FISHERIES ENHANCEMENT PROGRAM

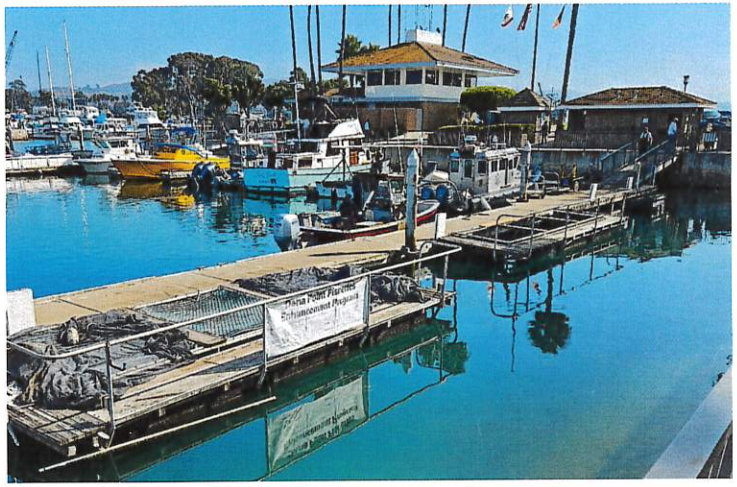
Dana Point Harbor Oversight Committee Meeting

March 5, 2025

Dana Point Fisheries Enhancement Program (DPFEP)

The Dana Point Fisheries Enhancement Program (DPFEP) is a volunteer-run program that helps the state's fish hatchery in Carlsbad restock white seabass populations.

- The DPFEP operates a fish grow-out pen on the Harbor Master's dock in Dana Point Harbor.
- The DPFEP has released thousands of juvenile white seabass into the wild.
- The DPFEP was formed with help from the Dana Angling Club, which promotes conservation and catch and release practices.



Hierarchy

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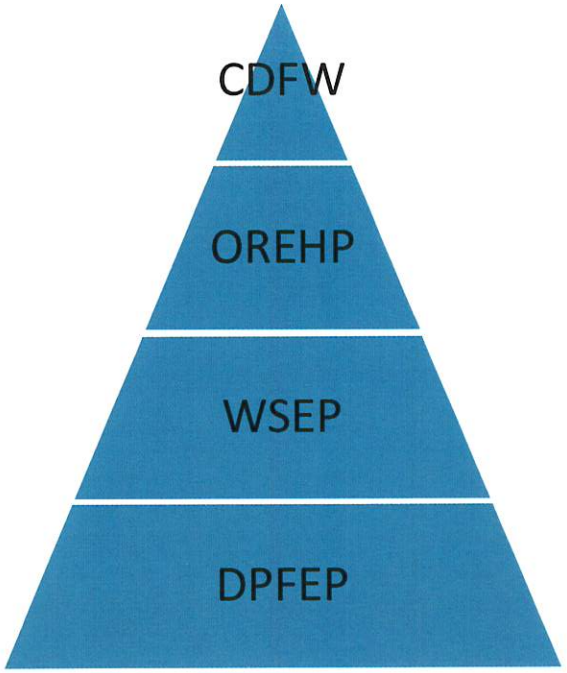
- California Department of Fish & Wildlife - manages the OREHP with help from an advisory panel.
- The Ocean Resources Enhancement and Hatchery Program (OREHP) is a hatchery program using cultured marine finfish to successfully enhance wild fish populations.
- The White Seabass Enhancement Plan (WSEP) provides a framework for managing the Ocean Resources Enhancement and Hatchery Program (OREHP) in an environmentally sustainable manner.
- The Dana Point Fisheries Enhancement Program (DPFEP) …



Overview

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In 1995, the Ocean Resources Enhancement and Hatchery Program (OREHP) completed construction of the Leon Raymond Hubbard, Jr. Marine Fish Hatchery in Carlsbad, California. The hatchery is designed to produce more than 350,000 juvenile white seabass annually. It has seven separate systems: larval food production, broodstock, egg incubation, juvenile 1, juvenile 2, raceway culture, and experimental

