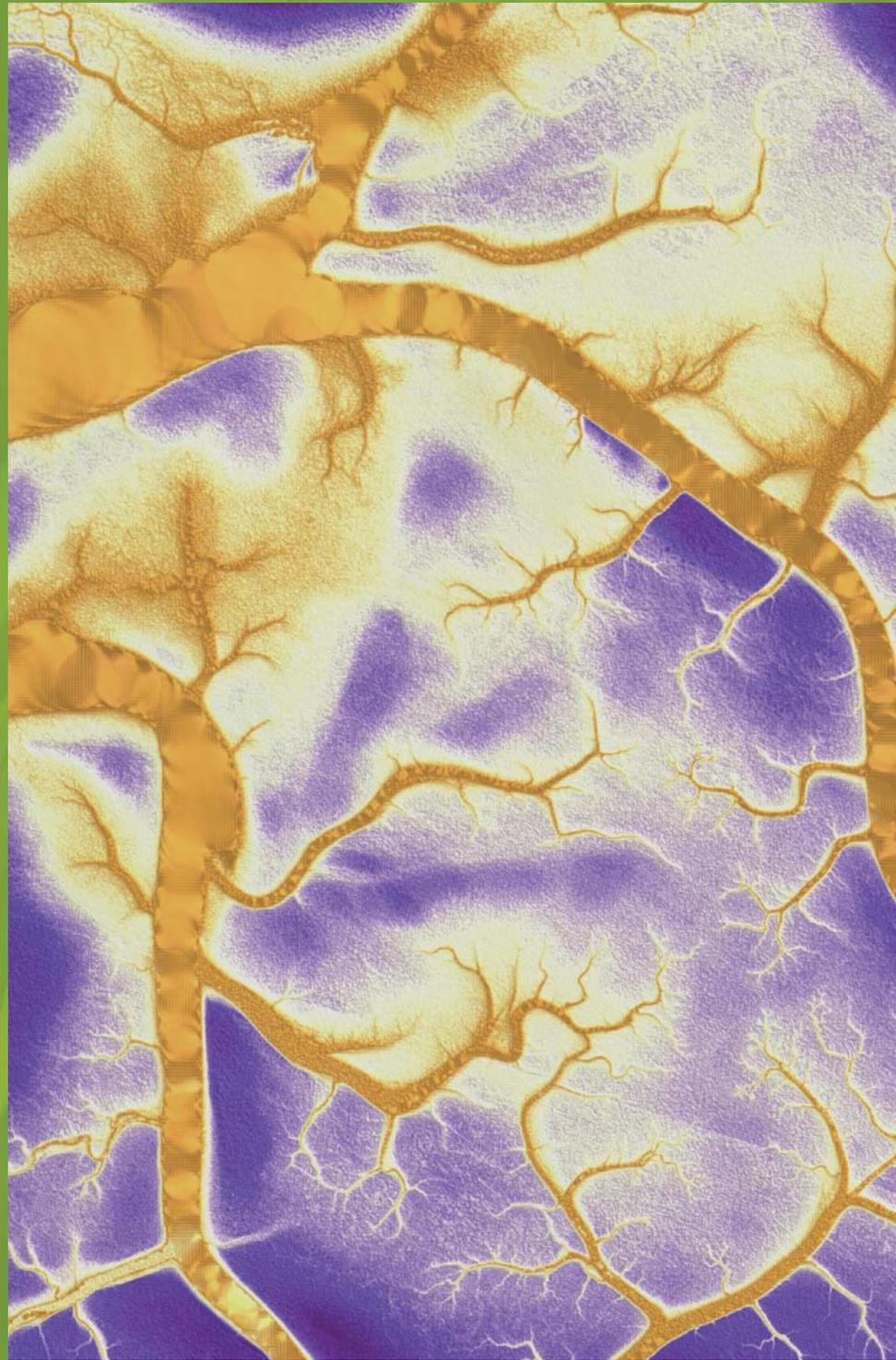


2012

year in review

“We [the citizens of Morro Bay] depend on the Morro Bay National Estuary Program to provide information on the estuary’s health and implement actions to ensure a vibrant future.”

-Noah Smukler, Morro Bay City Council



MORRO BAY
NATIONAL
ESTUARY
PROGRAM

Image (right) created through digital elevation model of Morro Bay.

