

2013 ANNUAL REPORT







The Surfrider Foundation is a non-profit grassroots environmental organization dedicated to the protection and enjoyment of our world's oceans, waves and beaches through a powerful activist network.

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For more information on our campaigns and programs, visit **surfrider.org** 

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# **Executive Summary**

Over its 30-year history, the Surfrider Foundation has been protecting our oceans, waves and beaches for our enjoyment through a powerful activist network.

The Surfrider Foundation, through its Clean Water Initiative, advocates for solutions that can restore the water cycle and natural functions of landscapes to protect local water supplies and prevent pollution from reaching the ocean. This includes programs, campaigns, tools and resources to educate communities on water mismanagement, waste and pollution of water resources, and how to restore the natural water cycle through integrated land and water management.

The Ocean Friendly Gardens program supports the Foundation's Clean Water Initiative. It is a volunteer-run landscape education, hands-on training and advocacy program. In addition to providing valuable information to property owners on how landscapes and hardscapes can prevent water pollution, Surfrider chapters are using this program to train landscape professionals to incorporate the program's principles into their practices. Chapters also use the program to motivate local governments to support Ocean Friendly Garden-oriented policy changes for existing and new development.

In 2013, there were 35 chapters running various levels of garden programming, using Surfrider's Ocean Friendly Gardens online map to display their projects. This is a jump from 23 chapters in 2012. Programs were launched in Hawaii, connections strengthened in the Southeast and Florida, and discussions held in New England. A total of 294 activities occurred, more than doubling the amount from the previous year.

Chapter volunteers do everything from neighborhood walks, speaking engagements, workdays to policy work. Ocean Friendly Gardens activities showed that (1) chapters want a range of activities that adjust to their capacity; (2) property owners want a set of steps to follow, and they like hands-on events more than handouts; (3) people are most often looking for a list of competent landscape professionals to hire rather than do the work themselves; (4) a holistic approach engages multiple government agencies that typically work independently of one another – water quality, water supply, flood control, green waste reduction – and nets multiple benefits. This is consistent with what is being learned by non-profit organizations.

Armed with knowledge, experience, data and examples of solutions, chapters are raising public awareness of local water quality issues and bringing together stakeholders to investigate and solve water quality problems caused by urban runoff and other sources of pollution. The case studies included in this annual report describe how seven chapters are running programs based on their capacity and issues. Surfrider chapters across the country are also implementing other Surfrider clean water programs such as Blue Water Task Force to identify pollution sources and monitor how well solutions work.

Learn more at surfrider.org/ofg





# **Initiative Summary**



#### The Clean Water Initiative

The urbanization along our coasts has altered and polluted the natural water cycle. For example, green landscapes that have been replaced by concrete prevent rain from soaking into the ground which results in polluted runoff straight to the ocean. The Surfrider Foundation advocates for solutions that can restore the water cycle and natural functions of coastal landscapes to protect local water supplies and prevent pollution from reaching our oceans, waves and beaches.



Restoring floodplains, wetlands, and rivers creates more resilient landscapes that allow water to soak into the ground, which filters out pollutants and provides flood control benefits. Fish and wildlife also benefit as new habitat is created. And, it improves stream flow, which carries more sand downstream to help build beaches.



Recycling wastewater reduces ocean discharge from sewage treatment plants while creating a local, reliable, and safe clean water supply.

## 3 Create Green Streets

Capturing rainwater in vegetated areas near streets and paved parking lots allows water to soak into the ground, which recharges ground water supplies, reduces flooding and prevents polluted runoff from reaching the beach and ocean.





Planting an Ocean Friendly Garden applies Conservation, Permeability and Retention (CPR) to your yard. This conserves water, creates habitat for wildlife, and reduces polluted runoff from your landscape.

## (5) Monitor Water Quality



Testing the water at the beach lets us know where it is safe to swim and surf, and helps identify pollution problems so they can be fixed. Learn how to test the water at your local beach with the Surfrider Foundation's volunteer water quality monitoring program, the Blue Water Task Force.