Broodstock

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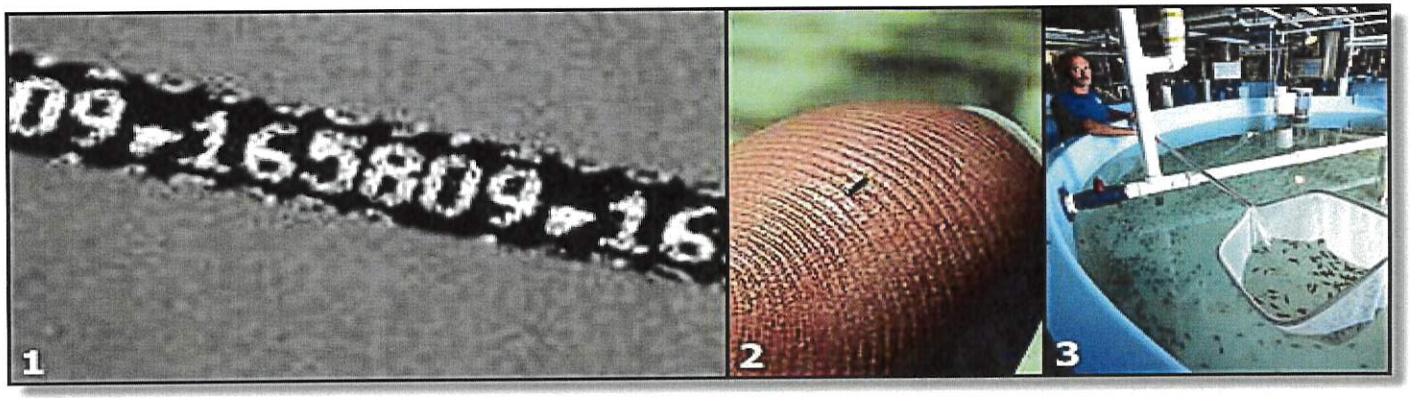
- Five broodstock tanks hold fish collected from the wild under controlled environmental conditions to induce spawning.
- The water temperature and photoperiod are manipulated to simulate springtime conditions, which stimulates the broodstock to reproduce.
- Before being introduced into the existing adult population, the sex of each new brood fish is determined, a tissue sample is taken for genetic analysis, a health examination is performed, and an identification tag is inserted in the dorsal musculature.



Larval Rearing & Post-Larval Culture

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- The larval rearing area houses fish up to 2 inches long that were hatched from the fertilized eggs collected from the broodstock tanks during spawning events.
- At about 12 days post-hatch, the fish are moved into the Juvenile 1 system, where they are weaned off of live Artemia feed onto a dry pelleted feed.
- Once the fish are completely weaned, they are transferred into the Juvenile 2 system where they remain until they are large enough (4 inches long) to be transported to one of the grow-out facilities.
- Each fish is tagged with a small, coded-wire tag (1 millimeter long) in the cheek muscle prior to transfer to the grow-out facilities.

