SURFRIDER FOUNDATION

OCEAN FRIENDLY GARDENS

2012 ANNUAL REPORT

Introduction

Ocean Friendly Gardens (OFG) is Surfrider Foundation's program for transforming landscapes and hardscapes to prevent water pollution. This is done through education, hands-on events and engaging landscape professionals and government agencies. It offers our members and activists a permanent solution to prevent water pollution that can be applied everywhere. This "proactive" program also broadens and strengthens Surfrider chapters' recruitment of new volunteers, while simultaneously building a chapter's readiness to respond to OFG-related issues that arise unexpectedly.

OFG Program Model

Chapter volunteers do everything from conducting Classes, Hands-On Workshops, Garden Assistance Parties and Lawn Patrols to group presentations and policy work:

Watershed Basics Classes are typically taught by a landscape professional and are comprehensive, integrating 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
- Steward your land

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

Hands-On Workshops are part in-class, part in-field trainings to educate and train people as part of a garden installation or retrofit. HOWs are lead by a professional, or the equivalent, as part of a professionally installed project and one that meets the OFG sign criteria. HOWs are geared toward everyone: OFG class attendees, Surfrider members, other non-governmental organizations, and government and landscape professionals. They also help grow a cadre of trained sustainable landscape practitioners who can then reach a larger audience.

Topics covered include:

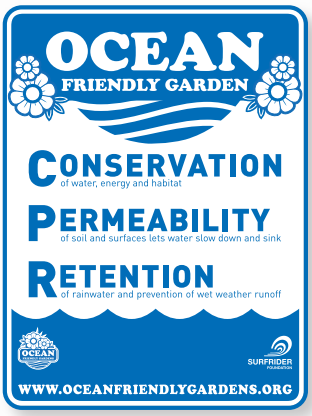
- Site evaluation and analysis
- Turf removal, sheet mulching and soil remediation
- Rainwater capture and rain garden design
- Proper planting & installation of drip irrigation & correct installation & programming of weather-based irrigation controllers
- Stewardship (maintenance)

Garden Assistance Party provides hands-on help to assist people in creating an OFG, relying on the project host to do some homework. The host's jobs include: create a design that meets the OFG criteria; gather all materials ahead of time; ask neighbors and friend to join us at the work party; provide lunch; pay it forward. Because a 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 GAP is aimed at those who have attended an OFG class and/or HOW, have a highly visible location, and invite their neighbors to participate – and spark a wave of OFGs in the neighborhood. Before someone contacts a chapter for help, they are asked to review and work through the GAP Questionnaire. For those who do not know where to start first, we recommend that they hire a landscape professional to assist with any and all steps: site evaluation, design, materials acquisition list, and workday oversight.

Lawn Patrol takes its name from Dawn Patrol, the early-morning check of waves done by surfers to see if it is worth going out. Lawn Patrol is a neighborhood walk, led by a person familiar with OFG concepts, that is open to anyone who wants to develop his/her understanding of what makes an OFG. It is also an easy way for volunteers to get involved and educate the public. We start at an existing OFG, reviewing the OFG principles and practices implemented. Participants then walk the neighborhood with the OFG Sign Criteria on a clipboard to help them identify existing OFG elements at a home landscape and opportunities to do more. They can leave behind a flyer that has space to check-off OFG components that are implemented or write in the date of any upcoming OFG events next to the slots for them. The chapter OFG Committee can offer to help implement a CPR element like a dry stream bed. Landscape professionals and water agency reps often attend, handing out business cards.

Other Resources: OFG resources are provided to Surfrider chapters as well as to the general public through the OFG webpage on the Surfrider website: sign criteria (standards) and yard sign, an Activist Toolkit on how to run activities, online map to display OFGs, blog posts about events and DIY info. In addition, there is a national OFG Facebook page. Chapters can customize a program to fit their capacity and local needs.

To learn more about each of the program activities, visit the OFG Activist Toolkit.