President's Message

In 2012, Joel Neel finished his term as President of the Bay Foundation Board of Directors. We thank Joel for his seven years of dedicated service in that role. For myself, I am excited to return to the role of President for a second term, my first being more than 10 years ago. Much has changed during that time period, but it is still an absolute pleasure to work with the Estuary Program and its dedicated partners.

This past year, one of our founding members, David Paradies, stepped down from the Bay Foundation board. His many contributions can be seen throughout the organization. The Bay Foundation will truly miss the knowledge and expertise that Dave brought to the Board. Thank you Dave.

I look forward to the challenges that lie ahead in our efforts to protect the Morro Bay Estuary. While the future of the traditional resources that have funded our programs are less secure, we are working to develop new funding sources and strengthen our partnerships to ensure future success of the estuary program. Bay Foundation Directors have participated in "non-profit development" workshops at SPOKES (formerly the San Luis Obispo Non-Profit Support Center) that have provided valuable information on developing new sustainable resources. The Directors and the Estuary Program management team have also developed our first strategic plan and updated our financial plan. Lastly, Bay Foundation is currently recruiting new board members to broaden our knowledge and expertise in fund development.

We continue to see strong Congressional and local official support for the Estuary Program and strong commitment from our programs partners and volunteers. Together, we will continue to demonstrate why Morro Bay is considered a shining example of the National Estuary Program.

Gary Ruggerone, President, Bay Foundation of Morro Bay



Management Plan Update

In 2012, the Morro Bay National Estuary Program released its draft updated Comprehensive Conservation and Management Plan (CCMP) for public comment. Since 2011, the Estuary Program has been working to update the CCMP that was originally created a decade ago. The CCMP guides the important conservation work of the program and was created with input from hundreds of community members and partner organizations. The final updated document will be released in early 2013 and covers the priority conservation issues of :

- Accelerated sedimentation**
- Bacterial contamination**
- Elevated nutrient levels**
- Toxic pollutants**
- Scarce freshwater resources**
- Preserving biodiversity**
- Environmentally balanced uses**



The Morro Bay National Estuary Program

The Estuary Program brings citizens, local governments, non-profits, government agencies, and landowners together to protect and restore Morro Bay. The Morro Bay National Estuary Program is a non-regulatory, not-for-profit organization that conducts monitoring and research, restores natural habitats, and educates residents and visitors on how to keep Morro Bay clean and healthy.

Join our community in keeping Morro Bay clean to ensure a great life for all of us. Volunteer, donate, and join the conversation on Facebook:

www.mbnep.org

www.facebook.com/mbestuary

Director's Message

One thing I've learned while working in the environmental science and conservation field, change is constant. We study systems in order to preserve them, yet these systems are changing all the time. It keeps us busy. This year, Estuary Program staff continued to tackle resource questions like what will happen to our fresh water as climate changes?; what is the sedimentation rate to the bay?; how is circulation in the back bay changing?; and we learned more. We also had new questions added to the list, like what is causing eelgrass to die-off so dramatically? In 2013, we will continue to monitor changes along with our citizen scientists in order to create meaningful conservation projects.

In 2012, two conservation milestones were finally realized in our watershed. The Los Osos sewer project broke ground moving our surrounding community that much closer to improved wastewater treatment. In addition, the Land Conservancy of SLO County, with Estuary Program financial support, completed the Highland Ranch Conservation Easement protecting 530 acres of farm and ranch land in the upper watershed. Here at the Estuary Program, we, along with our partners, developed and implemented landmark water conservation projects to protect this essential resource for people and wildlife.

Everything we do is with the help of community partners. We cannot thank our partners and supporters enough for all their efforts towards conserving Morro Bay. In 2013, I look forward to working with our partners as we begin implementation of the revised CCMP and its five-year goals, including a conservation planning effort geared towards promoting a resilient ecosystem – one prepared for a dynamic and changing climate.

We make a difference, together. I'll see you out in the watershed.