Growout Facilities

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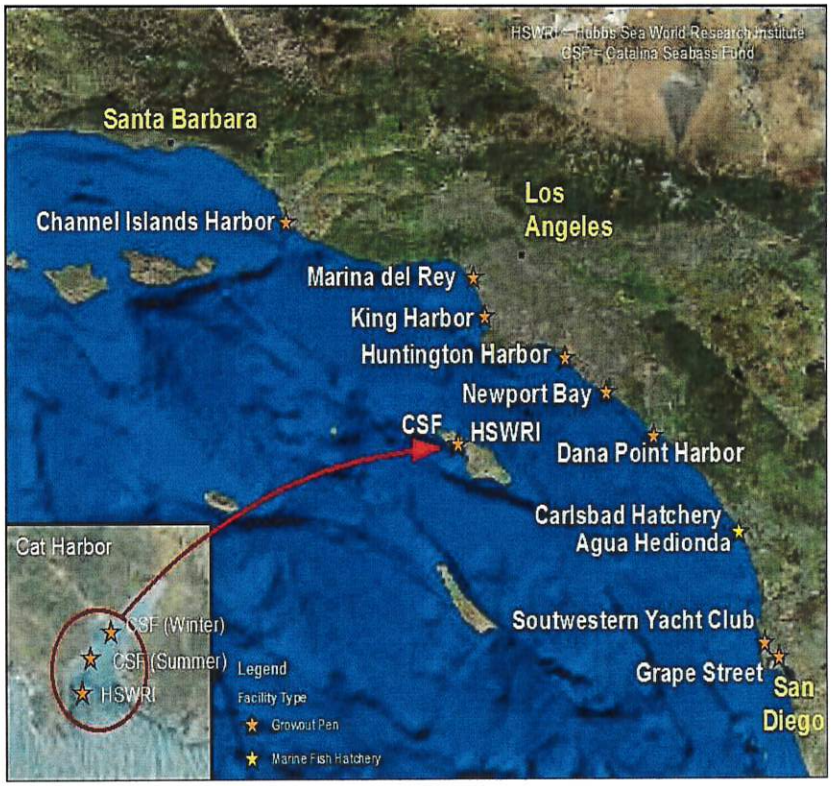
- 13 facilities are currently in operation from San Diego to Santa Barbara, including two pens at Catalina Island, and **Dana Point**.
- Designed, constructed, and operated by volunteers associated with angler groups and non-profit organizations.
- Fish are transferred to these facilities at about 3 to 4 months of age and remain there until they are large enough and are cleared by the CDFW fish pathologist for release.



Dana Point Facility

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- Since 1995 this facility has successfully released 378,318 White Sea Bass.
- OREHP Program as whole has released over 2.5 million

Predators & Current Location

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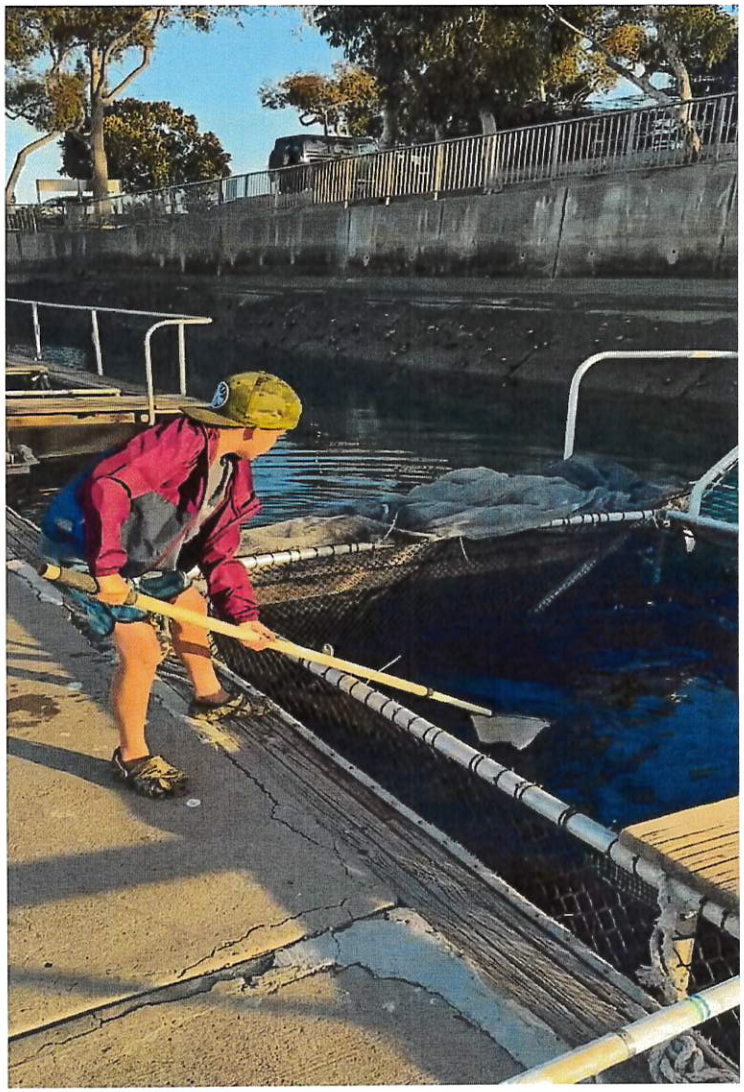
- In 30 years we have experienced no issues with Sea Lions
  - There is a heavy plastic predator guard below the water line installed by a bait barge manufacturer.
  - There is a chain link lid above the water line
- Birds are a larger concern
  - Additional barriers to close any gaps above the water line

