

A TAMPA BAY ESTUARY PROGRAM PROGRESS REPORT 2012



Photo credit: Mary Lou Johnson

Page 1

The State of Our

SEAGRASSES
WATER QUALITY
HABITAT
RESEARCH
COMMUNITY OUTREACH





Message from the Executive Director

As the Tampa Bay Estuary Program enters its third decade of working with the community to restore the bay, we are pleased to present to you – our partners, colleagues and friends – this summary highlighting some of our key achievements over

the last three years.

The year-long celebration of our 20th anniversary in 2011 offered an opportunity to reflect on the dramatic progress we've made together in improving the bay:

Life-sustaining seagrasses are returning to the bay at a record pace of 660 acres per year. We've regained 7,600 acres of this key indicator of the bay's health since the Estuary Program was created.

A net increase of 433 acres of emergent tidal wetlands has been documented from 1995-2007.

Overall water quality in Tampa Bay is as good as it was during the 1950s, despite more than quadrupling the human population in the watershed during that time.

As we strive to maintain our momentum in these fiscally challenging times, the need to rely on strong science to guide our decisions, and to leverage our limited resources, has never been more important.

We will continue to sponsor ground-breaking research

to ensure we are spending time and money in the most cost-effective ways on the bay's most pressing problems. We have just launched a multi-year study of water quality in Old Tampa Bay, the one bay segment that is lagging behind in recovery.

We will also continue to work as regional consensus-builders, finding common ground among disparate and at times conflicting interests to benefit the bay. Our innovative Nitrogen Management Consortium, composed of both local governments and private industries, was awarded the prestigious Gulf Guardian Award for Partnership in 2011. This unique alliance will continue to play a prominent role in reducing pollution from air emissions, stormwater runoff and wastewater.

It won't be easy to maintain our progress in the future. Added to our ongoing list of concerns for the bay are emerging threats like sea level rise and climate change. But, with your support and participation, we look forward to meeting the challenges ahead, and ensuring that Tampa Bay remains a vibrant cornerstone of our environment, our economy and our quality of life.

Holly Greening
Executive Director
Tampa Bay Estuary Program

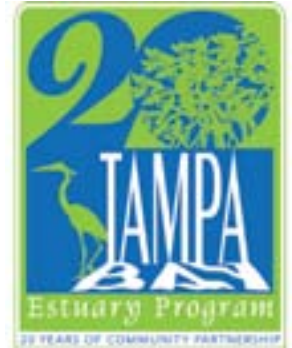
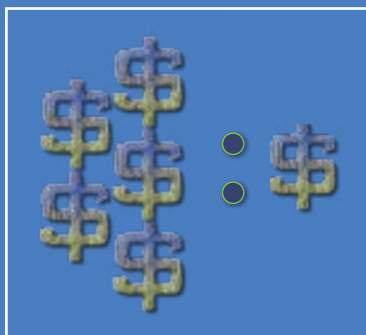


Photo credit: Peter Lousberg

The mission of the Tampa Bay Estuary Program is to build partnerships to restore and protect Tampa Bay through implementation of a scientifically sound, community-based management plan.

A Smart Investment for Local Government



TBEP provides outstanding service to our local government partners through directed research and restoration, grant writing assistance, regional facilitation services, and wide-ranging community outreach programs. Over the last three years, TBEP has returned nearly \$5 to the Tampa Bay region for every \$1 invested. TBEP also has been very successful in obtaining external grants to advance bay restoration activities. In 2012, TBEP staff will manage more than \$3.7 million in competitive grants and contracts.

A Partnership for a Healthy Bay

About Us

TBEP is one of 28 “estuaries of national significance” designated by Congress. We are an intergovernmental partnership of Hillsborough, Manatee and Pinellas counties; the cities of Tampa, St. Petersburg and Clearwater; the U.S. Environmental Protection Agency; the Southwest Florida Water Management District; and the Florida Department of Environmental Protection. We work with these partners to implement a comprehensive, science-based restoration and management plan for the bay.

TBEP is governed by a Policy Board composed of elected officials from the six local governments, EPA, DEP and the Water Management District. A Management Board comprised of upper-level environmental administrators makes recommendations to the Policy Board.