# Program Overview

Ocean Friendly Gardens is Surfrider Foundation's volunteer-run landscape education, hands-on training and advocacy program. Since the program's inception five years ago, volunteers have been in communities across the country sharing information, building gardens and seeking to change government policy. As the awareness of taking an integrated approach to landscaping has grown, chapters began designing Ocean Friendly Gardens programs to fill in gaps and complement the work of government and other non-profits.



**Classes** are typically taught by a landscape professional and are comprehensive, integrating several key components for developing a successful garden: evaluate your site; build healthy soil; create permeable surfaces and retain rainwater; create habitat; select climate appropriate plants; minimize turf and maintain organically; irrigate properly and achieve zero dry weather runoff; and maintenance.

Lawn Patrol (neighborhood walk) takes its name from dawn patrol, the early-morning check of waves done by surfers to see if it's worth going out. The walk is led by a person familiar with the program's concepts and is open to anyone who wants to develop his/her understanding of what makes an ocean friendly garden. It is also a way for volunteers to get involved and educate the public. It starts at an existing garden, reviewing the principles and practices implemented. Participants walk the neighborhood with the sign criteria on a clipboard to help them identify existing ocean friendly garden elements at a home landscape and opportunities to do more. They can leave behind a flyer that has space to check-off components that are implemented or write in the date of any upcoming Ocean Friendly Gardens events next to the slots for them. The Chapter Ocean Friendly Gardens Committee could help with implementing the retention element. A tracking sheet can be used to write

down the addresses of homes with Ocean Friendly Gardens, or close to it, to follow up with.

Classes can be the first step in a series of events to retrofit a landscape, followed by a Hands-On Workshop and Garden Assistance Party.

Garden Assistance Party provides hands-on help to assist people in creating an Ocean Friendly Garden, relying on the project host to do some homework. The host's job include; creating a design that meets the garden criteria; gathering all materials ahead of time; asking neighbors and friends to join the party; providing lunch; paying it forward. Because the Surfrider Chapter is made up of volunteers, we typically limit the size of the area to around 500 square feet. We also want to take volunteers from beginning-to-end of a task. The party is aimed at those who have attended an Ocean Friendly Gardens class and/or workshops, have a highly visible location, and invite their neighbors to participate - and spark a wave of Ocean Friendly Gardens in the neighborhood. Before someone contacts a chapter for help, they are asked to review and answer a questionnaire. For those who do not know where to start first, it is recommended that they hire a landscape professional to assist with any and all steps: site evaluation, design, materials acquisition list, and workday oversight.

Hands-On Workshops are part in-class and part in-field to educate and train people as part of a professionally led garden installation or retrofit. Because they are geared toward training, the workshops are led by a pro and focus on completing just one section or component of the garden. They help grow a cadre of trained sustainable landscape practitioners who can then reach a larger audience.

Topics covered include: site evaluation and analysis; turf removal, sheet mulching and soil remediation; rainwater capture and rain garden design; proper planting and installation of drip irrigation; correct installation and programming of weather-based irrigation controllers; and stewardship (maintenance).

#### **Other Resources**

Ocean Friendly Gardens resources are provided to Surfrider chapters as well as to the general public through the Ocean Friendly Gardens webpage on the Surfrider website: sign criteria (standards) and yard sign, an Activist Toolkit on how to run activities, online map to display Ocean Friendly Gardens, blog posts about events and DIY info. In addition, there is a national Ocean Friendly Gardens Facebook page.

Ocean Friendly Gardens is a very diverse program. Each Surfrider chapter is able to design and implement their program to best utilize their available resources and meet local needs. Some chapters simply post information on their website and hand out Ocean Friendly Gardens brochures. Other chapters conduct speaking engagements and walks. Those with sufficient capacity partner with local government agencies, coastal organizations, and neighborhood associations to conduct workdays. Whether high- or beginning-capacity, chapters have advocate for changes to government policy. Many chapters also have programs established in local schools, and are educating students about local water quality issues and promoting a coastal stewardship ethic.