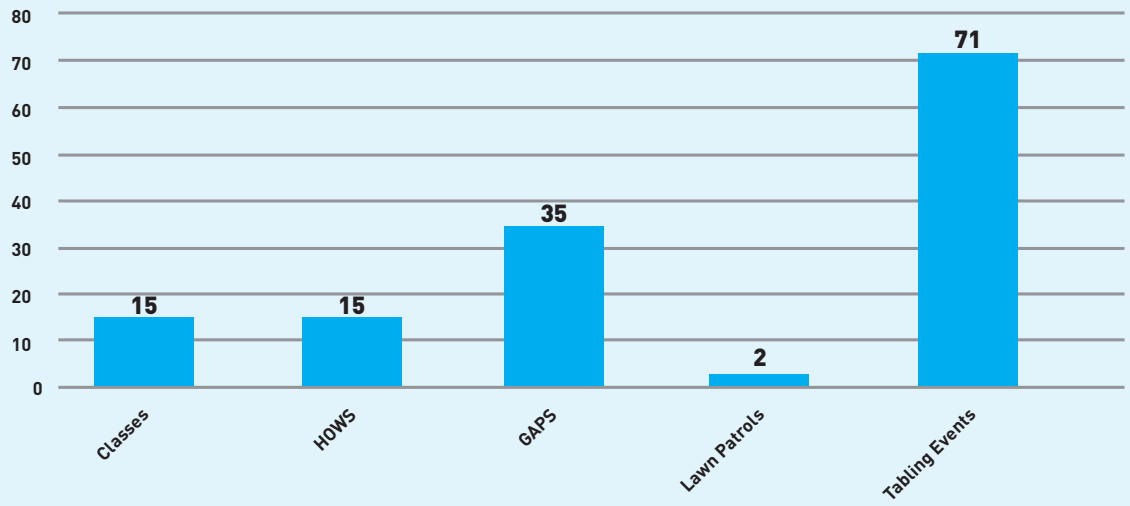
OFG Yard Sign

OFG Online Map

Sharing best practices and pictures, and capturing data on water quality, water supply, etc.

This report covers all OFG activity data gathered by the Surfrider Foundation during the 2012 calendar year.

Number of OFG Activities in 2012



23 chapters with 638 volunteers providing 1,841 hours of instruction to 1,285 attendees of OFG classes and hands-on activities.

Volunteer hours – 1,841 x $22/hour* = $40,502 of value (*www.independentsector.org).

Zero dry-weather runoff

80% water use reduction

Prevent polluted wet-weather runoff

Prevent flooding & eliminate green waste

What Is Urban Run-Off and How To Sponge It Up

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 (about 600 gallons of water run off hard surfaces 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 40-70% of a household's water use, even though much of it may not be needed by the garden. Yet, many regions lack clean drinking water. Plus, transporting and cleaning water is "energy-intensive," contributing to climate change.

In runoff are pollutants such as:

- **Synthetic 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** – poison humans, marine life and soil biology.
- **Automobile engine oil, exhaust and brake pad dust as well as exhaust from utilities** – poison marine life.
- **Bacteria from animal poop** – sicken humans and marine life, and can close beaches.
- **Sediment** (soil) – reduces clarity.

But 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 of maintenance). How? Apply **CPR** to your property – **Conservation, Permeability and Retention** © - to revive our watersheds and oceans.

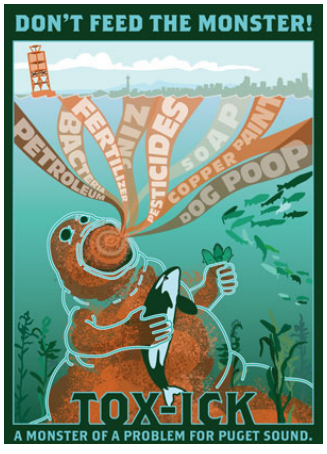
Conservation of water, energy and habitat through native plants and climate adapted plants, spaced for mature growth (the same applies to vegetable and fruit gardens).

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.

The Power of Soil - a team of researchers at Washington State University collected runoff from a Seattle highway on a day it rained - after going 50 days without rain. Half the water was filtered through soil, like would happen in an OFG; the other half was not filtered. The water from each was put into separate aquariums, and then 10 young Coho salmon were added. The fish in the filtered water lived, while those in the un-filtered water did not.

What does a stormwater outfall pipe in action look like? Time-lapse images shot over four hours on a rainy, Seattle Oct. 14th, 2012 by Lamont Granquist and Laura James gives a clear look of the toxic stew: http://vimeo.com/51456008. James started an organization, Don't Feed The Tox-ick Monster (see poster at right).



From Run-Off to Slow, Spread, Sink

Like the 3 “Rs” for solid waste – reduce, reuse, recycle – there are the 3 “Ss” for water: slow it, spread it, and sink it. This happens easily in a natural watershed.* Streams take on curvy shapes and low and high spots, with rocks, mulch and plants helping to slow water and give it time to spread and sink. OFG looks at a site as a “mini-watershed,” identifying the high and low points (e.g., roof and street gutter), and applying the 3 “Ss” in between. OFGs 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.