The Program’s mission is also supported by several committees, including a Technical Advisory Committee of bay scientists and managers, and a Community Advisory Committee of interested citizens.

TBEP Policy Board

- Commissioner Joe McClash, Chair
Manatee County
- Commissioner Neil Brickfield, Vice Chair
Pinellas County
- Commissioner Victor Crist
Hillsborough County
- Councilman Paul Gibson
City of Clearwater
- Councilman Steve Kornell
City of St. Petersburg
- Councilwoman Mary Mulhern
City of Tampa
- Hugh Gramling
Southwest Florida Water Management District
- Tom Welborn
U.S. Environmental Protection Agency (1997-2011)
- Deborah Getzoff
Florida Department of Environmental Protection (2001-2011)

An Award-Winning Team

In the last three years, TBEP has received several awards recognizing the Program’s outstanding collaborative community programs:

- 2011 Gulf Guardian Partnership Award from the Gulf of Mexico Alliance for the Tampa Bay Nitrogen Management Consortium
- 2011 Community Design Award of Merit from The Planning Commission in Hillsborough County for the longshore bar restoration project at MacDill Air Force Base.
- In 2010, TBEP received three awards at the Future of the Region awards sponsored by the Tampa Bay Regional Planning Council
 - The Bay Mini-Grant Program earned first place in the Community Service category
 - The Nitrogen Management Consortium earned first place in the Environment category
 - The “Pooches for the Planet” pet waste education campaign earned second place in the Public Education category



Photo credit: Joe Bailey

TBEP Staff



TBEP Staff members with former Policy Board Chair Deborah Getzoff (back row, right) and former Vice Chair Tom Welborn (first row, middle)

Holly Greening
Executive Director

Ron Hosler
Program Administrator

Ed Sherwood
Program Scientist

Nanette O’Hara
Public Outreach
Coordinator

Misty Cladas
Project Manager

Lindsay Cross
Environmental Scientist

Colleen Gray
Outreach Specialist

Dave Moore
Program Development
Coordinator



TBEP is one of 28 “estuaries of national significance” designated by

Congress and administered by the U.S. Environmental Protection Agency.

Improving Water Quality Fuels Record Seagrass Gains



Tampa Bay gained 3,250 acres of seagrass between 2008 and 2010—an 11% increase that is the largest 2-year expansion of seagrasses since scientists began regular surveys of this critical underwater habitat.

The bay now supports 32,897 acres of seagrasses—more than at any time measured since the 1950s. Water quality overall also is as good as it was in the 1950s. In 2011, all but one major bay segment met adopted targets for chlorophyll a and light penetration to the bay bottom.

TBEP's seagrass recovery strategy seeks to nurture new grasses by reducing the amount of nitrogen entering the bay from urban, industrial and agricultural development. Too much nitrogen causes algae blooms that cloud the water and prevent sunlight from reaching seagrasses. In 2010, members of TBEP's Nitrogen Management Consortium reached agreement on further nitrogen reductions to maintain seagrass recovery and meet new regulatory limits (see Case In Point below).

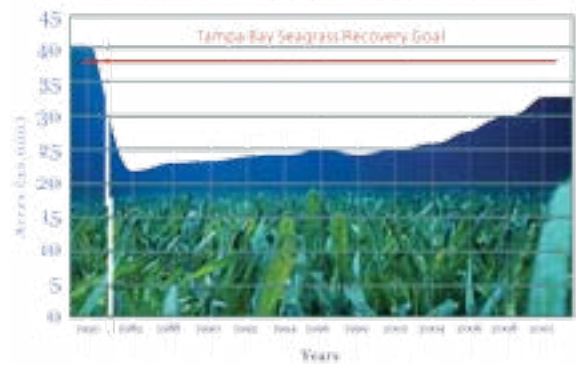


Despite seagrass gains and water quality improvements, the area north of the Gandy Bridge, known as Old Tampa Bay, continues to experience problems. Algae blooms have plagued this segment in 3 of the last 4 summers, most recently in August 2011.

