



MARCH
17

SAVE THE DATE

Come hear updates on activities taking place in the San Antonio-Guadalupe Estuary!

March 17, 2016
Presentations: 2:00 - 5:00 PM
Social Hour: 5:00 - 6:30 PM
Prosperity Bank - Town Hall Conference Room
Victoria, Texas

Photo credit: Liz Smith

San Antonio Bay Partnership

ANNUAL REVIEW

2015

PROTECTING, RESTORING, AND ENHANCING

Progress Made but Work Remains

The start of the New Year provides an opportunity to reflect on the accomplishments of the year past and to focus on the opportunities and challenges for coming year.

SABP had another good year in 2015! Estuary Education Week provided more kids the opportunity for hands on learning aboard the Texas Floating Classroom. Our Bay Day grew to two days with public excursions on the Floating Classroom from both Seadrift and Port O'Connor. We sponsored tours to Powderhorn Ranch to observe the Smithsonian Migratory Bird Center banding station, and began a kids birding program at Austwell-Tivoli ISD. The Port O'Connor Paddling Trail was formally dedicated, and avid paddlers continued to explore the bay and river.

Further, completion of two studies positioned us to improve freshwater availability for Whooping Cranes in the next drought and to pursue strategies that improve the attainment of freshwater inflow targets for San Antonio Bay. Please take a few minutes and read about each of the above accomplishments in this newsletter.

These accomplishments could not have happened without the financial support from our partners, particularly the San

Antonio River Authority, whose generous help makes it all possible. See the list of sponsors included at the end of the newsletter -- and please thank them at your next opportunity.

2016 offers many opportunities and challenges for SABP, and we resolve to:

- Put more kids in the Floating Classroom
- Enhance the educational experience of Bay Days for kids and adults
- Enhance paddling opportunities in the Region, and paddle more
- Start additional kids birding programs, and don't forget the adults
- Restore/install more water wells to provide drought resilience for Whooping Cranes
- Continue efforts to attain freshwater inflow targets to our estuary
- Improve our financial foundation

Please consider including participating in SABP events and supporting our cause as part of your New Year's resolution -- you will be glad you did!

On Behalf of the SABP Board,



Allan R. Berger
Chair, SABP Board of Directors

IN THIS ISSUE



Water for Wildlife

SABP worked in partnership with the International Crane Foundation to identify the most suitable locations within the Whooping Crane wintering grounds for new and/or refurbished water wells.

PAGE #2



Studying Freshwater Inflows

Read more about how SABP worked with Truncale Engineering & Science and ASR Systems, LLC to examine strategies for achieving freshwater inflow targets in San Antonio Bay.

PAGE #6

Water for Wildlife

by Kiersten Stanzel

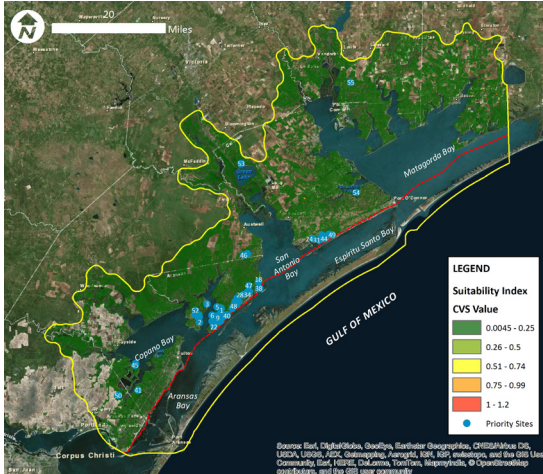
While Whooping Cranes are predominantly linked to marsh and tidal flat habitats along the shorelines of San Antonio and Aransas bays, dietary freshwater is necessary when bay salinities in their wintering grounds exceed 15-18. Availability of freshwater during drought periods is often limited to excavated earthen ponds (stock tanks) in upland areas adjacent

to fringing coastal marshes. Since water in these ponds is typically limited to direct precipitation, freshwater can quickly become scarce during periods of drought. By strategically placing solar powered water wells across the landscape and in close proximity to Whooping

Crane territories, the stress of traveling to ponds in order to acquire freshwater during dry periods may be reduced.