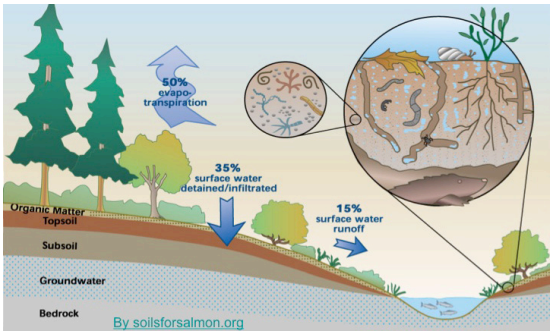
When pollutants settle into permeable soil, soil microorganisms can help filter them: bacteria sequester heavy metals; protozoa are the main nutrient cyclers; fungi help suppress disease and transport food and water to plants. Of course, we want to reduce the production of pollutants.

The term “rain garden” is sometimes used interchangeably with OFG. Rain gardens are shallow depressions planted with native plants 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, OFG principles apply to the entire garden and work to prevent polluted runoff everyday, rain or no rain, we like the term OFG.”

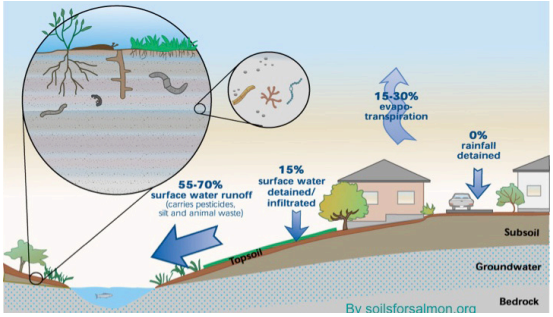
Sponging up water has multiple benefits:

- Less money spent on trying to clean water such as through putting a filter on the end of a stormwater discharge pipe. It helps meet stormwater permit deadlines.
- Saving money on your water bill and green waste bill (using leaves as mulch).
- Cleaner and larger aquatic populations and healthier watersheds, which can also mean safer food for humans.
- Fewer sewage spills for areas which stormwater and sewer systems are connected.

*A watershed is the area of land where all of the water that is under it or drains off of it goes into the same place.” USEPA



Natural Watershed. Water “feeds” soil, streams or water cycle. Lots of soil life (see detail) photo: King County, WA DNRP



Developed Watershed. Covered and compacted soils create polluted water run-off. Dimished soil life (see detail) photo: King County, WA DNRP

What We Are Learning

The OFG Program was created to provide chapter activists with concepts and activities to build on our water quality testing and beach clean up programs, creating solutions to water pollution. After several years of running activities, the program continues to evolve. Several conclusions can be drawn about how to achieve effective transmission of knowledge and training as well as scaling up of the Program that is achievable for chapter volunteers:

Muscle: Leveraging Our Grassroots Structure

- We are action oriented, while other organizations are geared more toward education and policy advocacy.
- Activists are getting cutting edge education and training in cleaning and greening urban watersheds. Other organizations do training, but not for volunteers or activists.
- Bringing in a new base of volunteers - non-surfers and ones that have influenced the landscapes of their neighbors, friends, etc.

Know-How: Creating soil “sponges” everywhere

- OFG first looks to direct water into soil to filter pollutants, sponge up water for use by plants during dry periods, and ensure adequate stream/creek flows.
- Small, natural solutions can be done throughout a watershed using low-tech tools and materials. These solutions are more effective, less expensive and get more benefits than human-made filters put on the end of a pipe and then discharging into a river or ocean.
- The “sponge” approach also applies to breaking up hard surfaces such as walkways, parkway curbs and parking lots.

Partnerships: Integrating work of landscape-related agencies

- A watershed approach engages numerous government agencies and water districts that normally work independently of one another: water quality, water supply, flood control, green waste reduction, and others.
- We make them allies in co-promoting and funding programming and projects.
- They all benefit from tracking and sharing of data about landscapes. This data can directly support water agencies in complying with stormwater permits, water supply management plans, flood control objectives, and green waste reduction regulations.

Hands-on learning

- Hands-on, peer-to-peer, professionally lead events are more valuable than handouts.
- These events engage those who want to learn from or practice on someone else’s yard before being the first one in their neighborhood to go OFG.

- Those who participate in creating the OFGs are more likely to maintain them and be able to explain to others how they work.

- They also offer professionals quality learning environments or, if they are already competent, opportunities to hand out business cards.

- Landscape retrofits at high-profile sites inspire people to make changes at their own sites. Government's involvement in subsidizing hands-on activities balance the regulatory "stick" with the "carrot."

Working with professionals

- There is a need for qualified professionals. These professionals can conduct classes, workshops and work days, lead neighborhood walks from landscapes they have done, and post their gardens on the OFG map. These professionals benefit by gaining exposure to new clients and getting compensated for their expertise and time in leading events.

- The largest segment of the market to influence is those wanting to hire a professional who knows how to go OFG. Chapters can educate consumers about the value of going OFG as well as promote professionals who are practicing it.

- Partnerships to support a chapter's capacity – Chapters typically can perform educational outreach, solicitation of volunteers and event administration, while agency partners can bring funding and staff to keep a program running.