Predators Continued...

- California Sea Lions are proven to be opportunistic predators that primarily hunt in the open ocean at night for anchovies & sardines.
- During the daytime they often return to haul out sites- such as rocks, beaches, and harbor docks to rest, digest food, regulate body temperature, and socialize.

March 4th, 2025 Release



Potential For Growth & Additional Species

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- Halibut is the next species the program will be focusing on potentially within the next 6 months.

Preference #1

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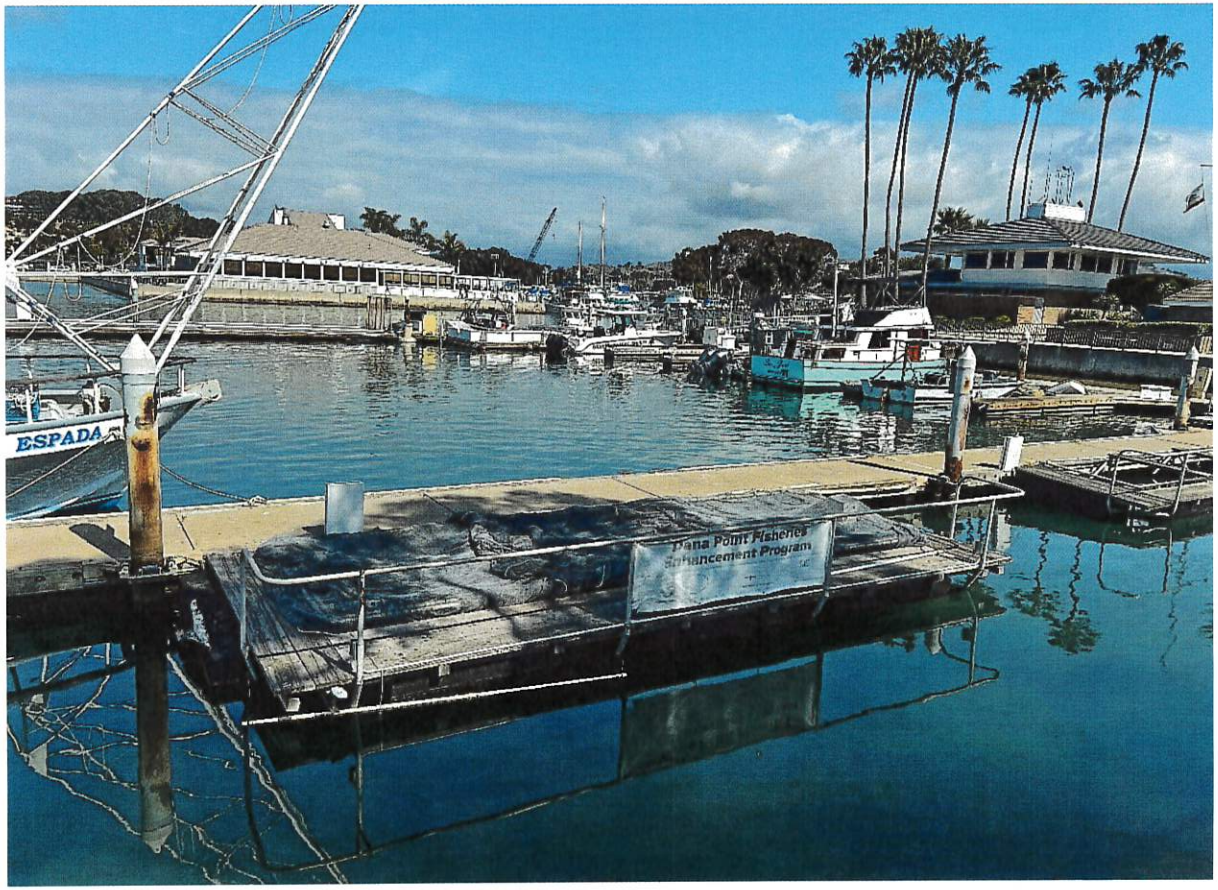
- Remain in current location



