

SUMMER 2024

VOL. 2, ISSUE 3



BETWEEN THE Tides

FEATURED



**MONITORING STORY: MORRO
BAY EELGRASS ABOUNDS**



**RESTORATION PARTNER
HIGHLIGHT: CUESTA COLLEGE
RANCH EDUCATION PROGRAM**



**MUTTS FOR THE BAY:
SUMMER TIPS**



MORRO BAY
NATIONAL ESTUARY PROGRAM

SUMMER LETTER FROM THE DIRECTOR

Spring and summer have been busy at the Estuary Program! Our team has been hard at work monitoring our creeks and bay, planning and implementing habitat restoration projects, coordinating community engagement events, and educating youth in various summer programming.

Our Monitoring team spent countless hours trekking through creeks in the watershed to collect bugs for bioassessment monitoring. Different bug species and the quantity of these species help us understand the health of our creeks and trends over time. Understanding our ecosystems through monitoring and research helps us develop projects that restore function and create healthier and more sustainable environments for humans and wildlife.



As a small, local-based, environmental program it is very important to work together with our partners and communities to develop projects to increase sustainability. Our Restoration Team has several ongoing planning efforts addressing steelhead fish passage barriers on San Luisito Creek, stormwater improvements at Camp SLO, and invasive vegetation along Chorro Creek. These are just a few of the ongoing efforts aimed at restoring and conserving our estuary and watershed for generations to come.

We have hosted and attended several events this year including our ongoing Science on Tap series, tabling at the Downtown SLO Farmers Market, and three cleanups at Morro Rock. Our Education and Outreach team completed a successful round of three teacher training workshops this spring in partnership with CA State Parks and Cal Poly. These workshops empower teachers to bring watershed and climate science into their classrooms and learn how to use our beautiful estuary and watershed as a real-world laboratory for learning.

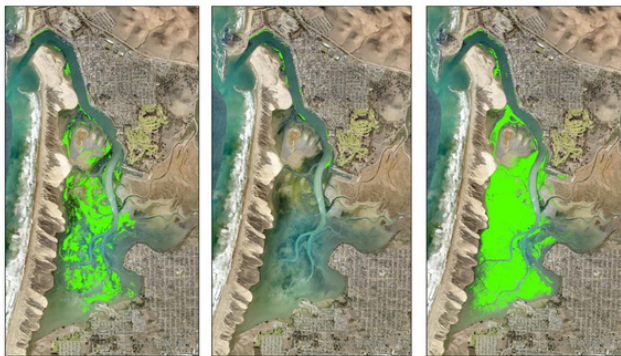
On Saturday, August 17th, we will be hosting a Science Explorations event in Los Osos. Our team will be sharing some of our ongoing work focused on eelgrass monitoring and habitats in the bay. We hope that you will come join us! More information can be found on our website at www.mbnep.org or [MBNEP.Eventbrite.org](https://www.eventbrite.org).

-Melodie Grubbs, Executive Director

MORRO BAY EELGRASS ABOUND



Eelgrass is a flowering plant that can be found throughout Morro Bay. It provides habitat for marine life, helps stabilize the bay bottom, and improves water quality. As it serves so many important functions in the bay, the Estuary Program has monitored and mapped eelgrass for over two decades. For those following the fate of eelgrass in Morro Bay, there have been a number of dramatic changes in recent years. The bay experienced a steep decline in eelgrass acreage from 2010 to 2017, with over 90% loss. Eelgrass has since rebounded to an amazing extent, as demonstrated by a map of 2023 acreage that was recently completed.



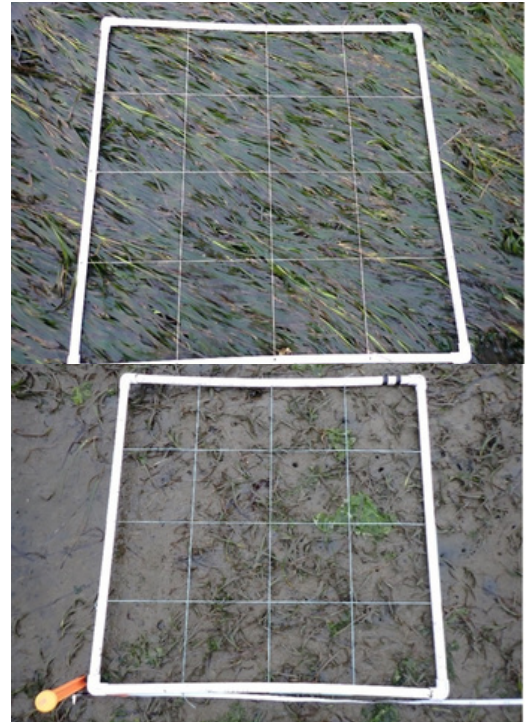
2007 (344 acres)

2017 (13 acres)

2023 (750 acres)

In 2007, the Estuary Program's mapping effort indicated that the bay supported 344 acres of eelgrass. Over the next decade, eelgrass declined to only 13 acres. Since 2017, eelgrass acreage has been steadily increasing. A map created with sonar and drone data collected in spring of 2023 indicated 750 acres of eelgrass in Morro Bay.

While this eelgrass recovery is welcome news, it's important to understand the method by which eelgrass extent was measured. For the 2023 survey, eelgrass that is part of a dense bed and eelgrass that is present in patches are both represented as green on the map. Although the map appears to imply that much of the mid and back bay are covered by dense beds of eelgrass, the reality is that much of the eelgrass throughout the area is sparse and patchy.



The photo on the top illustrates a dense eelgrass bed, whereas the image on the right shows sparse patchy eelgrass. These two levels of eelgrass coverage are represented on the map by the same green color. Thus, the bright green areas on the map do not necessarily indicate solid, continuous eelgrass coverage.