Adrienne Harris, Executive Director

The Morro Bay National Estuary Program's Volunteer Monitoring Program – the last 10 years

Since its beginning, the Estuary Program has fostered an active monitoring program. Our volunteers are a vital resource for conducting citizen science throughout the watershed. Here are some facts and figures from the last 10 years of the program:

"Citizen Scientists are the backbone of the Estuary Program's monitoring effort,"
- Ann Kitajima, Monitoring Program Manager



- **500+:** the number of volunteers from 2002 through 2012.
- **13,369:** the number of hours contributed by those volunteers.
- **\$323,262:** the value of that volunteer time.
- **2,477:** the number of bacteria samples collected and analyzed.
Volunteers collect samples and conduct scientific lab work to determine levels of bacteria that can be harmful to swimmers, boaters, and other bay users.
- **2,225:** the number of creek water quality Creek Samplers monitor what's flowing out of our hills and into our bay.
- **1,200:** the number of hours performing bioassessment monitoring on the creeks.
Habitat quality and biological factors are closely analyzed to help determine overall health of our streams.
- **219:** the number of plankton samples from the bay.
Plankton Pullers collect and identify marine phytoplankton to help the state Department of Public Health track potential toxic blooms.

Highlights from the 2012 Data Summary Report

Every year the Estuary Program staff compiles and analyzes the data collected by our citizen scientists to detect changes in the health of the estuary. Our on-going data record help us to determine trends, which aids the program in designing future restoration efforts to improve the health and safety of our waters for people and wildlife.

Here are some points from our recent data report:



in the bay

- Our data reveals that only occasionally are conditions unsafe for swimming at the eight sites monitored monthly around the bay. Good news for the paddleboarders without their sea legs! The worst offender is Baywood Pier with 24% of the samples showing bacteria levels that are unsafe for swimming. The Surfrider Foundation recommends avoiding contact with water 72 hours after a large storm event.
- Our data shows that dissolved oxygen (crucial for the creatures living in the bay) is good most of the time. At Cuesta Inlet and Sharks Inlet, dissolved oxygen levels do not meet the regulatory level set to protect aquatic plants and animals about 40% of the time. These areas are shallow with minimal tidal mixing, two conditions that exacerbate the problem.

in the watershed

- Great news! Our data shows no areas of concern for water temperature or dissolved oxygen in our creeks. These are two important parameters for fish, in particular steelhead trout.
- For bacteria, we continue to see elevated levels in the tributaries of Chorro Creek, but levels in Chorro Creek itself remain low.
- The program recently began a more in-depth evaluation of nutrient levels in the Los Osos Valley. We have frequently observed elevated nitrate levels (above the drinking water standard of 10 mg/L) in the area. The program is working with the Coastal San Luis Resource Conservation District to better understand the environmental conditions in the valley and develop projects with landowners to protect water quality in the area.

Rainwater Harvesting and Stormwater Management Good for Cattle, Good for Fish



Rainwater harvesting is not a new concept. For centuries, people have captured rainwater for later use. This practice can be beneficial for environmental conservation and for households and commercial operations. The Central Coast of California has wet winters and dry summers. During dry times, water can be scarce and the need for water great. Exploring creative water management is important for our communities.

Across Highway 1 from Cuesta College, at Cal Poly's Beef Center, the Estuary Program, the CA Conservation Corps (CCC) and Cal Poly have worked together to install a rainwater harvesting project. This demo project is helping address stormwater runoff from the site and is storing winter rain to provide water for the Center's summer residents – the cattle.

The system is designed to reduce the use of wells located near Pennington Creek during the dry summer months. Hopefully, this will result in increased freshwater flow in the creek for steelhead trout. Creeks like Pennington with historically good steelhead habitat have reduced capacity to support this threatened species when water drops below critical levels.

Finished in July of this year, the project collects and stores rainwater run-off from the buildings and shade structures at the Beef Center. The system has the potential to produce 283,964 gallons of rainwater during an average rain year. The stored water could last through the four to six dry weather months. The Estuary Program and our partners are currently evaluating the success of the project in order to demonstrate beneficial results to other landowners in the area.

Funding for this project was provided through NOAA's American Recovery and Reinvestment Act funds, the Estuary Program, and CA Department of Fish and Game. Many companies and individuals—including Sierra Watershed Progressive, BlueScope Water, the CCC, and Pat Molnar—donated time, materials and expertise to complete the project.

"Partnering with the Estuary Program on projects has proven to be extremely beneficial to the university's cattle operation and range improvement practices. We are very fortunate to be located in this watershed, and be able to take advantage of their cost-share programs."

