



MORRO BAY

NATIONAL ESTUARY PROGRAM

FOR IMMEDIATE RELEASE

Contact: Riley Hine, Community Engagement
Coordinator

Phone: (805) 772-3834, Ext. 13

Email: rhine@mbnep.org

Federal Infrastructure Funding Supports Morro Bay Estuary Monitoring Efforts

The Morro Bay National Estuary Program (Estuary Program) is a nonprofit dedicated to protecting and restoring Morro Bay for people and wildlife. The program was excited to receive just over \$900,000 a year for the next five years from the federal Bipartisan Infrastructure Law (BIL) to support its work in the bay and the lands that surround it. The program will utilize the funding to support restoration, monitoring, and education projects that benefit Morro Bay's residents, visitors, wildlife, and habitats.

One such effort involves a partnership with Cal Poly researchers to study water quality in the bay. The Estuary Program used BIL monies to purchase sensors that continuously track water quality conditions at the bay mouth and in the back bay near the oyster farms. Cal Poly researchers installed and maintain the equipment, and the resulting data supports their research efforts.

"This partnership is a natural fit for the Estuary Program. It makes sense for us to work closely with local university researchers focused on the bay and provide resources that can help move their work forward," said Estuary Program Executive Director Melodie Grubbs.

The Cal Poly partners in the project are Dr. Ryan Walter, a physical oceanographer and Associate Professor of Physics, and Dr. Emily Bockmon, a chemical oceanographer and Associate Professor of Chemistry. Both have partnered with the Estuary Program for several years to study the physical and chemical variability in the bay, including impacts from the eelgrass decline and recovery. Eelgrass is a seagrass growing in Morro Bay that experienced a rapid decline and recovery over the past decade. The Estuary Program wants to better understand the bay conditions that support eelgrass as well as how eelgrass itself impacts water quality in the bay.

The sensors are part of the Central and Northern California Ocean Observing System (CeNCOOS), a network of coordinated partners that collect high quality environmental data to support scientific research and resource management, as well as integrate products to inform decisions about the regional ocean. Until recently, the original sensors from 2007 were being used in Morro Bay, and the aging equipment resulted in periodic downtimes due to failed electronics. With the support of the Estuary Program and CeNCOOS, new state-of-the-art sensors were purchased and installed earlier this year.

"These new and improved sensors will allow for a unique long-term view into how the estuarine environment is changing," said Dr. Walter. "These sensors serve as a foundation for understanding water quality conditions in the bay and either directly or indirectly have helped with understanding bay

oxygen conditions, ocean acidification, marine heat waves, bacteria concentrations, harmful algal blooms, eelgrass system dynamics, and local aquaculture health.”

“The main goal of my research is to characterize the short and long-term variability of pH and carbonate chemistry in the bay and to learn what drives that variability,” said Dr. Bockmon. “If we know what is causing particular conditions, then we can work with stakeholders to avoid them or mitigate their impacts. Without these sensors and the support of the Estuary Program, we would be significantly hampered in our efforts to understand the estuary’s chemical environment given how variable it is on tidal, daily, and weekly timescales.”

Another benefit of the project is the real world data it creates that helps support Cal Poly’s “Learn By Doing” approach to educating future environmental professionals. “It has created opportunities for many students to work with real oceanographic data,” said Bockmon.

The Morro Bay data is publicly available via the CeNCOOS [data portal](#), where continuously updated data on bay water temperature, oxygen, pH, water clarity, and other measurements are available from the two monitoring stations.

Additional Estuary Program projects supported by federal infrastructure funding include a partnership with the Los Osos Community Services District to install a groundwater monitoring well, a project with the U.S. Geologic Survey to model sea level rise and its impact on bay habitats, and trainings to share environmental education curriculum with educators from the area and beyond.