- Starting small and scaling up – Walks and talks and policy work are easier for a chapter volunteer to do. Starting off with a neighborhood walk or talk before doing a landscape retrofit makes good organizational sense. The main objectives are: (a) to create demonstrations of OFG while training all participants; and (b) OFG principles and programs get incorporated into government, water district, private sector and academic practices.

Government + Surfrider + Community run fun events

- Joining Surfrider Foundation's "fun," positive image with government's resources is more likely to get the public's attention. Government agencies working with non-profits can help to engage existing audiences and new ones, showing that tax dollars can be put to use to help people help them.

- Approaches that rely more on community-based social marketing than traditional mailers are more like to get the public's attention and trust.

Lessons for 2013

To engage more chapters in running OFG programs, we need to address some questions: do chapters see this as primarily a water conservation program and that is not necessary in their locale, i.e., they do not have a water supply problem? Do chapters think it is too hard to launch and run a program, or is this concern just representative of our attempt to change from "reactive" to "pro-active" programs?

Funding

There are several ways to fund OFG program components, and each way offers its benefits and costs. Chapters have pursued a mix of these options, as well:

- Sole chapter funding - Where a chapter has its own funds to sponsor a class, workshop or work day, sole sponsorship gives it freedom to run it as it desires. Putting down its own funds also shows that a chapter is serious about putting its money where its mouth is.

- Co-sponsorship - Chapters have also co-sponsored events, or a whole series (class, workshop, workday) with government water quality departments and private water districts. Larger sponsor opportunities run through Surfrider, e.g., national corporations.

- Participant pay – Like an adult education class, participants are learning while doing and will pay for that value.

- Grants – public agencies and private foundations offer competitive grant programs, e.g., California Coastal Commission's Whale Tail License Plate program, Rose Foundation. Local affiliates of public service clubs allocate funds for community projects, and a simple request letter may be all that is needed.

The host of the retrofit is asked to cover as much as possible of the cost. Retrofits can be low-cost, depending on how much effort the owner/renter can expend. For example, one retrofit cost the owner under $600, and that included buying food and drink for the work party participants. The owner got free mulch from a tree trimmer, purchased plants in 4-inch pots (smaller size), got compost from his compost bin, and sought out free sources of stones. He got free design assistance, but would have been willing to pay for it.

Chapters look for and promote local sources of funding: government or water agency rebates (turf removal, downspout redirection into the landscape, etc.); private sector donations, e.g., nurseries, irrigation/hardware stores, outdoor recreation companies, or even non-landscape retail stores.

Case studies are available in the OFG Activist Toolkit.

Forming Partnerships

In part, the beauty of OFG is that it encourages property owners to take individual action to "Be A Part of the Solution -- Not the Pollution!" But partnerships between chapters and agencies, professionals and other non-profits is critical to expanding the number of gardens and "institutionalizing" the principles and practices of OFG. (In regions where the political climate is amenable to new regulations, affecting policy is an objective. In more conservative areas, a focus on self-help works better.) Chapters have aimed for this broad acceptance by including these "targets" in their strategic plans.

Chapters have reached out to agencies to co-fund and promote OFG events. Often, these events have been packaged into a "series" approach of class, workshop and workday. Chapters see themselves as incubators, putting their time and money into experimenting with different approaches. This can also take the form of filling gaps in public programming, promoting competent professionals and collaborative educational efforts with other non-profits. Surfrider brings much to prospective partnerships:

- A well-respected, "cool" reputation;
- Chapters are hands-on and active in communities;
- OFG offers a way to engage multiple government agencies;

- Impacting sites small and large and gathering valuable data on water quality, water supply, and green waste;
- Developing the demand for and supply of qualified professionals.

Some of our partnerships and/or collaborations with agencies include:

City of Portland, East Multnomah Soil and Water Conservation District (OR), City of Newport (OR), City of Santa Barbara, Goleta Water District, City of Ventura, West Basin MWD (cities of Inglewood, Malibu, Manhattan Beach; County of LA Fire Department), City of San Diego, County of San Diego, San Diego County Water Authority, Indiatlantic Elementary School (FL), Rutgers University Cooperative Extension Service (NJ).

There are many non-governmental entities that chapters have or can partner with: Native Plant Societies, professional landscape associations such as the Association of Professional Landscape Designers (APLD), American Rainwater Catchment Systems of America (ARCSA), American Society of Landscape Architects (ASLA), and Master Gardeners.

Maintenance of OFGs created with these partners at public sites such as schools, fire stations and libraries require a different kind of care than “mow, blow and go.” Chapters have reached out to site maintenance staff and student/parent “green teams” to involve them in the making of the OFGs, while sharing knowledge and skills about proper long-term care.