– Aaron Lazanoff, Beef Operations Manager, Cal Poly State University



Eelgrass Monitoring and Restoration in the Bay – Fostering New Alliances for Restoration

For the past decade, the Estuary Program has tracked the extent of eelgrass within Morro Bay using aerial imagery. Eelgrass acreage has declined dramatically over the last five years. The Estuary Program is working with researchers across the west coast to understand the context, to identify potential causes, and to work towards solutions.

While we work with scientists to identify the cause of the decline, the Estuary Program and its partners launched a pilot recovery effort in September. MBNEP staff along with volunteers from the Black Brant Group and Morro Coast Audubon worked with contractors on an eelgrass transplant effort. Approximately 8,000 eelgrass shoots were harvested by divers from healthy eelgrass beds and replanted in the back bay where eelgrass losses have been the most severe. In total, 21 transects were planted, that involved planting shoot bundles a meter apart, three abreast, along each 66-meter transect.

The eelgrass planting effort was possible thanks to a collaboration between the Estuary Program, the Black Brant Group, Morro Coast Audubon, and Merkel & Associates. Separate restoration activities being undertaken by Merkel & Associates for the US Army Corps of Engineers made it possible to leverage resources for this pilot project. Monitoring of the restoration next summer will help fine-tune any future efforts.



Tech Tools Help Combat Invasive Plants

This year, the Estuary Program teamed up with Calflora and the Bay Area Early Detection Network to enhance the most comprehensive existing plant database for California. Calflora's website has a suite of tools to help map, manage and monitor invasive and native plants. Because of our contribution, now users have the ability to create "groups" and overlay citizen science data, improving coordination and data sharing capabilities for invasive species early detection networks throughout California. To find out more visit www.calflora.org.





Rainwater Garden and Greywater System Teaches CCC Members the Value of Water Conservation

This year the Estuary Program assisted the CCC in building a demonstration project at their Los Padres facility where stormwater has been difficult to manage. The project was a great way to give corps members training in low impact development and help make their living quarters more pleasant.

“The Morro Bay Watershed provides the perfect classroom for on-the-job training for corps members.”
 – Domenic Santangelo, Los Padres Center Director, California Conservation Corps



Clean Water, Great Life

“Clean Water, Great Life” is the message behind an exhibit and initiative launched this year by the Estuary Program. The Nature Center’s display encourages residents and visitors to pledge support for simple, clean water practices including picking up after pets, keeping trash out of the bay, and being mindful of household chemicals and medication that impact local waterways, all while conserving water.

The campaign, designed with Barnett Cox and Associates, showcases portraits by photographers Dean Sullivan and Bill Shewchuk of local residents illustrating the commitment of each person to support the clean water cause. The interactive campaign works to create awareness and behavioral change in both residents and tourists, stressing the fact that small changes add up to big results. Over 50 people from SLO County, the inland valleys and beyond took the pledge in the first 5 months.

Pledge your support at www.mbnep.org.

Volunteer Monitoring Program Outstanding Contribution Award – Jim Crescenzi

A Cambria resident since 2000 and avid fly fishermen, Jim worked as an engineer in the Bay Area before retiring. Jim collects water quality data on local creeks and makes up part of our Dawn Patrol corps, heading out in his kayak in the early morning hours to collect bay water quality data. Jim has contributed over 200 hours in the past four years. Jim enjoys working with the other volunteers as well as contributing to the protection and preservation of the estuary.

“The work of the Estuary Program and its volunteers is essential to a quantification of water quality in the Morro Bay watershed. That comprehensive understanding can be the foundation of significant improvement of our watershed environment, and of the habitat for the many species that depend on it.” - Jim Crescenzi

Community Volunteer Program Volunteer of the Year – Ruth Ann Angus

Ruth Ann first became involved with the Estuary Program before it officially existed. She served both as president and vice-president of the Friends of the Estuary (FOE), one of the organizations that ushered in national recognition for Morro Bay. Ruth Ann has served on the Estuary Program’s Executive Committee and on the Education and Outreach Working Group for over 10 years. She is also an accomplished nature photographer and environmental/travel writer, has served on the Morro Bay Winter Bird Festival board for 16 years, and is active in EcoRotary.