Preference #1 Continued..

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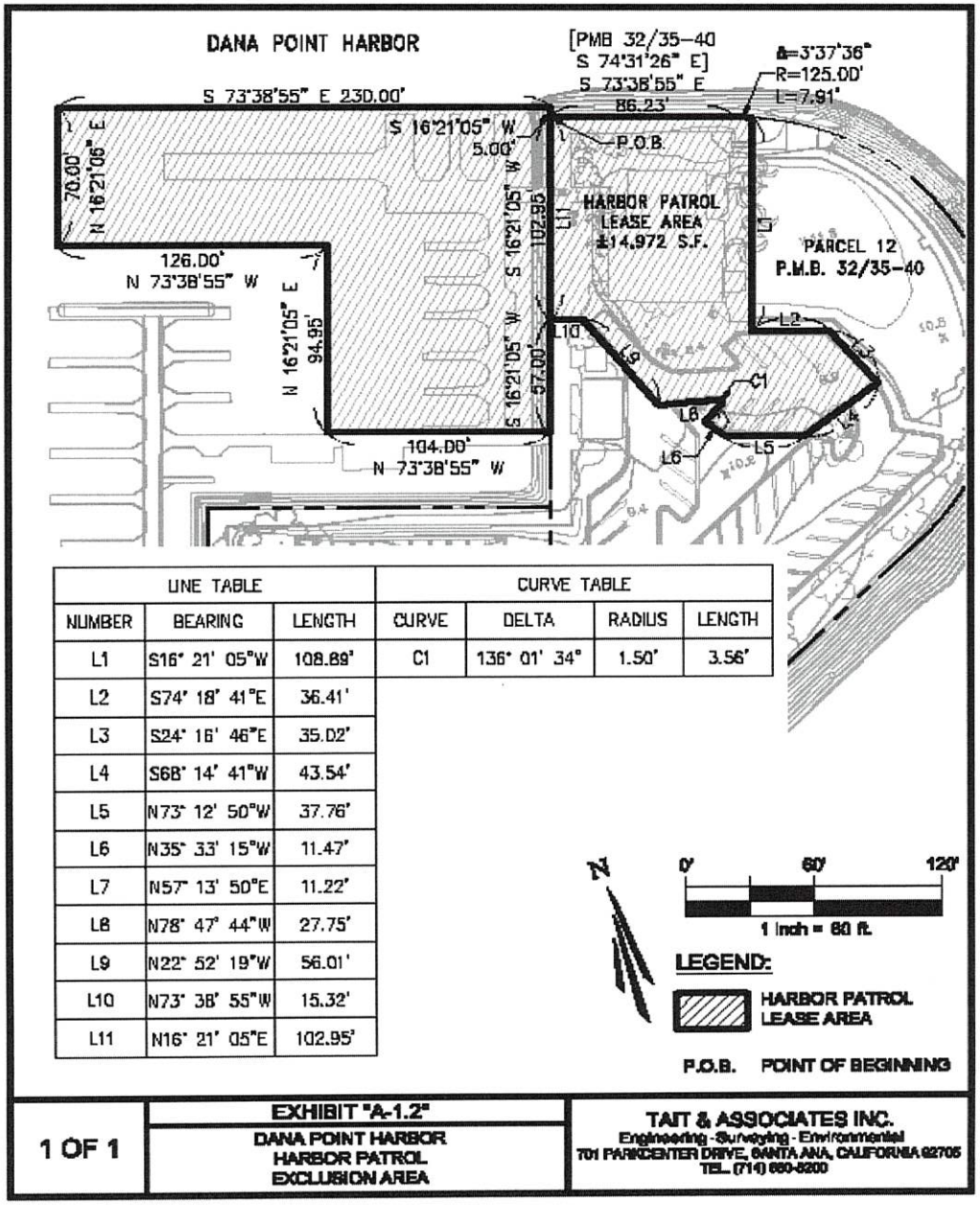
Preference #1 Continued…



