundays.

5. What equipment is used during the dredging operations?

Dredging of the Agua Hedionda Lagoon - Outer Basin will be performed using a dredging hull barge. During operations, the dredge hull would be stabilized by wire cables that are secured to existing anchors on the shore of the Lagoon. The dredged material (slurry) will be pumped to each of the receiver beaches (North, Middle and South Beaches) through a 20-inch diameter pipeline. A floating section of pipe will convey the slurry from the dredge to the Lagoon shoreline, where it will connect with a land-based pipeline that will deliver the material to the receiver beach.

6. Will public beach access be affected during the dredging?

The shoreline will remain open to public access during sand nourishment operations. Designated access ways, over or around obstructions, will be provided. Access for public safety vehicles also will be maintained. Sand will be delivered in a pipe that is placed on the beach. Signs, fencing and monitors will be located in active work area to prevent foot traffic in the immediate work area. The beach access areas will be left in a safe condition at the end of each workday.

7. Will the height of the beach nourishment block my view?

The beach will gradually rise approximately six feet from the shoreline to the seawall along Carlsbad Boulevard and will be groomed and flattened to provide towel space. The sand will be placed in such a manner that the beach profile slopes gradually to the surf zone. There will be no view obstruction.

8. Will the beach nourishment on North Beach impact surfing?

Sand profiles on the local beaches are constantly changing. Since 2018, 295,274 cubic yards of sand has eroded from the Carlsbad beaches. The sand from the dredging operation will be placed on the beaches to restore the beach profiles that were in place in 2018 and is not expected to adversely impact North Beach surfing.

9. Will the sand dredged from the Lagoon's Outer Basin and placed on North Beach be re-ingested back into the Lagoon's inlet?

Since the 2018 dredge/beach nourishment, approximately 295,000 cubic yards have eroded from the Carlsbad beaches. The eroded sand drifts south, with most sand ended up at beaches located south of Carlsbad.

10. Why is so much sand being placed on North Beach?

Target sand placement quantities for North, Middle, and South Beach were developed based on current beach profiles to maintain recreational beach widths while avoiding impact to the sensitive hard bottom habitat. No sand was placed on North Beach in last dredge/beach nourishment conducted in 2018. The beach profile survey conducted in May 2020 indicated significant erosion of the sand has occurred on the North Beach. North Beach tends to have most recreational use due to the access to parking at the Tamarack Beach lot.

11. Will there be any impact on marine habitat from the beach nourishment?

Optimal sand placement volumes are based on re-establishing sand that has been eroded from the beaches since the 2018 maintenance dredging, and maximizing recreational beach widths in proportion to use, while avoiding impact to sensitive hard bottom habitat.

12. Will the dredged sand have any odor or discoloration?

Dredge sediments are derived principally from deeper layers of the lagoon bottom where sediments are not exposed to oxygen. This black color and the "rotten egg" odor develops as a result from the presence of sulfides, such as metal sulfides and hydrogen sulfide that are produced under reductive conditions. When sediments are exposed to oxygen and light, they quickly bleach to normal sand color and the odor quickly dissipates within a few days. Because the level of color and odor is exacerbated by the amount of organic material in the sediment, the color of relatively low organic sediment from sand that accumulates in the outer lagoon is generally gray not black and the odor is generally lightly sulfidic rather than having a strong smell.

13. Contact Information

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