A far-reaching evaluation and assessment of water quality in Old Tampa Bay was launched in December 2011 to better understand factors affecting the health of this area, and facilitate long-term solutions to improve water flow and clarity. The initial project will span three years, but full implementation of recommended actions may take decades.



TAMPA BAY SEAGRASS ACREAGE ESTIMATES



Year	Old Tampa Bay	Hillsborough Bay	Middle Tampa Bay	Lower Tampa Bay
1974	No	No	No	Yes
1975	No	No	No	Yes
1976	No	No	No	Yes
1977	No	No	No	No
1978	No	No	No	Yes
1979	No	No	No	No
1980	No	No	No	No
1981	No	No	No	No
1982	No	No	No	No
1983	No	No	No	No
1984	Yes	Yes	No	Yes
1985	No	No	No	Yes
1986	No	No	Yes	Yes
1987	No	Yes	No	Yes
1988	Yes	Yes	Yes	Yes
1989	No	Yes	Yes	Yes
1990	No	Yes	Yes	Yes
1991	Yes	Yes	Yes	Yes
1992	Yes	Yes	Yes	Yes
1993	Yes	Yes	Yes	Yes
1994	No	No	No	No
1995	No	No	No	Yes
1996	Yes	Yes	Yes	Yes
1997	Yes	Yes	Yes	Yes
1998	No	No	No	No
1999	Yes	Yes	Yes	Yes
2000	Yes	Yes	Yes	Yes
2001	Yes	Yes	Yes	Yes
2002	Yes	Yes	Yes	Yes
2003	No	Yes	Yes	Yes
2004	No	Yes	Yes	Yes
2005	Yes	Yes	Yes	No
2006	Yes	Yes	Yes	Yes
2007	Yes	Yes	Yes	Yes
2008	Yes	Yes	Yes	Yes
2009	No	Yes	Yes	Yes
2010	Yes	Yes	Yes	Yes
2011	No	Yes	Yes	Yes

CASE IN POINT

The Nitrogen Management Consortium



Tony Janicki, Jeff Stewart, Holly Greening and Rob Brown at the Gulf Guardian awards ceremony.

TBEP's unique alliance of government and industry representatives, the Nitrogen Management Consortium, has worked cooperatively for more than 15 years to reduce nitrogen pollution to Tampa Bay by half. In 2010, Consortium members voluntarily agreed to a major reallocation of nitrogen contributions that will require all new nitrogen sources to be offset by cuts in existing loads.

The Consortium's collaborative approach is hailed as a model for watershed management, and both state and federal regulators have ruled that the agreed-upon nitrogen limits provide adequate protection for Tampa Bay under new state and federal water quality standards. Consortium members were awarded the prestigious Gulf Guardian Partnership Award in 2011.

“Be Floridian” Campaign Supports Local Fertilizer Ordinances



TBEP launched a major public awareness campaign in 2011 in support of local fertilizer

ordinances that ban use of lawn and landscape fertilizers containing nitrogen during the summer months to protect water quality.

“Be Floridian” utilizes Social Marketing principles to foster a change in behavior and attitudes about fertilizer use, and about the “Florida-ness” of lush green lawns in general. The campaign’s theme reinforces the importance of water-based recreation to Tampa Bay residents, emphasizing that True Floridians know better than to fertilize their yards in the summertime, when heavy rains can wash excess nitrogen into the bays, lakes and oceans that are the centerpiece of our regional identity. The campaign mascot is a plastic pink yard flamingo, an iconic and familiar symbol of Florida.



Be Floridian kicked off in Pinellas County in Spring 2011, with billboards, print and digital ads, a website and Facebook page, materials for retail outlets, and a traveling flock of plastic pink yard flamingos that serve as roving campaign ambassadors. Be Floridian expands in 2012 to Manatee County and the City of Tampa.