The application of mapping software can provide an effective methodology for identifying suitable sites for installation/repair of water wells by removing much of the uncertainty that is sometimes involved in the selection process. Using funds from the Coastal Bend Bays & Estuaries Program and U.S. Fish & Wildlife Service, SABP worked with the International Crane Foundation to apply mapping software for the development of a suitability index that characterizes locations in the wintering grounds based on their potential for successful use by Whooping Cranes following water well installation/repair. The index was based on spatial data that depicted observations of Whooping Cranes during aerial surveys, presence of excavated wetlands, and locations of habitats that are most likely to be utilized during droughts.

Once the 55 priority sites were identified, they were characterized based on their suitability score, geographic location, land use/land cover, distance from existing water wells, protection status, and elevation. The results will initially be used by SABP to identify a location for the refurbishment of two solar water wells or the installation of one new solar water well on non-Federal land. However, the index could be used by additional partners in other on-going efforts to promote the recovery of Whooping Cranes.



Map of priority well locations

The blue dots indicate priority locations for repair of an existing water well or installation of a new well

Bay Days hosted in Seadrift and Port O'Connor

by Kiersten Stanzel

For three years, the San Antonio Bay Partnership has hosted an annual "Bay Day" event in Seadrift, Texas. In 2015, however, SABP decided to expand their outreach efforts to include both Seadrift and Port O'Connor. As in years past, the goal of these "Bay Day" events was to provide a hands-on environmental educational experience for the general public to improve their understanding of the ecology and natural resources of our local bays.

On October 10, SABP hosted three separate trips aboard the Texas Floating Classroom vessel the R/V Archimedes. Participants departed from Seadrift and took part in a 90-min boat trip into San Antonio Bay, which featured hands-on interaction with local wildlife through plankton tows, shrimp trawls, and marine ecology lesson. Similarly, on October 17, the Texas Floating Classroom vessel moved to Port O'Connor where participants had the opportunity to have a hands-on experience in Espiritu Santo Bay during three separate trips.

The boat trips were a huge hit with many of the trips selling out prior to departure. Proceeds from these "Bay Days" will go to support the San Antonio Bay Partnership's efforts to protect, restore, and enhance San Antonio Bay.



2015 BAY DAY SPONSORS

San Antonio River Authority	Kelsey Berger
Allan & Brigid Berger	Bernice & Anthony Kallina
Sisters Gift Shop	Ashley Berger
Coastal Bend Marine	First National Bank - Port Lavaca
Doug & Brenda Berger	Beacon 44 Seafood
James Berger	Prosperity Bank

Hands-on Education Reaches More Students and Teachers in 2015

by Kiersten Stanzel

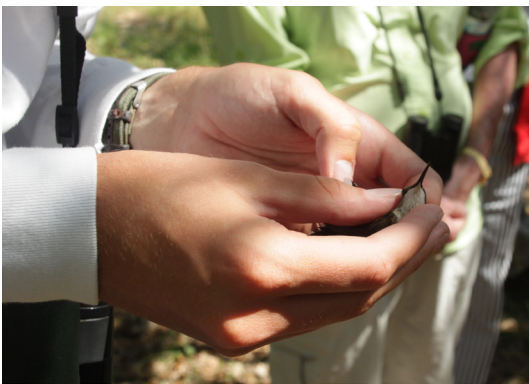
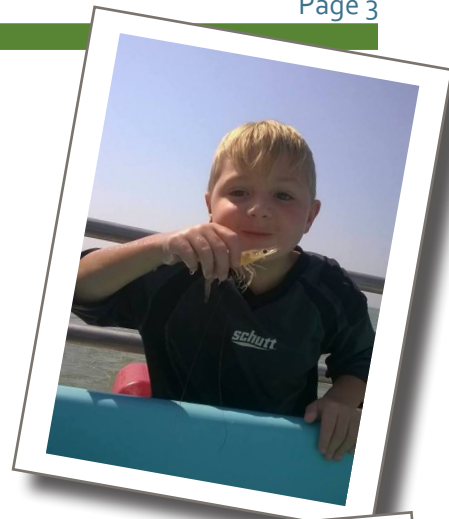
For a second year, the San Antonio Bay Partnership received funding from the Trull Foundation, Dow Chemical, and the Wood Family Memorial Trust to hold a hands-on education program called "Estuary Education Week." Generous contributions from these organizations allowed students and teachers from the San Antonio and Matagorda bay watersheds the opportunity to participate in the Texas Floating Classroom, as well as on-shore educational lessons. The goal of "Estuary Education Week" is to improve students' understanding of the ecology of these bay systems and to help them recognize the role they play in conserving coastal resources.

