

**State of California
California Regional Water Quality Control Board
Santa Ana Region**

June 3, 2022

STAFF REPORT

ITEM: 11

SUBJECT: Status of the *Caulerpa Prolifera* Eradication Project in Newport Bay

DISCUSSION:

The coastal waters of the Santa Ana Regional Water Quality Control Board (Santa Ana Water Board) are currently being impacted by the non-native invasive alga *Caulerpa prolifera*. In March 2021, this alga was confirmed growing in the China Cove area of Newport Bay, which is located at the north end of the Newport Bay entrance channel. Resource and regulatory agencies were especially concerned about this location because it is very dynamic with strong tides and swells and sediment movement, thus increasing the chances of the invasive alga being transported to other areas of the bay.

Allowing any species of *Caulerpa* to become established and spread within California coastal areas and embayments is likely to result in considerable economic, recreational, and biological impacts as it has in other locations around the world, e.g., the Suez Canal and Bitter Lakes Region in Egypt, the Canary Islands of Spain, and Portugal. The Santa Ana Water Board is concerned because of the tendency for the *Caulerpa* species to overtake native plant species, resulting in poor habitat quality and less nutritious food for native fish, which ultimately impacts commercial and recreational fishing. In the early 2000s, the seriousness and acknowledged threat from *Caulerpa prolifera*'s close relative, *Caulerpa taxifolia*, prompted an effective, highly successful eradication project in two southern California locations over a period of eight years at a cost of over seven million dollars. This quick action and investment protected local resources and led to the recovery of critically important eelgrass habitat and protected California's coastal ecosystems.

The Santa Ana Water Board and other state and federal agencies were notified in April 2021 of a *Caulerpa prolifera* infestation in China Cove. The Southern California Caulerpa Action Team (SCCAT), which was established in the early 2000s to eradicate the *Caulerpa taxifolia* infestations in Agua Hedionda Lagoon (San Diego Region) and Huntington Harbour (Santa Ana Region), was quickly reconvened to address this latest new invasion of a *Caulerpa* species. The SCCAT includes staff from the Santa Ana Water Board, California Department of Fish and Wildlife (CDFW) Marine Division, the

California Coastal Commission (CCC), U.S. Fish and Wildlife Service (USFWS), National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries), and the U.S. Army Corps of Engineers (USACOE), with staff from the City of Newport Beach and Orange County Coastkeeper (OCCK) also participating. Santa Ana Water Board staff and CDFW staff co-chair the SCCAT.

Funded primarily by the State's Cleanup and Abatement Account, operations to remove the main biomass of the China Cove *Caulerpa prolifera* infestation were carried out in July 2021. Though the biomass has been reduced by nearly 100 percent by the removal effort, due to the potential for regrowth of *Caulerpa*, it is also necessary to reach a point of complete eradication of all material, irrespective of biomass. Therefore, removal efforts continue to this day as regrowth of *Caulerpa* has occurred due to periodic burial and uncovering of fragments of *Caulerpa* by shifting sand. Considerable time is needed for individual divers to survey areas multiple times to ensure that all *Caulerpa prolifera* regrowth has been removed. Three concurrent diver surveys with zero finds of *Caulerpa* must be made before Phase 1 of the eradication effort (China Cove removal) can be considered complete. Phase 2, which will be funded separately, requires two to three years of quarterly follow-up dive surveys to ensure that no regrowth occurs, and that complete eradication of this infestation can be confirmed.

RECOMMENDATION:

This is an information item, and no action is required by the Board.