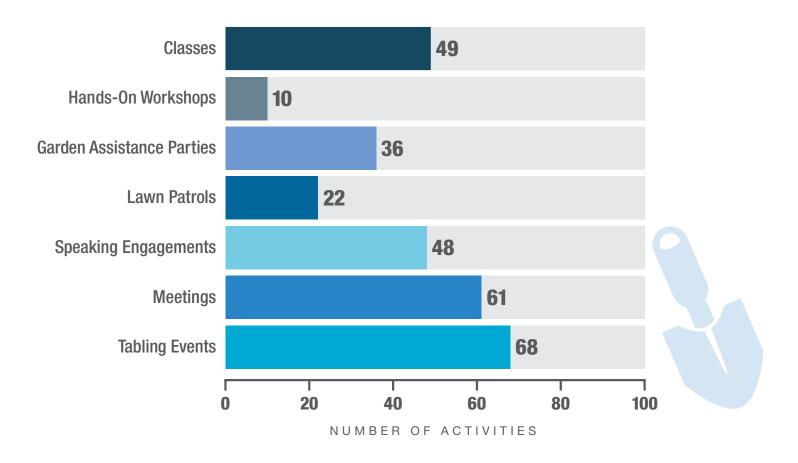






### 2013 Program Activity & Results

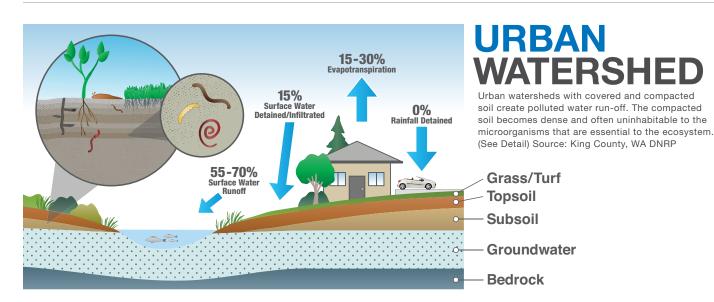
This report covers all Ocean Friendly Gardens programming data collected during the 2013 calendar year. The program continues to grow in number of activities and chapters running programs.



#### 2012 Results 2013 Results 23 Chapters 35 Chapters 638 Volunteers 479 Volunteers 1,841 Hours of Instruction 3,111 Hours of Instruction 1,285 Activity Attendees 5,741 Activity Attendees 1,841 Volunteer Hours 3,111 Volunteer Hours x \$22 Per Hour\* x \$22 Per Hour\* \$40,502 of Value \$68,442 of Value

\*Hourly wage according to www.independentsector.org

# Facing Issues



#### What is Urban Runoff?

Water running off our gardens, streets and farmland is the #1 source of ocean pollution – and ocean users and precious marine life suffer for it. The first one-inch of rain after a dry spell is called the "first flush," and contains most of the pollutants during a rainstorm (every 1000 feet of hard surfaces generates about 600 gallons of water runoff for every inch of rain). Traditional building codes have directed rainwater off the property to prevent flooding of a site. Meanwhile, this runoff contributes to flooding of neighborhoods and erosion of stream banks.



Runoff also happens during dry periods, known as dry-weather runoff, with sprinklers overwatering and overshooting the landscape. Outdoor watering typically accounts for the majority of a household's water use in dry climates, even though much of it may not be needed if using rainwater as a primary source of irrigation. Meanwhile, many regions lack clean drinking water. Plus, transporting and cleaning water is "energy-intensive," contributing to climate change.

## Runoff can contain pollutants and contaminants such as:

#### Fertilizers

Increased nutrients leads to algal blooms and red tides, lowering dissolved oxygen levels enough to kill aquatic habitat and fisheries.

Pesticides, Herbicides and Fungicides
These chemicals poison humans, marine
life and soil biology.