In an effort to scale up their impacts, chapters are talking and/or working to develop partnerships around neighborhood retrofits, green streets, and getting OFG practices incorporated into government policies for new developments and retrofits.

Partnering with a water district, with help from city, county, and state agencies.

School OFG partners: superintendent, teacher, Surfrider, neighborhood association.

Influencing Policy

In addition to supporting chapters in running events and forming partnerships with agencies, professionals and other non-profits, the national OFG coordinator experimented with ways to influence sustainable landscaping policy-making. This helped to demonstrate and pave the way for chapters to be engaged in influencing policy:

Regional Stormwater Permits

Municipal Separate Storm Sewer System NPDES Permits (MS4 Permits, aka a stormwater permit) regulate the amount of pollutants discharged into water bodies. They are one of the best ways for groups like Surfrider to influence protection of water quality. In California, they are updated every five years by Regional Water Quality Control Boards. The national coordinator reviewed the comment letter created Surfrider Foundation's San Diego Chapter and San Diego Coastkeeper and provided suggestions.

Key "asks" within the letter included: (a) having the permit break up the San Diego region by watershed and regulate pollution across city and county boundaries; (b) moving from an "action oriented" permit to an "outcome oriented" permit; (c) increasing reliance on Low Impact Development (LID).

California Urban Water Conservation Council

(CUWCC) – CUWCC is an association of water conservation agencies. Surfrider was invited to participate in the CUWCC's Landscape Committee. Surfrider helped to shape the definition of the "new norm in landscaping" to take on a watershed-based approach, rather than just an irrigation efficiency focus: each site seen as a mini-watershed, contoured to use rainwater as a first source of irrigation, while simultaneously preventing polluted runoff. The next step for Surfrider is participating in a work group tasked with developing "Partnerships & Promotions" to spread and implement the new norm statewide.

U.S. Environmental Protection Agency WaterSense Program Partner

The WaterSense Program focuses on promoting the use of irrigation efficiency products. In terms of OFG, that can mean reduction in dry-weather runoff. Program "Partners" agree to promote the Program's mission and, in return, USEPA helps to promote the partner's work. Surfrider registered as a Partner to promote that message, but also help shift it. Surfrider sees the potential to encourage WaterSense to engage their sister agency programs in water quality, green infrastructure and the GreenScapes Program, creating a national, integrated approach to landscapes and hardscapes. The development of such a program would make it easier for Surfrider chapters to identify and work with collaborators.

WaterLA Project

This Los Angeles, CA-area project is a cutting-edge endeavor, educating, training and assisting a whole neighborhood in retrofitting their gardens into OFG-type landscapes. The Project leverages the re-doing of an adjacent, ¾-mile long concrete median into a naturalized swale that absorbs or infiltrates all the rain runoff from the surrounding 135 acres. The Project will result in City-approved standard plans for six in-home Best Management Practices, including rain gardens, parkway swales, greywater systems, rain barrels, drywells & infiltration trenches, and hardscape removal. Monitoring stations along the median will allow the Project team to gauge the impact of at least 24 installations in the project area, so City agencies will have real data on how these projects affect our local watershed. The national coordinator participated in the development of the Project's retrofit methodology, sharing OFG principles, criteria and lessons learned from installations.

San Diego Sustainable Landscapes Project

Surfrider is part of a team of government agencies and non-profits which received a state grant to create an integrated set of landscape guidelines, run in-class and in-field workshops for residents and professionals, and assist with several hundred landscape retrofits throughout the County. The national coordinator has participated in regular meetings for over two years, helping to insure that OFG-oriented criteria and programming is incorporated. Surfrider has brought in the contractor who developed the OFG criteria and helped develop the OFG program components to lead the "Surfrider" part of the grant (classes, workshops, technical assistance). The team is considering contracting with the contractor to develop the guidelines and more.

SAN DIEGO Integrated Regional Water Management

San Diego Integrated Regional Water Management Program
Proposition 84-Round 1 Implementation Grant Overview

In 2011, the San Diego IRWM program submitted a grant proposal to the Department of Water Resources for $8 million (of $71 million available to the San Diego IRWM region) in Proposition 84 funds. This proposal included 11 projects that would implement four high priority programs to meet the Region's water management needs.

Water Supply/Recycled Water Program

Project 1: Sustainable Landscapes Program. This project is designed to reduce water waste and pollutant infiltration into local waterways through development and implementation of landscape standards and specifications generally consistent with the California State Model Water Efficient Landscape Ordinance and the San Diego Regional Board MS4 Permit. This project is being developed in partnership with San Diego County Water Authority, City of San Diego, County of San Diego, California American Water, and non-profit partners such as California Center for Sustainable Energy, Surfrider Foundation, and Association of Compost Producers. The *Sustainable Landscapes Program* relies on the integration of landscape standards and specifications, education and training, incentives, outreach, and technical assistance to achieve project goals.