A total of 620 students, teachers, and staff from eight different school districts participated in trips aboard the Texas Floating Classroom vessel during a three-week period of October 2015. The Texas Floating Classroom program included a two-hour trip aboard the R/V Archimedes into either San Antonio or Matagorda bays. The boat departed

from the cities of Seadrift, Port Lavaca, and Palacios. While on the boat, students explored the plants and animals that share our bays. Live plants and animals were collected and observed in touch tanks and under a microscope.

While they waited for their turn on the boat, several of the students and teachers also had the opportunity to participate in on-shore lessons provided by trained educators from the International Crane Foundation, Aransas National Wildlife Refuge, and Texas Master Naturalists. The San Antonio Bay Partnership would like to extend a special thank you to these partners for making this part of Estuary Education Week possible.

Plans are already underway for a bigger and better Estuary Education Week in 2016! Contact Kiersten Stanzel to participate (kiersten.madden@gmail.com; 361-813-1401).



Bird in the Hand

by Brigid Berger

One in the hand is worth more than just two in the bush -- especially when that hand is a bird bander's! For two months last spring, three avian biologists from the Smithsonian Migratory Bird Center collected data from some 1,750 birds at Powderhorn Ranch in Calhoun County. With the banders skilled hands, data was collected to help understand the timing and condition of birds during migration. As the first scientists to spend an entire season at the Ranch, their observations will also contribute to knowledge of the site, which could prove useful for its future managers.

The 17,000-acre Powderhorn Ranch was secured by a partnership between The Nature Conservancy, Texas Parks and Wildlife Foundation, Texas Parks and Wildlife Department, and The Conservation Fund and is slated to become a state park and wildlife management area. It is an important site along the mid-Texas coast, providing critical stop over habitat for migratory birds.

To bolster knowledge and awareness of this ecologic jewel, San Antonio Bay Partnership led three spring tours at the Ranch. For the first time, locals were given the opportunity to view the Ranch's native prairie, bay front, and wetlands. With the bird banders on site, the groups enjoyed the rare opportunity to witness the beautiful migratory birds who stopped to rest and refuel among the coastal live oaks. Smithsonian educator, Sean McElaney, described the banding procedures and significance of the data collected as the group walked along the netting lanes and watched the banders work.

The tour also included lunch at the Ranch house and presentations about the Ranch's history and ecological significance, but the tour's climax was, unanimously, seeing the birds in hand. A few local residents were even lucky enough to release a banded bird from their own hand, the thrill of which will never be forgotten. The San Antonio Bay Partnership hopes that this "one in the hand" will be worth the continued support by area residents for the conservation and preservation of these important lands.