Volunteer Monitoring Program Volunteer of the Year – Paul Courcy

A computer programmer from the aerospace industry, Paul retired to the area a few years ago. He has long been interested in estuaries and environmental science. Paul helps collect water quality data from Chorro Creek and joins us for spring bioassessment monitoring. He has contributed over 80 hours to the program over the last two years. He enjoys the people he meets and he likes contributing to environmental protection.

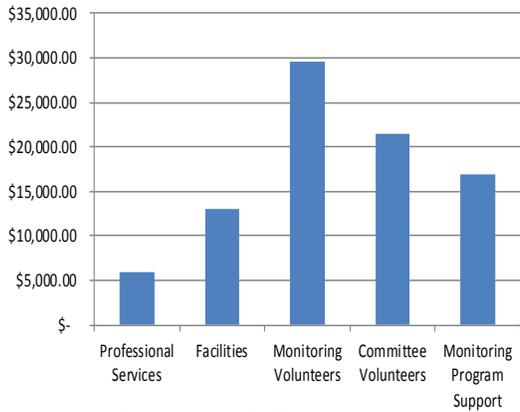


In October, the Estuary Program held its annual volunteer appreciation dinner. Thank you to the many businesses and individuals who donated prizes for the event.

Central Coast Outdoors
Kayak Horizons
Central Coast StandUp Paddling
Grassy Bar Oyster Company
Morro Bay Oyster Company
Sage Ecological Landscapes

Broken Earth Winery
Wolff Vineyards
Drake Wines
Graves Winegrowers
Treasury Wine Estates
Mike Bush and Jeanne Miller

Fiscal Year 2012 – Finances



The Morro Bay National Estuary Program is one of 28 national estuary programs around the country, and as a member of this group, we receive an annual grant from the U.S. Environmental Protection Agency (EPA). The Estuary Program has been able to raise two-and-a-half dollars for every dollar in funding provided by the EPA. The combination of this government funding and other funding allows the program to achieve important conservation goals for Morro Bay. The vast majority of these funds are provided to partners and local organization through grants and collaborative projects.

Since 2001, over \$1.77 million has been awarded to community members and local partner organizations to fund projects that conserve Morro Bay. Thank you to our 2012 grant sponsors:

Environmental Protection Agency
California State Water Resources Control Board

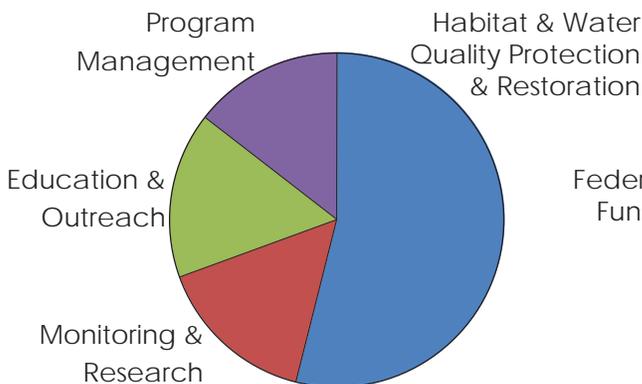
California Department of Fish and Game
Harold J. Miossi Charitable Trust

Beyond cash donations, the Estuary Program relies on numerous volunteers and businesses that donate their time and services to the organization. These donations are vital to the Estuary Program’s core functions. In fiscal year 2012, nearly \$87,000 in volunteer time and services were donated. Thank you to our business sponsors and partners who donated services in 2012:

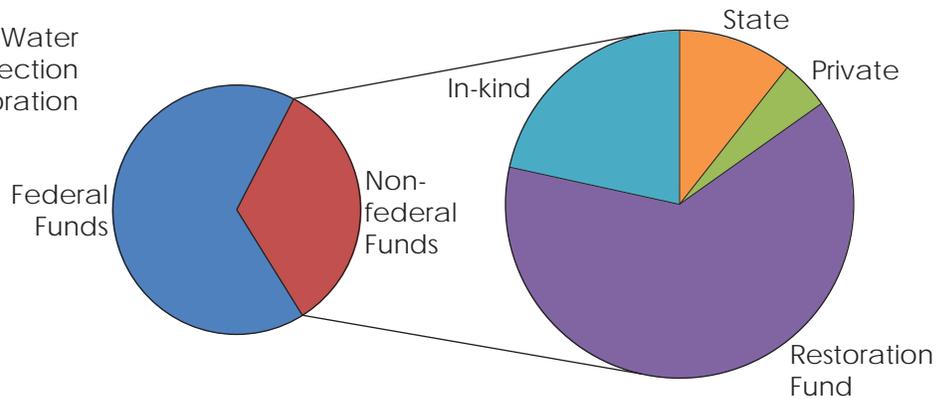
Glenn Burdette
Marina Square
Better Business Financial Services
Sullivan & Associates
San Luis Obispo Botanical Garden
Kayak Horizons
Morro Bay Oyster Company
Michael Multari
SWCA Environmental Consultants
Merkel & Associates, Inc.