#### **Automobile Contaminants**

Engine oil, exhaust and brake pad dust as well as exhaust from utilities can poison marine life and acidify oceans, decreasing the thickness of creatures with shells as well as bleaching corals.

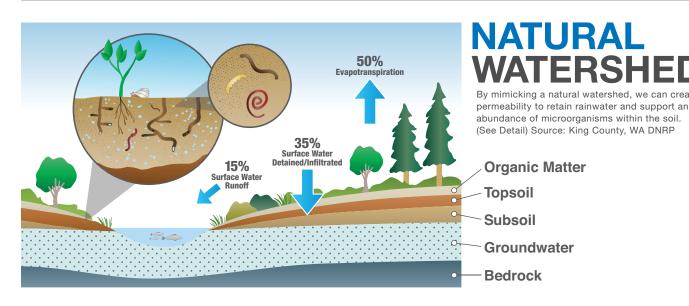
#### **Ø** Bacteria

Bacteria from animal droppings sicken humans and marine life, and can close beaches.

#### Sediment (Soil)

Sediment pollution can reduce water clarity and smother fish eggs.

# Creating Solutions



## Creating a "Soil Sponge"

Gardens and hard surfaces can sponge up rainwater and any runoff for use by plants during dry periods, reduce supplemental water use by 80-90%, filter pollutants and reduce flooding – and be beautiful, reasonably priced and less frequently maintained (but a more organic-type maintenance).

How is this possible? Apply **CPR** to your property (**Conservation**, **Permeability** & **Retention**®) to revive our watersheds and oceans. CPR takes an integrated and holistic approach, addressing water quality, water supply, green waste reduction, and habitat creation at the same time:

**Conservation** of water, energy and habitat through native plants and climate adapted plants, spaced for mature growth (the same applies to vegetable and fruit gardens).

**Permeability** through mulch and biologically active soil as well as using permeable materials for – or making cuts in existing – driveways, walkways and patios that allow water to percolate into the soil.

**Retention** devices like rain chains, rain barrels and swales/ dry stream beds soak up rain water in the soil for the dry season or store it to water veggies, preventing it from running off of the property.



## Each Ocean Friendly Garden applies CPR, resulting in:

- Zero dry-weather runoff
- Preventing polluted wet-weather runoff
- Significant water use reduction
- Preventing flooding & eliminating green waste



### Slow, Spread and Sink

Like the three "R's" for solid waste – reduce, reuse, recycle – there are the three "S's" for water: slow, spread, and sink it. This happens easily in a natural watershed, where streams naturally have curvy shapes and low and high spots, with rocks, mulch and plants helping to slow water and give it time to spread and sink. Ocean Friendly Gardens approach a site as a "mini-watershed," identifying the high and low points (e.g., roof and street gutter), and apply the three "S's" in between. Ocean Friendly Gardens mimic watersheds with design features like dry streambeds and building soil that acts like a sponge.

Leaves fall and break down into mulch, becoming food for soil microorganisms as well as creating air pockets. The organic matter and pockets also make soil "spongy" and absorb up to 40% more water than just dirt (Association of Compost Producers). Soil microorganisms need the air to survive and water to move around. Water is key to plant life, too: a plant sends out a message to the soil microorganisms (in the form of a hormone, or sugar) to bring it some water or food. Native plants require less water and no pesticides because they are adapted to local soils and rainfall patterns. In addition, natives have deeper root systems, absorbing runoff and tapping into lower sources of water. Water that is not sponged up by the soil may either move laterally and replenish stream flows, or percolate down further and help refill groundwater aquifers.

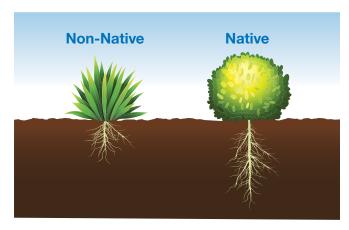
When pollutants settle in permeable soil, soil microorganisms can help filter them: bacteria sequester heavy metals; protozoa are the main nutrient cyclers; fungi help suppress disease and transport food and water to plants. Of course, we want to reduce the production of pollutants.