To learn more about the Smithsonian's banding project at Powderhorn Ranch, go to: <https://nationalzoo.si.edu/scbi/migratorybirds/blog/?id=1430> or <https://www.victoriaadvocate.com/news/2015/may/16/bird-banding-on-powderhorn-ranch/>

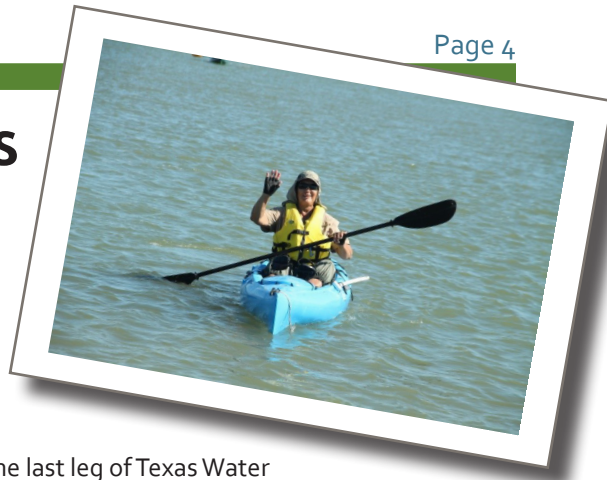
Explore the Bay Paddling Series

by Allan Berger

The spring 2015 weather reminded us who is boss -- several weather-related cancellations resulted. However, we recovered with excellent weather and paddles later in the summer and fall:

- **May:** Tellers Point out of Port O'Connor -- visited protected salt water marsh and bayous and discussed pelicans.
- **June:** Port O'Connor Boggy Bayou beginners paddle -- proved you can do it!
- **July:** Guadalupe River from RV Park near Tivoli to Seadrift -- paddle mimicked the last leg of Texas Water Safari and discussion topic was freshwater inflows.
- **August:** Powderhorn Ranch Shoreline (Port O'Connor to Hwy 1289/Coloma Creek) -- saw lots of birds and dolphins and discussed the next state park, Powderhorn Ranch.
- **September:** Hog Bayou -- paddled through riparian woodlands looking for alligators, but none showed; discussed the Guadalupe Delta.
- In addition, all were invited to participate on a moonlight paddle in August from Little Jetties in Port O'Connor to Boggy Bayou -- paddle included full moon rising with party refreshments and live music at the takeout.

All were interesting paddles that exercised the body, refreshed the spirit, and provided good company and a few facts about where we live and why it is important to protect.



JOIN US IN 2016!

Contact Allan Berger to receive notification about monthly paddles starting in March -- allanrberger@comcast.net

New Paddling Trails Proposed for Local Waters

by Allan Berger

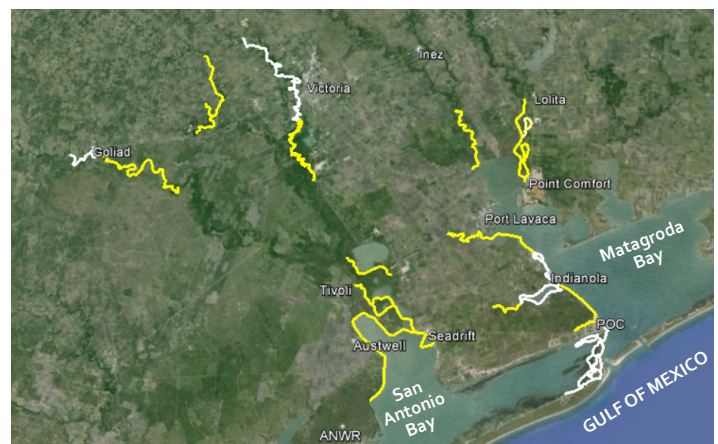
The numerous rivers, creeks, bays, and marshes of the Coastal Bend make the area a great place to paddle. Although paddling often requires practiced skill and a high level of effort, the rewards are tremendous -- beautiful scenery and wildlife provide an escape from the frantic pace of everyday life. However, despite our abundant potential paddling resources, there are only three local trails in the TPWD Paddle Texas program: Victoria Trail, Goliad Trail, and Port O'Connor Trail. SABP, in conjunction with the Coastal Bend Paddling Club, is working to increase the number of marked trails, providing both residents and visitors additional opportunities to enjoy our region's natural blessings.