LINE TABLE		
NUMBER	BEARING	LENGTH
L1	S16° 21' 05"W	108.89'
L2	S74° 18' 41"E	36.41'
L3	S24° 16' 46"E	35.02'
L4	S68° 14' 41"W	43.54'
L5	N73° 12' 50"W	37.76'
L6	N35° 33' 15"W	11.47'
L7	N57° 13' 50"E	11.22'
L8	N78° 47' 44"W	27.75'
L9	N22° 52' 19"W	56.01'
L10	N73° 38' 55"W	15.32'
L11	N16° 21' 05"E	102.95'

CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C1	136° 01' 34"	1.50'	3.56'

1 OF 1	EXHIBIT "A-1.2" DANA POINT HARBOR HARBOR PATROL EXCLUSION AREA	TAIT & ASSOCIATES INC. Engineering - Surveying - Environmental 701 PARKCENTER DRIVE, SANTA ANA, CALIFORNIA 92705 TEL. (714) 560-8200

Preference #2

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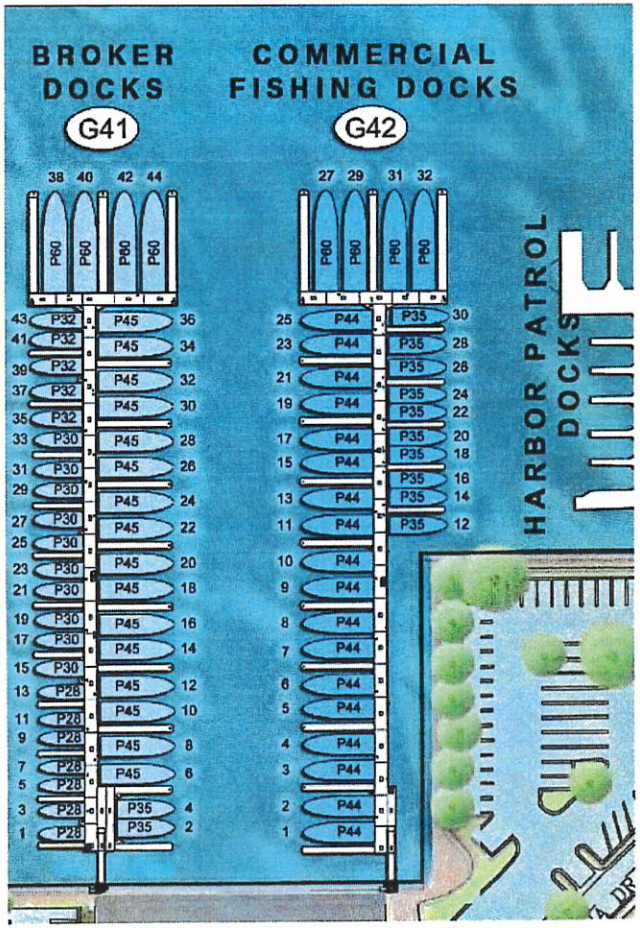
- Near Seawall on G42



Location Possibilities Continued…

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Preference #3

- Slip

Preference #4

- Ocean Institute