

SPRING 2025

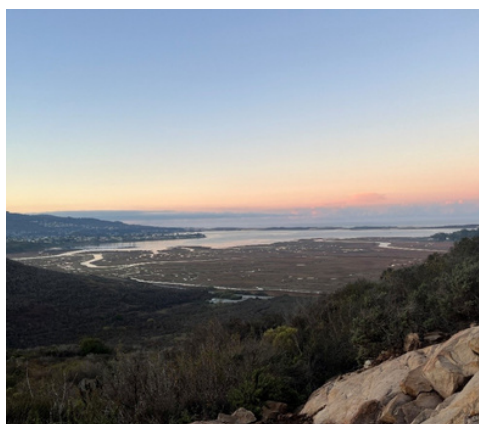
VOL. 3, ISSUE 2

BETWEEN THE Tides

FEATURED



**MONITORING: MORRO BAY
FISH POPULATION SHIFTS
WITH EELGRASS RECOVERY**



**RESTORATION: HABITAT
PROTECTION AND RESTORATION
STRATEGY FINALIZED**



**MUTTS FOR THE BAY
CORNER**



MORRO BAY
NATIONAL ESTUARY PROGRAM

LETTER FROM THE DIRECTOR

SCIENCE, STEWARDSHIP, AND STAYING THE COURSE

As the days grow longer and Morro Bay enters its most vibrant season, we're reminded of the energy, resilience, and beauty that make this estuary so special. From birds nesting along the shoreline to fish navigating the changing tides, summer brings life to every corner of our watershed.

This year is especially meaningful for us – 2025 marks 30 years since Morro Bay was designated as part of the National Estuary Program. It's a milestone that reflects decades of steady, science-based stewardship and collaboration. We've grown alongside our community by building long-term monitoring programs, restoring essential habitats, and deepening partnerships to protect the health of the bay.

While there are always challenges – from shifting environmental conditions to evolving policy landscapes – we remain focused on what matters most: the health of the estuary.



We know this estuary. We've walked its creeks, sampled its waters, and listened to the people who call this place home. That deep, place-based knowledge fuels everything we do. Our science continues, our restoration work moves forward, and our team remains focused on protecting and restoring the health of Morro Bay.

In this issue, you'll read about how fish populations are responding to eelgrass recovery, a reflection of the powerful link between science and action. We also highlight the completion of our Habitat Protection and Restoration Strategy, which will help guide restoration efforts in the years ahead. And we celebrate the ongoing success of Mutts for the Bay, a community-driven program that blends outreach, education, and water quality protection.

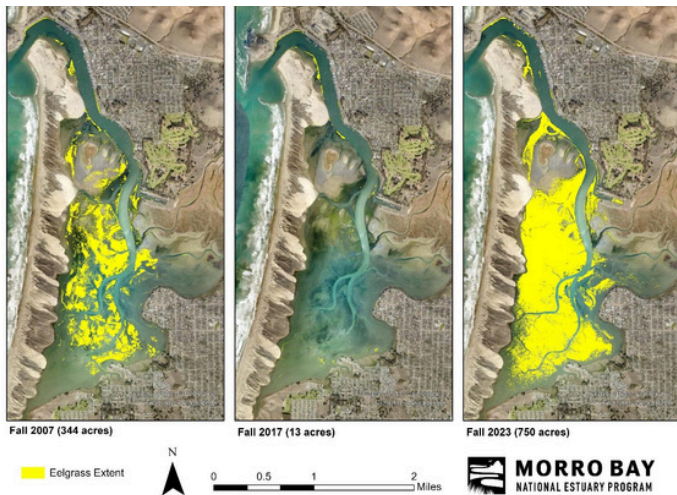
Each of these stories is a piece of the bigger picture – one that you are a part of. As we mark this 30-year milestone, we remain deeply committed to collaboration, resilience, and care for the estuary. Thank you for standing with us – for the past three decades, and for the future we are creating together.

-Melodie Grubbs, Executive Director

MORRO BAY FISH POPULATION SHIFTS WITH EELGRASS RECOVERY



Morro Bay's eelgrass beds have experienced many ups and downs in the last 20 years, with a low of 13 acres in 2017 and a high of 750 acres in 2023. We wanted to learn more about how Morro Bay's fish population was shifting in response to these changes in eelgrass.