Pinellas County (and all 24 municipalities including Clearwater and St. Petersburg):

Forbids use or sale of lawn/landscape fertilizer containing Nitrogen from June-September

Requires use and sale of fertilizers with 50% or more slow-release Nitrogen from October-May

Manatee County:

Forbids use of lawn/landscape fertilizer containing Nitrogen from June-September

Requires use of fertilizers with 50% or more slow-release Nitrogen from October-May

Hillsborough County:

Fertilizer cannot be applied when heavy rains are forecast or storm/flood advisories issued

Fertilizer cannot be applied within 10 feet of a waterway

City of Tampa:

Forbids use or sale of lawn/landscape fertilizer containing Nitrogen from June-September

Requires use and sale of fertilizers with 50% or more slow-release Nitrogen from October-May

CASE IN POINT

Bay-Friendly Landscape Blog

Following the record-setting winter of 2010, TBEP Outreach Coordinator Nanette O’Hara and her husband Rick decided to conduct an Extreme Yard Makeover at their Tampa home. They eliminated all their turfgrass, yanked out all their frozen, dead tropicals, and created a low-maintenance, water-thrifty landscape featuring cold-hardy native and Florida-adapted

trees, shrubs and groundcovers. The landscape is watered by three rain barrels and retains all stormwater on site by using natural mulches and permeable walkways of gravel and shell. Nanette shares their ongoing yard adventures through a blog that encourages others to follow in their footsteps and landscape like True Floridians. Visit www.bayfriendly.blogspot.com.

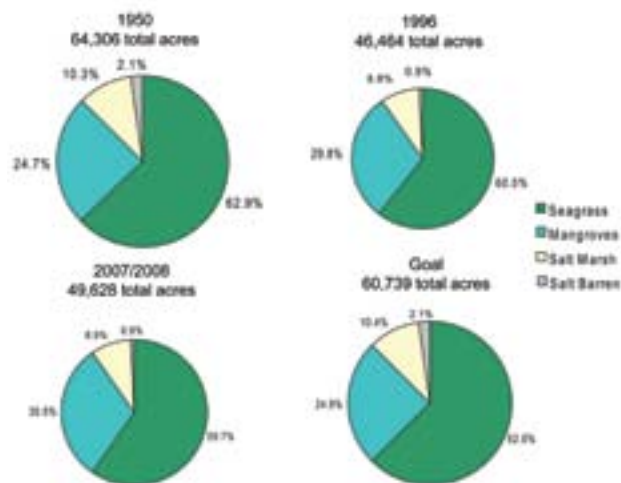


New Habitat Restoration Goals Support a Balanced Approach

The first update of TBEP's Habitat Master Plan in 15 years was completed in 2010, recommending expansion of two key habitats — low-salinity salt marshes and salt barrens — critical to maintaining biodiversity in the bay watershed.

The revised Habitat Master Plan validates the original "Restoring The Balance" approach adopted in 1995, that called for restoring habitats in relative proportion to their historic acreages in 1950.

Under "Restoring The Balance," more than 5,000 acres of coastal wetland and upland habitats have been restored or enhanced in the Tampa Bay watershed since 1995. Some 7,600 acres of seagrasses, the benchmark barometer of the bay's health, have been recovered since 1982. Additionally, 19 of 28 sites priority land acquisition sites have been completely or partially purchased, and eight of those have undergone at least some restoration.



Mangroves continue to expand faster than other tidal wetland habitats, so more salt marshes and salt barrens need to be created to maintain the historic mosaic of habitats, and ensure that the bay continues to support a diversity of birds, fish and other creatures. Therefore, the new goals call for maintaining the current mangrove coverage of 15,139 acres, while increasing the amount of low-salinity tidal marshes by another 1,918 acres and salt barrens by another 840 acres to keep

pace. Having such specific goals helps bay managers focus restoration efforts on priority habitats and track their progress in meeting the goals.

A Tampa Bay Habitat Restoration and Protection Partnership composed of agencies and organizations involved in bay restoration was formed in 2011, to further improve regional coordination and cooperation in identifying and implementing restoration and mitigation.



Photo credit: Donna Bollenbach

CASE IN POINT

Feather Sound Restoration

TBEP is sponsoring a significant habitat restoration in the Feather Sound area of western Tampa Bay that will help to jump-start recovery efforts in this highly urbanized section of the bay.