Barnett Cox & Associates
Sierra Watershed Progressive
Pat Molnar
BlueScope Water
Cleath-Harris Geologists, Inc.
City of Morro Bay
California Conservation Corps
Cuesta College
California Polytechnic University

Expense Distribution



Income Sources, Cash and In-kind



non-federal funds, *broken out*

Funding Community Efforts

Every year the Morro Bay National Estuary Program awards grants to support community efforts to protect and restore Morro Bay.

Fiscal Year 2012 Grants Awarded

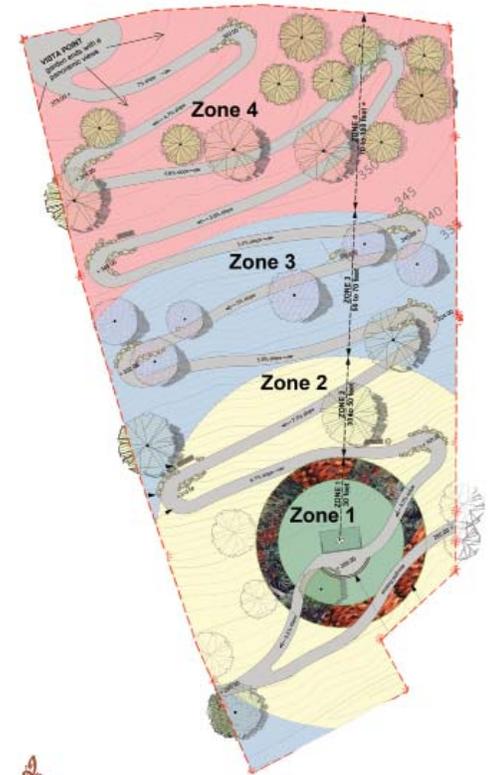
Firesafe Demonstration Landscape, SLO Botanical Gardens, \$3,800

Microscope Program Expansion, Central Coast Natural History Association, \$3,646.53

Spanish Version Sammy Steelhead Coloring Book & Activity Guide, Los Osos Community Service District, \$2,654

SLO Hydrologic Cycle: Rainwater Harvesting Guide, SLO Green Build, \$2,500

“Through their [Estuary Program’s] contributions we have created an educational facility to generate awareness and provide information that can assist everyone to do their part to ensure that our communities are more sustainable ... The most remarkable aspect about the organization is that they continue to provide assistance even upon completion of the projects and that is a sign of a loyal partner.” – Josh Heptig, Golf Course Superintendent, San Luis Obispo County Parks, 2011 grant recipient



Firesafe Demonstration Landscape

Re-envisioning the Grant Program

In 2012, the Estuary Program and its management committees revised and updated the grant programs, combining them into one community grant program. We are happy to now offer funding opportunities twice a year for grants up to \$5,000 for exciting and innovative community projects that address an identified priority issue from the program’s Comprehensive Conservation and Management Plan (CCMP). The purpose of the grant is to encourage and inspire projects that are motivated by community members to implement the CCMP. Deadlines for proposal submittals are the first Friday in March and September.