Morro Bay experienced a significant loss of eelgrass (represented in yellow) between 2007 and 2017, dropping from 344 acres to 17 acres. Eelgrass acreage has since rebounded, with the most recent map indicating 750 acres.

In the mid-2000s, Dr. John Stephens of Occidental College conducted fish monitoring in Morro Bay at a time when about 340 acres of eelgrass were present. In 2016, when there were only about 13 acres of eelgrass in the bay, Dr. Jennifer O'Leary of Cal Poly and NOAA Sea Grant repeated Stephens' work using many of the same monitoring sites and methods. The data showed that fish communities had changed with the significant loss of eelgrass. Habitat generalist species like flatfish became more common, while eelgrass-dependent species like bay pipefish had declined.



Various netting and trawling methods were used to capture fish in habitats throughout the bay. The fish, like this surf perch, were identified, counted, and measured before being returned unharmed to the bay.

We decided to conduct bay fish monitoring using similar methods to see what fish populations looked like during a time of abundant eelgrass. We collected fish data in fall of 2023 and spring of 2024. A total of 8,317 fish from 24 different taxa were collected. Bay pipefish was the most abundant species, accounting for 40% of the total catch, followed by arrow goby at 20%, and shiner perch at 10%.



During times of plentiful eelgrass such as the 2023-2024 survey, bay pipefish were the most abundant species. This green slender fish is uniquely adapted for life in eelgrass beds.

Eelgrass plays a vital role in maintaining a healthy estuary, providing food and shelter for a diverse range of species. When eelgrass thrives, so do a variety of fish species, especially those that are uniquely adapted to life in seagrass beds. The Estuary Program will continue to map and monitor eelgrass in the bay to support sensitive habitats and aquatic life in Morro Bay's diverse estuary.

HABITAT PROTECTION AND RESTORATION STRATEGY FINALIZED



This past winter, our staff finalized the Estuary Program's Habitat Protection and Restoration Strategy (HPRS) for the Morro Bay watershed. The HPRS provides a comprehensive, watershed-wide management approach to the health and resilience of the habitats of our watershed. It was developed to guide protection, restoration, research, monitoring, education, and resiliency efforts. It provides measurable objectives and targets to inform future management planning and projects within the Morro Bay watershed, including the Estuary Program's next Comprehensive Conservation & Management Plan (CCMP) update.



Morro Bay watershed is composed of five main habitat areas: estuarine, freshwater, sandy shores, upland, and urban & agricultural.

The HPRS describes the health, extent, and key species within five of Morro Bay watershed's habitat areas: estuarine, freshwater, sandy shores, upland, and urban & agriculture. There are descriptions of different habitat types within each habitat area, such as coastal dunes within sandy shores, or maritime chapparal with upland. These habitat types were based on previous studies like the *Atlas of Sensitive Species of the Morro Bay Area* (Sims 2010). The habitat strategy includes mapping analysis based on existing vegetation data of Morro Bay watershed habitats. This will allow us to track acreage of different habitat types over time as new habitat data becomes available.



The HPRS will help guide future efforts by the Estuary Program and partners to increase the resilience of sensitive habitats like coastal dunes.

The strategy also connects the habitats to the following: the 2022 CCMP Action Plans, 2021 Climate Vulnerability Assessment, anthropogenic stressors, management objectives/targets, climate resiliency, and ongoing, past, and future projects. With our partners, we aim to improve climate resiliency for the Morro Bay watershed habitats and interconnected coastal communities through the implementation of this strategy. For more information, you can visit our webpage associated with the strategy: mbnep.org/habitat-protection-restoration-strategy/



Mutts for the Bay Corner

The Estuary Program's Mutts for the Bay program is a collaborative partnership that focuses on protecting our bay waters by educating pet owners on the importance of keeping pet waste out of our natural waterways. The program manages donations to purchase pet waste bags, coordinates volunteers to keep our network of 36 dispensers stocked with around 300,000 bags each year, and creates curriculum and educational content to help people become eco-friendly dog owners. The effort is funded by donations from community members and sponsorships from local businesses and service organizations.