We are mapping ten new paddling trails. Each segment will require "Community Sponsors" to build and maintain the trail segment. The routes being considered include:

1. Extending the Victoria Trail south from Hwy 59 to a proposed Port of Victoria Park.
2. Seadrift Trail, from Hwy 35 to Seadrift Bayfront Park.
3. Guadalupe Delta Trail in Hog and Goff Bayous.
4. Austwell Trail, along north shoreline of Hynes Bay, then to Seadrift.
5. Extending the Goliad Trail south to Duke Ranch Road, then to a privately owned campground.
6. Powderhorn Shoreline Trail, Port O'Connor Boggy Bayou to Hwy 1289.
7. Connect Texas Sea Grant Indianola Trails to Chocolate Bayou south of Port Lavaca.

8. Garcitas Creek Trail from Jackson County's Bennett Park to Six Mile.
9. Lavaca River Trail from Hwy 616 to Point Comfort.
10. Coleto Creek Reservoir Trail.

If you have other ideas for paddling routes, are interested in assisting with mapping or construction, or want to be a Community Sponsor, please contact Allan Berger from SABP (allanrberger@comcasts.net; 713-829-2852) or Charlie Kouba from Coastal Bend Paddlers (charlie.kouba@classicnet.net; 512-940-0412).



Proposed paddling trails

White indicates existing, marked trails; yellow indicates proposed trails

POC Paddling Trail Grand Opening

by Kiersten Stanzel

The San Antonio Bay Partnership has partnered with the Port O'Connor Chamber of Commerce, Calhoun County, and the West Side Calhoun County Navigation District to become the community sponsors of the Port O'Connor (POC) Paddling Trail. The POC Paddling Trail is currently the only marked trail in the San Antonio Bay System. The trail begins in POC and ends at the Matagorda Island Wildlife Management Area, and includes six round-trip loop trails of varying lengths, which means visitors can choose to paddle from several hours to several days.

On July 9, 2015, the Texas Parks and Wildlife Department and the trail sponsors held a ribbon cutting in Port O'Connor to commemorate the official opening of the POC Paddling Trail. The ribbon cutting also signified the installation of an informational kiosk (pictured left) at the launch site at Little Jetties Park -- the kiosk provides paddlers with helpful information about the POC Paddling Trail and local wildlife.



Kids Birding Program Takes Flight at Austwell-Tivoli ISD

by Brigid Berger

"DIHEDRAL!!!" exclaimed Fischer Franck, third grader at Austwell-Tivoli Independent School District.

"Full length white gloves" adds sixth grader Amy Brewer describing the distinguishing characteristics of the turkey vulture soaring overhead.

"They eat dead things" announced Desiree Martinez (5th grader) with a tone of disgust when asked what role the turkey vultures play in our environment.

Fischer, Amy, and Desiree are all participants in the new Austwell-Tivoli ISD Gifted and Talented Birding Program which took flight in October 2015 through the efforts and sponsorship of the San Antonio Bay Partnership. Along with eighth graders Sean McClellan, Lauren Lutz, and Macie Hernandez, the kids learn to identify birds, their behaviors, and habitats, as well as the role that birds play in the environment.

Collaboration and support from the school has been the key to this program. "It's a very unique opportunity for our young people" said Stephen Maldonado, Austwell-Tivoli principal. Maldonado takes time out of his busy schedule to visit with the students during the birding class and field trips. Teacher, Maggie Franck has skillfully incorporated the birding program into the curriculum, drives the students to each field trip, and oversees the student's participation.

Field trips to Aransas National Wildlife Refuge, Goose Island State Park, Guadalupe Delta Wildlife Management Area and Welder Wildlife Foundation allow the kids to experience the resident and migratory birds for which the Mid-Texas Coast is so well known. Students also participated in the Audubon Christmas Bird Count at the Matagorda County Mad Island



The Austwell-Tivoli ISD Birding Club took a trip to Goose Island State Park to practice their newly acquired birding skills

Marsh, and through the generous support of Captain Tommy Moore, Rockport Birding and Kayak Adventures students will see endangered Whooping Cranes in their winter home along the Texas Coast.