The project will restore about 20 acres of tidal wetlands in this area to naturally filter stormwater runoff from surrounding residential development and a golf course before it enters the bay. The restoration also includes nearly 10 acres of salterns -- a rare type of high salt marsh that has declined by more than 60% in Tampa Bay since 1950. Salterns, also known as

salt barrens, are a special focus of TBEP's Habitat Master Plan.

The publicly owned lands being restored are old mosquito control ditches along the bay shore that have been overrun with invasive Brazilian pepper trees. Once the pepper trees are removed and the ditches filled in, marsh grasses and mangroves can be planted to naturally filter runoff from the surrounding densely developed watershed.

The project team also is exploring opportunities to partner on the restoration project with the nearby Feather Sound Golf Course.



Preparing for the future impacts of climate change is an emerging concern for the Tampa Bay Estuary Program. The Tampa Bay region's vulnerability relating to urban flooding, storm surge and sea level rise must be addressed now in order to be prepared for the future.

In recognition of our commitment to assisting our local government partners in preparing for the effects of climate change, TBEP was designated a "Climate-Ready Estuary" by the U.S. Environmental Protection Agency in 2009.

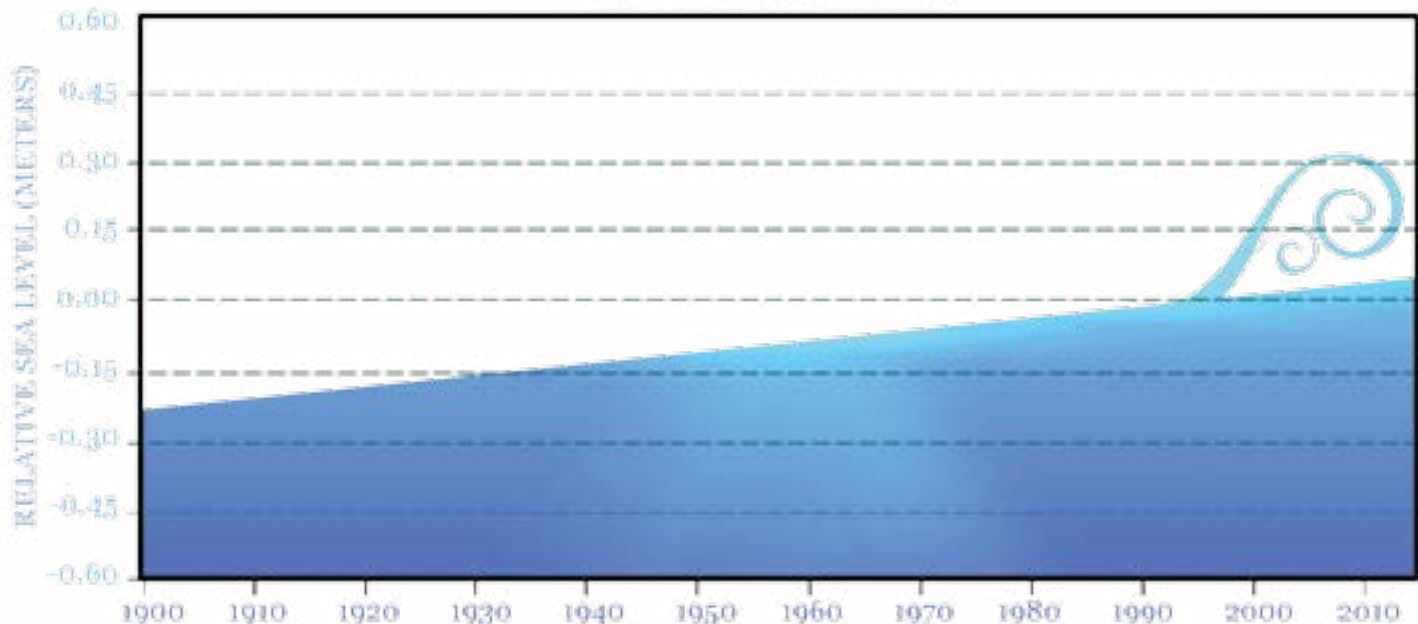
Among the climate-change projects we are working on:

- A Guidebook for Gulf Coast communities considering climate change in habitat protection strategies. The Guidebook will incorporate information produced from upcoming TBEP research projects, as well as other case studies from communities across the Gulf of Mexico region that showcase effective ways to accommodate climate change in habitat restoration efforts. This project is being funded by the U.S. Environmental Protection Agency.