San Diego Sustainable Landscapes Project – grant overview.

Activists line up to take the oath before providing public comment to the San Diego Regional Water Quality Control Board.

An Integrated Plan and Set of Tools

Ocean Friendly Gardens is part of Surfrider Foundation's **Know Your H2O** (KYH2O) Program, a suite of complimentary programs, campaigns and tools. KYH2O educates communities on how we mismanage, waste and pollute water resources, and presents solutions for integrated land and water management to restore the natural water cycle. The full program suite includes:

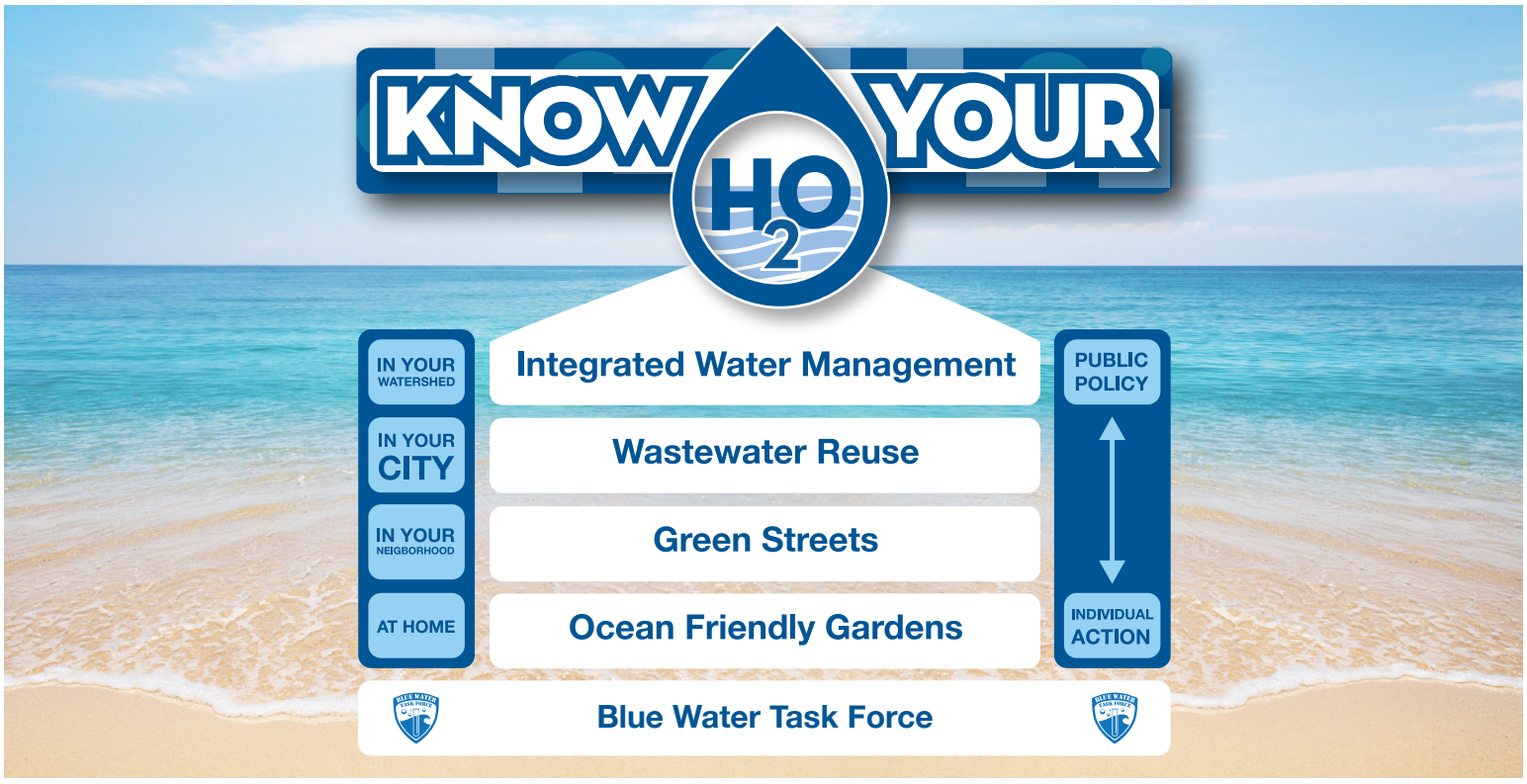
Integrated Water Management
Wastewater Reuse
Green Streets & Low Impact Development (LID)
Ocean Friendly Gardens
Blue Water Task Force

OFG builds on Surfrider Foundation's **Blue Water Task Force** program of water testing and monitoring, connecting identification of a problem with solutions as well as monitoring the success of implementation.

