



Sustainability Stewards of Broward Coastal Resilience and Green Infrastructure *Workshop Summary*

The May 7, 2015 Sustainability Stewards Workshop blew our socks off! Literally! Co-hosted by Lauderdale-by-the-Sea and Broward County's Environmental Planning and Community Resilience Division, the workshop explored coastal vulnerabilities and nature-based defense strategies.

With both classroom style learning and a hands-on activity, 50 participants got to network, expand their knowledge, and dig-in to prove their love of our beach communities!



Our morning discussion included a virtual tour of The Nature Conservancy's (TNC's) new Coastal Resilience website and [Online Coastal Defense App](#). Broward County staff gave an update from the SE FL Regional Climate Change Compact's Shoreline Resilience Working Group, as well as an overview of Broward County Beach Management Program. A historical perspective on dune restoration and lessons learned was offered by the sustainability officer of Delray Beach, and recent efforts to enhance and protect the coast at Lauderdale-By-The-Sea were presented by City Commissioner Mark Brown.

After an inspirational video on volunteer-based dune restoration efforts in our region, folks laced up their sneakers, passed around the sunblock, and rolled up their sleeves – to make an immediate and positive impact at our host community. More than 35 volunteers headed out to the beach, led by staff from the Youth Environmental Alliance, to enhance a dune previously stabilized with rare and endangered species.

Some of the major take-a-ways from the meeting were:

- Healthy and complete ecosystems provide a wide range of economic benefits for the adjacent urban community. Coral reefs absorb wave energy and reduce wave height. Dunes reduce impacts of storm surge and provide sand erosion control. Mangroves trap sediment, filter stormwater, and provide improved habitat for marine nurseries. → Green infrastructure often performs at a fraction of the cost of grey infrastructure, and comes with many complimentary co-benefits.
- TNC's coastal resilience website can help a community model the benefits of targeted restoration, so we can decide where to act, and how. The tool can be used with a local or regional lens. It's a powerful tool with many layers, all on an easy online (non-GIS) platform. It can even show where habitats can or cannot migrate under different SLR projections, so that we understand our natural systems adaptation capacity. → Participants asked for future iterations of the tool to include dune habitats, current habitat health, and economic benefit calculators.

- The Southeast Florida Regional Climate Change Compact’s Shoreline Resilience Working Group has been meeting for one year. Their goals have been to collect data on all living shoreline projects, highlight completed projects, inventory opportunities for new projects, provide technical support when needed, and promote the concepts of shoreline resilience.
- The Nature Conservancy and Shoreline Resilience Working Group assembled a case studies booklet to highlight living shoreline projects in our area to promote the ideas that: Living shorelines are designed to work in harmony with nature; the living shoreline approach can be cost effective, self-maintaining and adaptable to change. → 7 Great Local Examples!
- Broward County has had a beach management program since the 1970’s. To date, over 10 million cubic yards of sand have been placed on our beaches. Maintaining our beaches is vital due to the fact that they:
 - Protect over \$4 billion in upland infrastructure
 - Provide critical habitat to nesting sea turtles and other marine life
 - Provide recreational space for tourists and residents
 - Contribute \$6.6 billion annually to the economy, directly and indirectly
 → The County is shifting from the traditional “segmented” program design to a more regional and proactive approach, focusing on small projects and hot spots in a coordinated process. Port Everglades Sand Bypass is an example of regional sediment management.
- Delray Beach’s beach management program is a great success story, but not one without its ups and downs. Through development and storm damage, they lost the original natural dunes. To protect infrastructure, they resorted to several iterations of hard armoring, which was soon wiped out with more storms. In the 70’s, the City began renourishing the beach with sand and vegetating the dune, but used exotics instead of native species. → After years of hard work and learning, their beach is beautiful and healthy, one of the most stable in South Florida! It does require active management, which the city puts as their top priority. Now their focus is species diversity, and the City is proud to serve as a seed bank for local needs.
- Rob Barren said that while beach restoration does require active management of invasive species, it is amazing what a relatively small initial investment in maintenance can do, over time. He stated that the Delray Beach renourishment started with a 6 foot strip of sand and plants for \$20,000 in the 1970’s. As a result of dunes and vegetation catching sand moved through wind transport, they have captured about \$6 million worth of sand. Their beach has grown over 120 feet seaward and up to 13 feet high in some places. The dune – properly placed and cared for, will grow! → cost effective approach
- Dunes can be placed *in front of access points* as a resilience strategy. Surfside has used this approach and Hollywood is about to implement it too.
- Youth Environmental Alliance and Commissioner Mark Brown from Lauderdale-By-The-Sea led the dune planting activity, on a site stabilized with sea grass 16 months prior to our event. Volunteers enhanced the dune with plants from Silent Native Nursery in Homestead, FL. Species included Bay Cedar, Verbena, and Beach Creeper.

If you have additional ideas or questions, our speakers have kindly made themselves available for event follow-up. Their contact information is below.

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The workshop agenda, summary, and presentation documents will also be posted on the County's GoGreen webpage, under [Sustainability Stewards](#).

Thank you again to our wonderful speakers and participants. Fantastic information and ideas were presented, and the group left inspired to take new concepts and best practices back to their realms of practice to implement. By sharing our knowledge, experiences, and thoughts we advance all of our programs and help to move sustainability forward in our entire community.

Together, through the Sustainability Stewards of Broward, we are making Broward a more energy efficient, climate resilient, and sustainable community. We hope to see you at the next informative and inspiring event!

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