- The "King Tide" photo-documentary project recruited citizens to take photos of structures and shorelines affected by very high, or "king" tides in October 2010, as a way to illustrate the possible impacts of rising seas on our region. The photos were published in a Florida Tide Watch page on Flickr.
- Creation of a web visualization tool that will depict various sea level rise scenarios in the Tampa Bay region in the year 2100, affording a preview of what habitats might be most vulnerable to rising seas so that planners and environmental managers can factor anticipated impacts into long-range planning initiatives.
- Ongoing participation in an information and technology exchange with scientists and water managers in The Netherlands through the "Resilient Tampa Bay" program sponsored by the University of South Florida. Annual workshops bring together Dutch experts with experience in managing water levels with scientists, planners and students in Tampa Bay to discuss common issues and solutions to sea level rise.
- Participation in the Nature's Notebook project of the National Phenology Network. Nature's Notebook trains citizens to monitor how keystone plant and animal species in their own backyards or nearby wild areas are responding to climate change. Workshops to train citizen-scientists are planned in 2012.



LINEAR MEAN SEA LEVEL TREND IN ST. PETERSBURG
(at St. Petersburg Tide Station)



From 1947-2011, sea level rose about an inch a decade.

BASIS 5: A Look Back At Three Decades of Science

Highlights of the Bay Area Scientific Information Symposium

In late 2009, more than 100 area scientists, managers, citizens and students gathered in St. Petersburg to share their collective knowledge of Tampa Bay in the 5th Bay Area Scientific Information Symposium.

BASIS 5 revisited and updated the science presented at the very first BASIS conference in 1982. The conference theme of "Using Our Knowledge To Shape Our Future" allowed participants

to reflect on how much our understanding of the bay ecosystem has grown over the last three decades, and identify emerging research and management needs.

More than 50 presenters spoke at the conference, covering diverse topics from geology to seagrasses to shorebirds. A facilitated synthesis session on the final



day pulled together cross-cutting themes, identified new concepts, gaps in our existing knowledge and even revealed a few surprises.

AMONG THE HIGHLIGHTS:

Water Quality/ Ecosystem Implications

What's New Since 1982:

- Nitrogen dioxide emissions have decreased substantially
- Phytoplankton concentrations in the bay are half what they were in 1980
- The quality of the sunlight penetrating the water column affects seagrass growth

What We Still Need to Know or Do:

- Better incorporate light quality into seagrass targets
- Improve our understanding of benthic production associated with epiphytes, microalgae and other vegetation
- Learn more about the open-water community of the bay (phytoplankton/zooplankton)
- Better understand factors causing spring/summer algae blooms in Old Tampa Bay

Seagrasses

What's New Since 1982:

- Significant technological advances in seagrass mapping
- 42% of the mapped seagrass areas in the bay are stable
- Shoal grass (*Halodule wrightii*) is the most prolific seagrass in the bay
- Successful transplanting of seagrass at MacDill Air Force Base

What We Still Need to Know or Do:

- Learn whether seagrasses stabilize longshore bars, or vice versa
- Understand why some seagrasses appear and disappear from year to year
- Better understand how commercial or port expansion will impact seagrasses

Ecosystem Restoration

What's New Since 1982:

- Adoption of a comprehensive plan and measurable goals for acquiring and restoring valuable habitats (the Habitat Master plan)
- Creation of an easily accessible Habitat Restoration Database
- Emerging 3D imaging technology for more precise habitat monitoring and assessment

What We Still Need to Know or Do:

- Integrate open water column production/larval recruitment/dynamics in habitat restoration goals
- Monitor and report on functional success of restoration/mitigation projects
- Shift restoration opportunities towards the upper watershed (including freshwater systems) that will not be affected by anticipated future coastal impacts