Green streets and LID – cutting parkway curbs, permeable roads, greening parking lots – applies OFG principles to hard surfaces. Chapters are also running KYH2O campaigns to **take the "waste" out of our outdated wastewater (sewage) treatment systems** by eliminating ocean discharges and cleaning up the water for safe and beneficial re-use (recharge groundwater or direct potable use).

Surfrider Foundation's animated movie about KYH2O, "**The Cycle of Insanity: The Real Story of Water**," is shown across the country to help chapters begin dialogues in communities about the various challenges and solutions relating to integrated water management.

Contact your local Surfrider Chapter to get involved in OFG or any of the other KYH2O Programs, or visit us online at Surfrider.org.



Case Studies

Portland, Oregon

The Newport, OR Chapter had already launched its OFG Program by partnering with their local Soil and Water Conservation District (SWCD) on a hybrid class/hands-on workshop, then a workday to create an OFG at Newport City Hall. But with so many public and non-profit rainwater-oriented programs in Portland, the challenge was to conduct activities that no one else was doing. The Oregon Surfrider Field Manager and the Portland, OR OFG Chairperson joined Surfrider Foundation's National OFG Coordinator in meeting with the City of Portland as well as the East Multnomah Soil and Water Conservation District to discuss how to collaborate and partner.

Though the city of Portland was turning its attention from rain gutter downspout redirects to inspiring urban tree planting, the City rep liked the Surfrider Lawn Patrol activities. Surfrider learned that the East Multnomah SWCD teaches a "Rain Garden 101 Workshop," and invites community groups to co-host them.

The Portland Chapter jumped on this opportunity, and co-hosted the Workshop. There was a classroom component where they calculated impervious surfaces and sized rain gardens on paper, and a field component where they went to check out a rain garden in the area, identify plants and talk about how they could improve the site. The Portland OFG Chairperson presented at the Workshop about Surfrider, encouraging people to apply for an OFG yard sign, and to post their gardens to the online OFG map. They had a great turnout: 28 people attended the Class.

One of the next steps they had discussed was to install a rain garden at a Chapter member's house. This would help them build their experience and knowledge, and generate momentum for the OFG program. Surfrider Foundation's Ocean Programs Manager and Portland resident Pete Stauffer offered his home up for the retrofit. Pete hired landscape designer Hannah Nickerson, principal at Rain City Gardens, to lead a group-planning meeting was held to do some preliminary planning. The event also was a good opportunity to engage Chapter members and others that had signed up over the past months to get involved with OFG. Activities for the day included:

Class photo

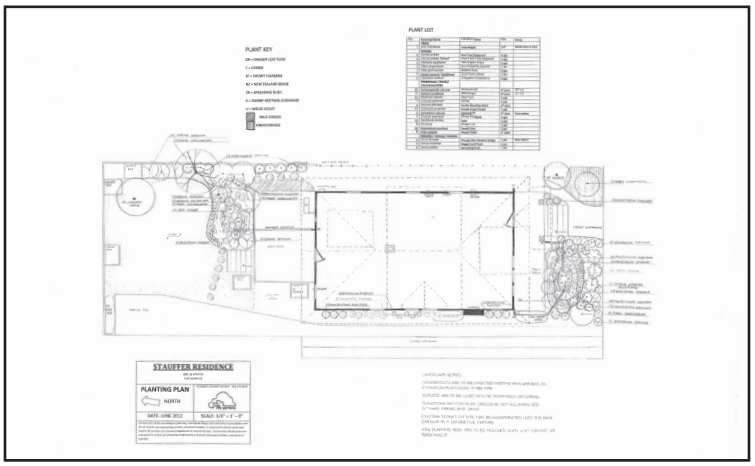
Hands-on workshop on site evaluation

- Observe and map the site
- Determine the location and size of the rain gardens (front- and backyard)
- Assess the soil for percolation and type tests

Two months later, a work party to install the OFG was led by the same professional. After volunteers dug out the swale (in the front yard...and they OFG'd the back yard, too), a person fitted an extension onto the rain gutter downspout to direct rainwater into the swale. Then the group installed the plants, spacing the, for mature growth and helping to prevent crowding and the pruning that goes with it (aka green waste).

Click here to read more about the installation, or here about the evaluation workshop.

At the workday, there was also discussion about how OFG can compliment the Chapter's work on stenciling the storm drains to discourage people from dumping pollutants down them. During winter months, the stenciling program takes a break, and so it's a good time to do other things - like clean out the inlets to curb cuts so rainwater can flow in. The City lacks the resources to do this kind of maintenance and it would be welcomed. Like the PDX Facebook page and keep updated on what they are doing.