The program is made possible by funding from the Trull Foundation, Texas Ornithological Society, and private donations and is supported by volunteers from the Texas Master Naturalist Mid-Coast Chapter. Master Naturalist volunteers enhance the field trip experience by coaching and encouraging collaboration. Facilitating team work is one of the most important objectives of the program which will culminate with student participation in the Spring 2016 Texas Parks and Wildlife's Great Texas Birding Classic.

Sponsorship, donations, and volunteers are needed to enhance the program and expand it to other areas schools. The wish list includes: sponsorship for Great Texas Birding Classic (\$500), a spotting scope (\$3000) and binocular chest straps (\$200). To support the program or become involved please contact Brigid Berger at brigidberger@comcast.net or 713-825-1929.

Study Examines Strategies for Increasing Freshwater Inflows to San Antonio Bay

by James Dodson

In November 2015, the San Antonio Bay Partnership, in association with Trungale Engineering & Science and ASR Systems LLC, submitted to the Texas Water Development Board (TWDB) a final report on a study of potential methods to increase the frequency at which the adopted targets for freshwater inflow (FWI) volumes for San Antonio Bay are met.

The study, funded through a special legislative appropriation to TWDB, was commissioned by the Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays Basin and Bay Stakeholder Committee ("GSA BBASC") and designed to address priority issues in the GSA BBASC's "Work Plan for Adaptive Management." The study was designed to provide information and recommendations to the GSA BBASC and Texas Commission on Environmental Quality (TCEQ) on water management strategies that could help meet the seasonal FWI targets that were determined to be supportive of a sound ecological environment in San Antonio Bay.

The study used the Guadalupe-San Antonio Water Availability Model (GSA WAM) to quantify the additional amount of annual streamflow needed to supplement FWI's in order to achieve spring and summer FWI targets. These targets, are stated as the percent of time the recommended seasonal FWI volumes should be met or exceeded. For example, the target for San Antonio Bay inflow during the Spring (Mar-May) states that in no more than 9% of the years should the Spring inflow be less than 150,000 acre-feet. Similarly, for the summer season (Jul-Sept), the target is that in no more than 6% of the years should the summer inflow be less than 50,000 acre-feet.

An analysis was made under "baseline" planning conditions which assumed that future FWI's patterns would be similar to those having occurred over a 56-year (1934-89) period -- except that the treated wastewater effluent typically discharged into streams in the San Antonio-Guadalupe watershed would be 100% re-used and therefore not available for FWI to the estuary. The result showed that FWI's would fall below the spring target in 29% of the years and below the summer target in 16% of the years. The baseline modeling determined that during a repeat of the drought of record, a supplemental supply of 90,000 acre-feet of FWI would be needed annually to meet the spring target, and an additional 40,000 acre-feet would be needed annually to meet the summer target.

The study then used the GSA WAM and the Aquifer Water Balance Model (AWBM) -- developed for this project -- to quantify the benefits of implementing two new FWI management strategies: (1) legally dedicating wastewater return flows as "environmental flows" and (2) allowing both already permitted water rights and new permits for currently unappropriated streamflow, to be legally dedicated for FWI. The analysis looked at how a system of Aquifer Storage and Recovery (ASR) facilities in the Gulf Coast Aquifer along the

lower Guadalupe River could "bank" some of those dedicated stream flows, providing for later managed releases of supplemental streamflow in quantities and at times designed to achieve the summer and spring season targets.

The AWBM determined how much ASR storage would be required to provide the volume of FWI's necessary to achieve the annual spring and summer targets over the duration of a repeat of the drought of record. A conceptual well-field design, a planning level cost estimate and an implementation plan for the ASR system are presented in the report, along with recommendations for further investigation of how using ASR for increasing FWI's during drought periods might be made more cost effective at the scale being anticipated.