*Proving science is fun,
BASIS attendees don 3D
glasses for one presentation.*



Tidal Tributaries

What's New Since 1982:

- Tidal creek habitats support 2-3 times as many snook as other habitats
- Snook preferred creeks regardless of the water or habitat quality
- Use of new technologies to track ecosystem processes (Nitrogen isotopes/ Otolith microchemistry)

What We Still Need to Know or Do:

- Understand the contribution of tidal tributaries to overall fish production
- Learn more about the hydrology of small tidal systems
- Develop a management strategy that incorporates the full estuarine system
- Characterize the 100+ tidal tributaries in Tampa Bay to better identify their status and trends
- Develop water quality targets/requirements which support the ecosystem function of tidal tributaries

Watershed Management and Regulation

What's New Since 1982:

- Extensive collaboration in bay management, through efforts such as the Nitrogen Management Consortium
- Development of a decision matrix to evaluate bacterial contamination
- More stringent requirements for redevelopment or new development in watershed (no additional nitrogen permitted)

What We Still Need to Know or Do:

- Address Sea Level Rise in local, regional and state planning initiatives
- Improve permit monitoring and reporting for small to mid-level facility discharges
- Effectively restore freshwater wetland function through mitigation
- Creatively explore mitigation options that support the whole system



Connecting With the Community



Give a Day for the Bay

The "Give A Day for the Bay" volunteer program recruits citizens to assist with bay improvement projects at area parks and preserves through a series of workdays held throughout the year. From 2009-2011, volunteers contributed more than 3,700 hours to bay restoration. They planted more than 8,700 native plants, removed 7 tons of Brazilian pepper and other invasives, and picked up more than 4.6 tons of trash in and along waterways. A tri-county 20th Anniversary "Give A Day" in April 2011 deployed volunteers to three different sites across the region on one day to help restore coastal areas.

Bay Mini-Grants

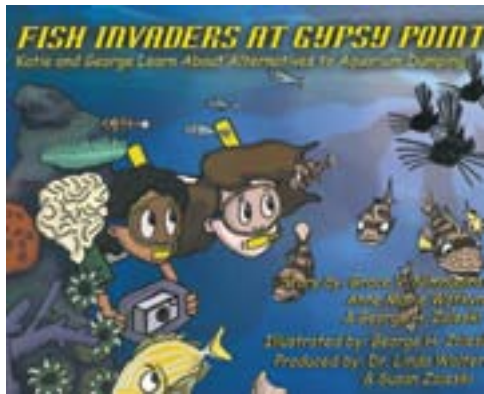
Using revenues from the Tampa Bay Estuary license plate (also known as the "Tarpon Tag"), TBEP has awarded nearly \$1.2 million in grants to schools, non-profits, neighborhood associations and other community groups in the last decade. Applicants in Hillsborough, Manatee and Pinellas counties are eligible for funding for bay education, restoration, research and pollution prevention activities, with recipients selected each Fall by members of TBEP's Community Advisory Committee. Since 2009, 68 community organizations have received \$296,000 in grant funding.



Pooches for the Planet

This innovative campaign seeks to reduce "Poo-lution" by educating dog owners about proper disposal of pet waste to protect water quality and human health. Recent activities include outreach partnerships with animal shelters, delivery of educational posters to vet clinics, an online "poop scoop" pledge, and pilot projects with neighborhoods surrounding waterfront parks. The newest component, "AmbassaDogs," enlists people-pet teams who use Robinson Preserve in Manatee County to provide outreach to other dog walkers there.





Eyes on the Bay: Invasive Species

TBEP partnered on two children’s books, “Fish Invaders at Gypsy Point” and “A New Home for an Old Friend.” Both explain the negative impacts of releasing aquarium fish into waterways, and include lesson plans to facilitate use in schools. A summer workshop in 2011 provided in-depth training to teachers on classroom use of the books. An Invasive Species Poetry Contest in 2011 was a hit with both children and adults who submitted more than 90 creative verses. All the poems were published in a digital booklet available on the TBEP website. *(The three winning entries are shown on the back cover of this Report.)*