The term "rain garden" is sometimes used inter-changeably with Ocean Friendly Gardens. Rain gardens are shallow depressions planted with natives specifically adapted to wet conditions. They are typically just the area of the garden absorbing rainwater from a part of the roof (from a rain gutter downspout). Since Ocean Friendly Gardens principles apply to the entire garden and work to prevent polluted runoff every day, rain or no rain, we like the term Ocean Friendly Gardens.

## Sponging water has multiple benefits:

- Less expensive than high-tech storm water devices and helps meet government storm water permit deadlines.
- Saves money on your water bill and green waste bill (using leaves as mulch).
- Healthier aquatic populations, which can also mean safer food for humans.
- Fewer sewage spills for areas in which storm water and sewer systems are connected.













The following case studies describe how chapters are implementing Ocean Friendly Gardens programs. They are good examples of how the chapters are raising awareness about water pollution issues in their communities, building demonstration gardens and advocating for changes to government policies.

### **Coos Bay, Oregon**

The Surfrider-Coos Bay Chapter Ocean Friendly Beer Garden at the new 7 Devils Brewery storefront was "brewed up" by the Chapter Chair and the Secretary - who also happen to be married and the co-owners of the Brewery. During renovation of the building which would ultimately be the Brewery, the Chair and the building co-owner saw the value of having an Ocean Friendly Garden to capture runoff - and create a nice, outdoor beer garden - all by removing asphalt from a few parking spaces.

The Chapter held a couple of meetings to highlight the Ocean Friendly Gardens concept, showing existing gardens in and around the area, and engaged local landscapers to co-present concepts. A local contractor (Sol Coast) that happened to be friends of the Brewery's co-owner was hired to lead the project. A local landscape designer (and Coos Bay City Council member) was asked by the contractor to create the design. The contractor also went with a small outfit that focuses on low impact design (LID) for storm water management calculations. Surfrider staff involvement was minimal: chiefly, just trying to keep up with the work that the design-build firm was doing and if they needed any support.

The Garden Assistance Party was also led by the contractor and focused on installing plants and spreading mulch. The contractor guided 35 volunteers through the day. In addition to Surfrider volunteers, the Coos Watershed Association brought out workers and also provided tools! The installation took 2 1/2 hours. As Sol Coast's Shannon Souza put it, "It was the best group of volunteers I've ever worked with." After the installation, everyone was rewarded with pizza and beer, compliments of Sol Coast and 7 Devils Brewing Co. The project got some good media coverage, too.









## Portland, Oregon







The Green Streets Stewards Program is a partnership between the City of Portland and the Portland Surfrider Chapter's Ocean Friendly Garden program. Green Streets Stewards aim to ensure the unimpeded flow of water into street-side bio-swales and clean up any trash. Over 1,300 of these gardens have been installed in Portland. This innovative way of managing storm water is turning heads internationally, with officials from around the Country and around the globe coming to Portland to see how this system is helping preserve local watersheds.

Green Streets is an excellent way for folks that don't live directly next to the ocean to connect to it. Volunteers like participating because they can immediately see the impact of their efforts, whereas policy and advocacy work can be hard to see, especially away from the coast. It's a great way to plug in new volunteers, to help them make friends within the chapter, and get people stoked.

There's a Green Streets Stewards "North" crew and an "East" crew. They work rain or shine (the City provides the buckets, vests, gloves and "trash grabbers"). Afterwards, they hang out at the end or eat dessert!

The partners at the City meet up with these crews for a debrief/check in usually twice a year, and they usually present on Green Streets and storm-water management once a year at Chapter meetings. Gregg Hayward recently got hired as the Waste Reduction Specialist for the City of Gresham's (Oregon) Solid Waste and Recycling Division! Gregg works with businesses, schools and multifamily complexes helping them throw away less stuff and connecting them to other sustainability services.

Check out Chapter Media Coordinator Phil Schlieder (who works at Hyperion Media) and up and coming photo media maker lan Kennelly who put together this video about the Green Streets Stewards Program.