The program is also supported by a generous grant from the Harold J. Miossi Charitable Trust, which has given over \$100,000 to the program since 2019. This funding has helped us keep our dispensers stocked and also allowed us to develop and print our Mutts for the Bay kid's activity book. We also created several new educational brochures on eco-friendly dog ownership. These items and more are distributed at local tabling events and in our Nature Center, increasing public knowledge and awareness of the importance of cleaning up after your dog.

The Miossi Trust also funds Estuary Program monitoring efforts, providing over \$140,000 since 2013 to support bioassessment monitoring in the watershed. This valuable monitoring method allows us to track watershed health over time.



Funds from the Miossi Charitable Trust allow us to purchase and give away items such as our Mutts activity book, dog bag leash dispensers, educational brochures, and treats!

The Trust has donated over \$16 million to support many local nonprofits and organizations. To learn more about the Miossi Trust or to apply for a grant, visit www.miossicharitabletrust.org.

The Mutts program is also partially funded by individuals, businesses, and organizations that sponsor dispensers. Each year our sponsors donate a combined total of nearly \$14,000 to help keep this important program running. If you're interested in being a sponsor, you can contact us directly at outreach.support@mbnep.org or visit MBNEP.org/mutts-for-the-bay.



Funds from the Miossi Charitable Trust help keep our dog bag dispensers stocked and our local waterways clean and healthy.

Blog Recap

In case you missed them the first time around, here are highlights from our most popular blogs of this spring.



A NEW WAY TO EXPLORE ESTUARY PROGRAM CONSERVATION EFFORTS

MARCH 7, 2025

Read this blog to discover how the Morro Bay National Estuary Program is transforming the Comprehensive Conservation and Management Plan into meaningful action.



FIELD UPDATES: FISH RESPONSE TO EELGRASS RECOVERY IN MORRO BAY

MARCH 14, 2025

Check out the March Field Updates blog to read the Estuary Program's recent study to learn how fish communities have been affected by changes in eelgrass over time.



NEP HIGHLIGHT SERIES: DELAWARE CENTER FOR THE INLAND BAYS

APRIL 11, 2025

This blog is part of a series to introduce our community to the work of other National Estuary Programs throughout the country. Read up to find out more about the Delaware Center for the Inland Bays!



CONTINUED EFFORTS TO SUPPORT CHORRO CREEK STEELHEAD

APRIL 18, 2025

Interested in learning more about our restoration projects? This blog is all about the monitoring and restoration efforts of the Estuary Program and our partners to protect steelhead in the watershed.

Upcoming Events

Join us! Learn more at MBNEP.org/events and register for limited-capacity events at MBNEP.Eventbrite.com.

Stay tuned for more events in the upcoming months!



MAY EVENTS

May 23rd:

CCSPA Film Night, 5 to 6 PM

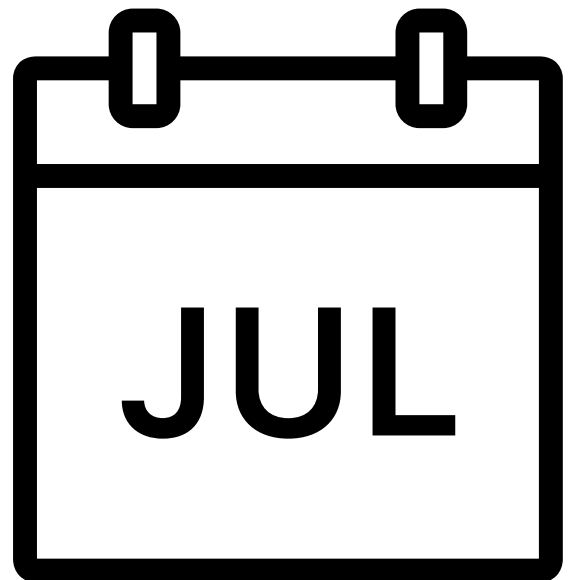
May 31st:

Marine Mammal Center 50th anniversary
at Oceanpoint Ranch, 11 AM to 3 PM

JULY EVENTS

July 5th:

Annual 4th of July beach cleanup,
10 AM to 12 PM



[MBNEP.ORG/EVENTS](https://MBNEP.org/events)

[MBNEP.EVENTBRITE.COM](https://MBNEP.Eventbrite.com)