Getting Social

TBEP now embraces social media with a substantial online presence. Local events, photos and interesting environmental news concerning Tampa Bay are posted frequently to nearly 1,000 followers of Tampa Bay Estuary Program, Pooches for the Planet and Be Floridian Facebook pages. Relevant news and features are also posted via a weekly listserve, bi-monthly e-newsletters, and a YouTube channel with links to videos produced by outreach staff.

tampa bay:
20|20

TBEP marked two decades of community partnership in 2011 with a number of 20th anniversary events including a traveling photo exhibit called “Tampa Bay: 20/20.” The exhibit featured 20 images by local photographers depicting the beauty and diversity of Tampa Bay. It traveled to various venues throughout the year, including Weedon Island Preserve, the South Florida Museum, Mosaic Co. headquarters, The Florida Aquarium and the South Shore Library. Several of the photos are featured in this report. The photos were auctioned at the end of the year, with proceeds going to TBEP’s community education programs.



Image credits (starting counter-clockwise with White Ibis): Joe Bailey, Jimmy White, Dorian Photography, Chad Young, Nature's Lore Photography.

Invasive Species Poetry Contest Winning Entries

Winner: Adult
Christine Jamesson, age 57
Clearwater, Florida

A Trio of Evil

Lovely but deadly the Lionfish have spread their range
Released partly thanks to a Hurricane
Once numbers of only three
Their masses are now seen from RI to Belize

Divers and fishermen have to fight back
And hold Lionfish derbies for wads of cash
All have high hopes to contain the creature
And keep it as it was- a rare aquarium feature

Bufo Toad all warty and thick
Secretes a poison that makes pets sick
Grayish-Brown with a slimy belly of yellow
He is a most repulsive fellow

Released in 1936 to control pests on sugar cane
He has now become a Florida pain
Looks harmless enough with no knobs on his head
But a lick of his skin leaves poor Fido dead

Burmese pythons - threatened in their native land
Are now a serious threat to man
Unchecked they could cover 1/3 of the states
And make pets or a child suffer a terrible fate

They can lay up to 100 eggs a year
And make meals of the sweet and rare Key Deer
They are unhampered now, sunning and well fed
We must end their reign and put a price on their head



Winner: Juniors 11 and under
Kristen Gallo, age 11
Odessa, Florida

The Evil Plant

Winding, twisting, rapidly growing,
the Air Potato strikes
a full grown Oak tree,
wrapping its sickening green leaves
around the tree's thick trunk,
moving closer and closer
to the canopy,
like a predator about to kill
its juicy prey.

The plant doubles its size,
squeezing out the life
of the helpless tree.
Finally, the Air Potato
reaches the canopy.
It secures for itself
a tough barrier of leaves
on top of the oak.

Hogging all of the sunlight;
The oak becomes weaker
and weaker.

Unable to perform photosynthesis,
it is slowly inching to its death.

The Air Potato finally covers
the helpless tree,
and sucks all the life
out of it.

The Oak tree dies,
by suffocation
and a lack of food.

The Air Potato has done its job.
It keeps growing and growing,
and killing and killing.

What can we do
to stop this evil plant?

Winner: Juniors 12-17
James Hsiung, age 15
Tampa, Florida

Neglecting the Natives

Many plants and animals reside
here in the Tampa Bay,
Some float on by, while others are
here to stay.

Invading our natural habitats,
many do not know,
These invasive species arrive, and
like weeds, they grow.

Humans, not aware of the
existence of these dangers,
Because all plants look alike, thus
none look like strangers.

Brazilian Pepper Trees are
conquering the shore,
along with air potatoes, cogon
grass, and oh yes, there's more.

Asian Swamp eel are preying on
native frogs,
while the aggressive marine toads
are killing off our dogs.

Who is responsible for protecting
plants with native features?
It is us, the citizens, to help
remove these invasive creatures!

Now is the time to step up to the
plate,
to save our original habitats,
before it's too late.



Tampa Bay Estuary Program
100 8th Avenue S.E.
St. Petersburg, FL 33701



Tel: 727.893.2765
Fax: 727.893.2767
E-mail: saveit@tbep.org
TBEP.org