CLICK HERE to view the video!

### Monterey, California

The Monterey Surfrider Chapter's Ocean Friendly Gardens Program has been giving talks and running Lawn Patrols (aka neighborhood walks), finding them to be a fun and effective way to educate and inspire action. Ramie Allard, a landscape contractor, is the Chair of the Ocean Friendly Gardens Program.

Walks typically start at a property that has CPR -Conservation, Permeability and Retention - applied to it. Ocean Friendly Gardens books are on-hand for sale. In attendance are arborists, plant nursery owners, master gardeners, neighbors, landscape contractors, irrigation specialists, and more.

Then they head out to walk the neighborhood, identifying examples of CPR or opportunities to apply it, focusing on ways to reduce or eliminate dry weather runoff and capture more storm water runoff, e.g., converting sprinklers to drip irrigation. A recent walk featured Ramie's garden, and a garden designed by her with rain gutter downspouts draining into a swale planted with natives. One stop was a site at which Ramie would be leading a hands-on workshop about sheet mulching (pictured at right). They have done a plant raffle and handed out Ocean Friendly Gardens Bingo cards for the walk (in the Ocean Friendly Gardens Activist Toolkit).

Talks have been presented on a Master Gardener Tour, and to garden clubs. Participated as an exhibitor in a Stormwater Workshop presented by the Resource Conservation District of Monterey County and sponsored by the Monterey Regional Storm Water Program in Seaside, California. The group demonstrated different types of drip irrigation and discussed principles of Ocean Friendly Gardens to the public. Alyssa Nally, a California State University-Monterey Bay student and Ocean Friendly Gardens intern, assisted Ramie at these events.

This high level of activity led to an invitation for the Ocean Friendly Gardens Program to be a part of the Monterey Bay Friendly Gardens Program. The Program is a sustainable landscape certification-oriented project led by Ecology Action and funded by a state proposition. The grant focus is to develop social incentives to drive market demand for sustainable landscaping and low impact design and create a regional standard for ecological landscaping design and maintenance services that will be incorporated into Certified Green Business Program Requirements.







## West Los Angeles/Malibu, California







The Beyond Baroque Ocean Friendly Gardens (Ocean Friendly Gardens) project was a collaboration between the Surfrider Foundation-West LA/Malibu Chapter Ocean Friendly Gardens Committee and Beyond Baroque Literary / Arts Center, a community non-profit cultural organization. BB occupies the building adjacent to the Ocean Friendly Gardens, which was once in the Venice City Hall building and is now owned by the City of Los Angeles.

The 800 square foot Ocean Friendly Gardens replaces a portion of the expansive, but mostly dead turf grass in front of the highly visible and historic building. The Chapter was successful in getting a \$5,000 grant from the City of Los Angeles' "Keep Los Angeles Beautiful Grant" Program. The grant helped fund a portion of the costs.

Ocean Friendly Gardens Co-chairs Steve Williams and Tom Rau organized and conducted a series of three Hands-on Workshops to building the Ocean Friendly Gardens. In the workshops, community volunteers learned how to: grade a site for rainwater capture, re-direct rain gutter downspouts, then sheet mulch; select and plant native plants; install drip irrigation; and perform maintenance using Ocean Friendly Gardens conservation principles.

The garden was designed by Tom, a licensed landscape architect. Rainwater from two roof downspouts is piped (just below ground level) to the garden, and they emerge through "pop-up" devices into two mulched and planted retention basins. There's capacity to absorb and infiltrate the "first flush" of rainwater (the dirtiest part of a rain storm after a dry spell). The entire garden is surrounded by berms that also help prevent runoff from reaching the ocean.

The Chapter and the Arts Center volunteers meet monthly for a few hours to weed and maintain the garden.

The total project cost was \$14,000. Subtracting for the \$5,000 grant, the remaining costs were covered by volunteer labor, and donated materials and services. Together they maintain the Ocean Friendly Gardens.