The report also recommends changes in state water policy that are key to implementing these potential strategies, including amending Texas surface water law to: (1) encourage and facilitate the dedication of wastewater return flows for FWI needs, (2) clearly grant TCEQ the authority to issue "bed-and-banks" permits for the purpose of protecting wastewater discharges intended to supplement instream flows, and (3) allow the granting of new "environmental" water rights for currently available unappropriated flows and the amending of existing permits for the purpose of instream flow and estuarine inflow protection.

The strategies evaluated and recommended in this study provide new options for achieving FWI goals, and SABP stands ready to work with other entities and organizations in developing a stakeholder-driven freshwater inflow management plan for the San Antonio Bay-Guadalupe Estuary.

TAKE AWAY POINTS

- Future freshwater inflows to the San Antonio-Guadalupe Estuary are not expected to meet spring and summer targets necessary for an "ecologically sound environment;"
- This study investigated the benefits of several new water management strategies designed to increase the frequency at which freshwater inflow targets are achieved;
- Results indicate that changes in the State's water rights permitting rules and development of a large-scale Aquifer Storage and Recovery system to "bank" streamflow during high flow periods and supplement during droughts could result in target inflows being met for spring and summer;
- Consideration of these new strategies could be part of developing and implementing a freshwater inflow management plan for the San Antonio-Guadalupe Estuary;
- SABP encourages a stakeholder-driven freshwater planning program for the San Antonio-Guadalupe Estuary.

THANK YOU

SABP would like to thank the following for . . .

Donations and Funding:

AEP Texas	Dow Chemical Foundation	Prosperity Private Enterprise
Allan & Brigid Berger	ExxonMobil Foundation	SABP Paddlers
Anonymous Donor	First National Bank Port Lavaca	San Antonio River Authority
Arena Energy Foundation	James Berger	Sisters Gifts Shop (POC)
Ashley Berger	Jerry Pearce	Texas State Aquarium
Beacon 44 Seafood (POC)	Kelsey Berger	Texas Water Development Board
Bernice & Anthony Kallina	Omron Foundation	Trull Foundation
Coastal Bend Bays & Estuaries Program	Pat Robertson	Vickie Grove & David Ryan
Coastal Bend Marine (POC)	Paul Swacina	Wood Family Memorial Trust
Doug & Brenda Berger	Prosperity Bank	

In-Kind Support and Partnering:

Aransas National Wildlife Refuge	Goose Island State Park	Smithsonian Migratory Bird Center
ASR Systems, LLC	HEB	Texas Floating Classroom
City of Seadrift	International Crane Foundation	Texas Ornithological Society
Coastal Bend Paddlers Club	Mad Island Marsh Preserve	TPWD Coastal Fisheries (POC)
Dolphin Kayaks	Mid-Coast Texas Master Naturalists	Trungale Engineering & Science
Dolphin Talk	Port Lavaca Wave	Victoria Advocate
Friends of POC Library		

If you like what we accomplished in 2015 and want to make 2016 even better, consider donating to SABP!

Send tax deductible checks to: SABP, 405 W Power Ave, Victoria 77901

To pay by credit card, go to: www.sabaypartnership.org

Any help you provide will be put to good use!

San Antonio Bay Partnership

405 W. Power Ave.
Victoria, TX 77901
www.sabaypartnership.org

The San Antonio Bay Partnership, Inc. (SABP) is a non-profit, stakeholder-driven planning and management program. The purpose of SABP is to create and sustain a working partnership of committed stakeholders in order to protect, restore and enhance the natural resources of the San Antonio Bay System for the benefit of the ecosystem and its human uses.

SABP is governed by an appointed Board of Directors that consists of members with diverse backgrounds from different geographic areas along the middle Texas coast. Current Board members are:

Allan Berger, Jr, Chair

Jerry Pearce,
Vice-Chair

Vickie Grove
John Kisalus

Terry Baiamonte,
Treasurer/Secretary

Kathleen Carey
Steven Fotiades