Projects should seek to:

- Engage the community
- Create public awareness and participation
- Implement a CCMP Action Plan
- Use cost-effective measures to implement projects
- Leverage funds through other community partnerships

More information on the grants program can be found at www.mbnep.org

Bay Foundation Board of Directors

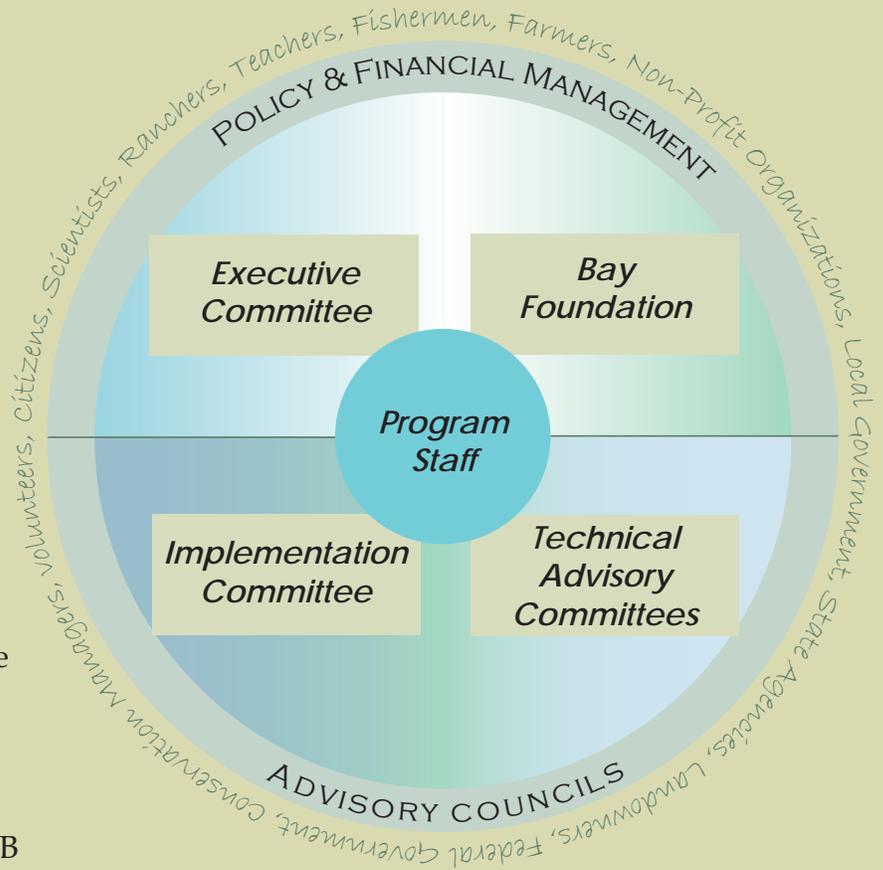
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Shaunna Sullivan, Vice President
Bill Henry, Secretary
Bob Semonsen, Treasurer
Rick Algert
Joel Neel
Gary Karner
Greg Smith

Executive Committee

Marshall Ochylski (chair) Los Osos
Community Service District
Noah Smukler, City of Morro Bay
Mike Bush (Implementation Committee
chair), SLO Botanical Garden
Bruce Gibson, San Luis Obispo County
Suzanne Marr, EPA
Gary Ruggerone, Bay Foundation
Dominic Roques, Central Coast RWQCB
Sam Schuchat (government at-large),
State Coastal Conservancy
Holly Sletteland (environment at-large),
Morro Coast Audubon
Dean Sullivan (tourism/recreation at-large),
small business owner
Sharon Rowley (fishing at-large), Central Coast
Women for Fisheries
Dean Wendt (science at-large), Cal Poly
Marc Lea (agriculture at-large), San Luis Obispo
Co. Department of Agriculture

Estuary Program Staff

Adrienne Harris, Executive Director
Lexie Bell, Assistant Director
Ann Kitajima, Monitoring Program Manager
Annie Gillespie, Monitoring Projects Manager
Jon Hall, Watershed Restoration Coordinator
Anna Halligan, Watershed Conservation
Coordinator
Cynthia Milhem, Office Manager
Shari Sullivan, Education and Outreach
Coordinator



Thank you to the many community volunteers and partner organizations who participate on our management and advisory committees. Please visit our website for a full list of Implementation Committee partners and others.

Join our community in keeping Morro Bay clean to ensure a great life for all of us. Volunteer, donate, and join the conversation on Facebook:

www.mbnep.org
www.facebook.com/mbestuary

Morro Bay National Estuary Program
601 Embarcadero, Suite 11
Morro Bay, CA 93442
805-772-3834