## Volusia-Flagler, Florida

The Volusia-Flagler Chapter's Ocean Friendly Gardens Committee chose the headquarters of the Marine Discovery Center (MDC) in New Smyrna Beach as their first project. Committee Chair, Ryan Flagler, had given a talk on Ocean Friendly Gardens as part of a lecture series with MDC, and MDC was open to doing an ocean friendly garden at their site.

The Chapter partnered with Marine Discovery Center and Shangri La Landscaping, a local landscaping company. Discussions and meeting with Shangri La and Marine Discovery Center occurred prior to the Garden Assistance Party workday to go over the requirements of the ocean friendly garden criteria as well as other information. Shangri La did most of the directing during the Garden Assistance Party and Chapter activists weighed in to ensure compliance with the Ocean Friendly Gardens program criteria. The design creates a "moat/dry creek bed" around the perimeter, which was filled with reclaimed oyster shells to capture any run off from the sloping garden. At various times throughout the day, about 25 people participated in installing the garden.

There were several locations and possibilities on-site that were offered. Though the site they chose did not have an obvious rainwater retention component (remember R in CPR), they thought that Surfrider members as well as the public could learn from it more given its high visibility. Because Marine Discovery Center was so inspired by the Ocean Friendly Gardens, they applied CPR to an area next to their headquarters (pictured at right). The roof supports double work as downspouts, directing rainwater into the landscape. They worked with the same nursery and landscaping company as the front Ocean Friendly Gardens.

In addition, Marine Discovery Center restored a massive area behind the building into a salt marsh (at right), which will also be used as a nursery to reconstruct other wetlands.









## Palm Beach County, Florida







The Palm Beach Chapter's Ocean Friendly Gardens Committee chose its first garden installation to be at a high profile location: the Palm Beach Zoo. The project was coordinated by Chapter Ocean Friendly Gardens Chair Jennifer Bevan and Co-Chair DD Halpern. Jennifer researched the different areas the Zoo had offered to give Surfrider for the Ocean Friendly Gardens and chose a spot with high visibility.

Jennifer then researched the spot's geographical features soil, sunlight, water - to determine which plants to use. After reviewing many websites and other Ocean Friendly Gardens information, she successfully picked out five different Florida native plants and brought a well-rounded plan to the Zoo staff. With a few months of work and ironing out the details, they installed the Ocean Friendly Gardens. The Zoo staff volunteers helped prep the area, cut away dead foliage, dug holes, spread organic mulch, raked and planted.

During the opening day, the Ocean Friendly Gardens Committee provided a small craft area for the kids to make natural bird feeders with peanut butter, pine cones, string and bird seed. Currently, Jennifer and 2 other wonderful volunteers maintain the garden once a week, rotating which week one will perform the work and take pictures of the progress. They were able to get all the materials from local companies for low- or no cost. They installed a cool Ocean Friendly Gardens brochure and business card holder.



## **Jersey Shore, New Jersey**

Not long after Hurricane Sandy, the Surfrider Jersey Shore Chapter was approached for assistance with a project that helps restore the natural and beneficial functions of the coast. They helped turn a parking lot that used to direct polluted runoff to the nearby beach back into its normal, vegetative state. It is part of Surfrider's campaign to "Rethink the Coast."

The project is referred to as maritime forest and is located in Bradley Beach, at the tip of Fletcher Lake. For locals, the parking lot used to be an eyesore. About 100 volunteers turned out to return the lot into a forest. Now the site infiltrates water (runoff?) as well as prevents coastal flooding and storm surges.

The vision for the project was a brainchild of Captain Al Modjeski, an environmental professional with AECOM. A natural coastline is comprised of "layers" of dunes: primary, secondary, and tertiary. They help lessen the impact of large storms, reducing risk to health and property, while enhancing ecological resiliency, biodiversity, and local water quality.

The project was a collaboration of community groups and non-profits, government agencies at all levels, and individuals. Check out this great video of the workday: CLICK HERE to view the video!









Thank You For Your Support.