The resurgence in eelgrass is thought to be due to a number of factors, including shifts in bay water quality and changes in elevation of the bay floor. Restoration efforts by the Estuary Program and our partners also likely supported the recovery.

The rapid shifts in eelgrass acreage over such a short period of time only reinforces the need for regular monitoring and mapping of eelgrass. The Estuary Program plans to continue its monitoring efforts into the future to help understand and support this valuable habitat type.



The Estuary Program and our partners will continue and efforts to assess the health and extent of eelgrass in Morro Bay.

RESTORATION PARTNER HIGHLIGHT: CUESTA COLLEGE RANCH EDUCATION PROGRAM

The Morro Bay estuary and the lands that surround it host a wide variety of habitats that require active management to protect and restore. Grasslands within the watershed are dominated by invasive species like brome grasses, thistles, and mustard that threaten native plant biodiversity and increase wildfire risk. Livestock grazing is an effective tool to reduce invasive species cover and fire fuel loads while improving native species habitat. Grazing can also improve soil health by adding organic matter via manure.

This past fall, we provided funding for water infrastructure to help support the establishment of Cuesta College's Ranch Education Program on their 75-acre grassland property. The funding came from the federal Bipartisan Infrastructure Law. The Cuesta program has two main goals: 1) regenerative, holistic, and sustainable farming workforce development, and 2) weed management via livestock grazing. Each semester, around thirty program participants will be trained in fundamental agricultural skills including land use grazing. Program participants maintain and monitor grazing pastures through fence and water system installation, animal husbandry, and site surveys. Measurements of soil and vegetation occur before and after grazing to track weed management success and soil health improvements.



Each active grazing site is enclosed using fencing installed by staff and program participants

This past June, we held a community restoration day to help prepare the site for the next round of cattle grazing. A small but mighty team of volunteers and staff installed over 5,400 linear feet of fencing on 35 acres. We are excited to support the training of future land stewards and the improvement of grassland habitat's health and fire resilience.



Grazers like cattle can help reduce invasive species, increase wildfire resilience, and improve soil health on grassland habitats.

Currently the site has two active pastures grazed by cattle on loan from the Cal Poly Animal Science Department to target grass species preferred by cows. The program will incorporate three additional pastures for goats and sheep in the future to target grasses, woody plants, and forbs (broad-leaved, non-woody plants). As the landscape changes with grazing, the pasture size and type of grazers will be adjusted based on habitat needs.



Water stations for grazers are placed on active pastures and fed water via pipes connected to two 5,000-gallon tanks.



Mutts for the Bay Corner



SUMMER TIPS FOR YOU AND YOUR PUP

Summer is in full swing on the Central Coast, and the temperatures will stay warm into the fall season. Here are some tips to keep your pup comfortable and cool during hot days at home and while out and about in the community:

- Have fresh water available while at home and bring some for your pup when you go on walks, venture out to the beach or trails, or head out in the car.
- Keep your window blinds closed to keep your house cool (and reduce your energy bill if you have air conditioning running!)
- Provide shade in outdoor areas so your dog has access to cooler areas out of the sun.
- When bringing your dog out on trails or the beach, avoid the peak heat of the day.
- Hot pavement can hurt your dog's paws. Test pavement temperature with your hand and if it is too hot for you, it's likely too hot for your dog's paws.
- Put slightly damp towels in the fridge or freezer and lay them out on the ground for your dog when they are panting heavily.
- Freeze plain Greek yogurt, broth, or dog-friendly fruits to give your pup a cold treat.



MUTTS FOR THE BAY

Blog Recap

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



APRIL 2024 FIELD UPDATES: STEELHEAD MOVEMENT IN CHORRO CREEK

May 10, 2024

Check out this blog recapping April's field efforts. Our field monitoring team explains our project to track and collect data on steelhead trout in Chorro Creek.



MUTTS FOR THE BAY: FOXTAILS, PET SAFETY, AND WATERSHED HEALTH

June 21, 2024

This blog explores foxtails, a common weed that are dangerous for pets. Learn how to identify them and keep your pet safe.



CAN ARTIFICIAL INTELLIGENCE HELP SAVE EELGRASS FROM WASTING DISEASE?

May 31, 2024

Catch up on some new and exciting progress incorporating Artificial Intelligence into research to understand the impacts of wasting disease on Morro Bay's eelgrass.



CALIFORNIA INVASIVE SPECIES ACTION WEEK

June 7, 2024

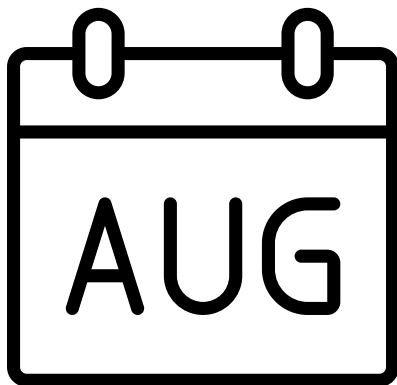
The first week of June was California Invasive Species Action Week. Dive into this blog to learn about local invasive species, their impacts on local habitats, and what the Estuary Program has been doing to take action.

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!

AUGUST EVENTS



August 1st: Los Osos Library

Storytime, 10-11 a.m.

August 6th: SLO Library Storytime,
10-11 a.m.

August 17th: Science Explorations,
Los Osos Schoolhouse, 1-3 p.m.

SEPTEMBER EVENTS

Sept. 19th: SLO Farmer's Market,
6-9 p.m.

Sept. 21st: ECOSLO Creeks to
Coast Cleanup at Morro Rock.



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

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