OFG Design Plans

Hannah setting out plants

Group digging out swale

Installed

Ventura, California

A Garden Assistance Party (GAP) Workday was the next step in the OFG Series, led by G3/The Green Gardens Group. G3 had, in previous months, taken a group of people through an OFG Class and Hands-On Workshop on Site Evaluation to prepare them for the Workday. Amongst the participants were a number of landscape professionals who had attended G3's Core Concepts Workshop, an all-day training geared toward professionals, focusing on site evaluation following OFG principles. Several were paying forward a scholarship to the CCW that was provided by a State grant that funded the Series.

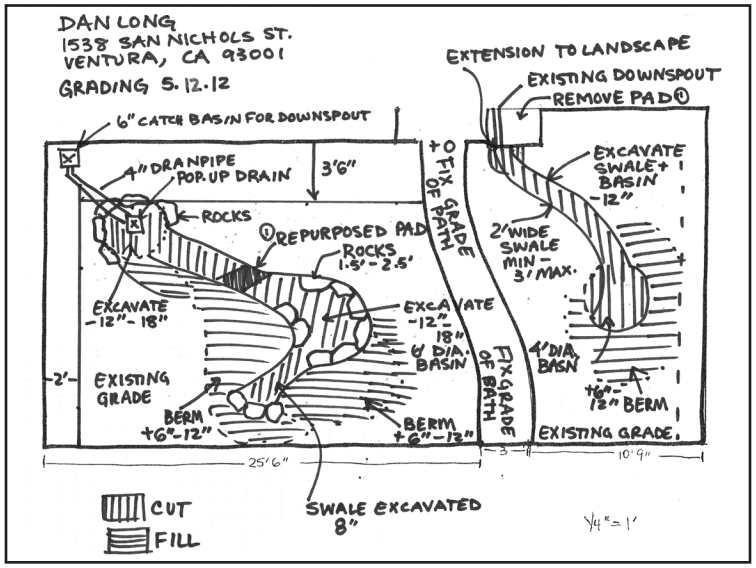
The property owner had removed the turf grass as part of his list of responsibilities. The first workday task for volunteers was digging and hand-removing new grass sprouts, then un-compacting the soil to help oxygen and water flow through it. Next, they got to digging out the areas for the swales, which were marked off by bright-green-colored flags laid. No soil left the site: what was dug out was used to create mounds. A water level developed in ancient Egyptian times, called a bunyip (two measuring sticks connected by a tube filled with water), was used to insure that the swale flowed away from the building's foundation.

Two employees with Aqua-Flo Supply helped lead the charge on using the bunyip and on retrofitting the rain gutter downspouts into the swales.

While that was going on, the landscape was sheet mulched: a process of lasagna-like layering of compost, paper and mulch to both build soil and block sunlight to prevent re-growth of grass and weeds. The City's Water Conservation Coordinator ("City rep") arranged for delivery of a load of City mulch and City hand tools.

Installing the plants was the next step. Successful planting involves a few steps to prevent plant shock: watering the hole into which it is planted twice; emerging the plant into a bucket of water till the bubbles stop; watering after it is planted; then watering again. The plants were purchased from a local native plant nursery.

Beneficial fungus, called mycorrhizae, was applied to the root ball prior to planting. Fungi play a key role in plant health, acting like a subterranean Internet to transport water and nutrients from the soil to the plant. Soil in a typical landscape is devoid of oxygen and water, necessary elements for aerobic (oxygen-loving) life. The OFG soil-prep regimes helps to awaken the lower rungs of the soil web - bacteria - that is then munched on by protozoa, nematode and fungi.



OFG Design Plans

Digging swale

The City awarded an OFG sign to the property owner (they purchased 100 to give out for free to those that meet the sign criteria). A local State Assemblyman as well as a local City Councilman stopped by to see the handiwork.

Several months later, another workday was held to cut the curb of the parkway (at left: the area between the street and sidewalk), and then create basins for street runoff to water plants and get filtered. G3 created a standard design. The City rep helped alter a City encroachment permit to create a no-cost City-issued permit to cut a curb as long as a standard design is followed and a licensed contractor does the cutting. Taken together, these are parts of a larger vision that Ventura Surfrider Chapter have developed restore the functioning of the watershed and lagoon near the beach (see a recent blog post about it). The Series was funded by a grant from the California Coastal Commission's Whale Tail License Plate Program.

Aqua-Flo guys re-directing downspout

Installing plants – using mycorrhizal spores

11 months later, with curb cuts

Curb cut in action

Redondo Union High School, California

Redondo Union High School (RUHS) students in the Ecology Club had already been participating in the South Bay-Surfrider Chapter's water quality testing program, advised by RUHS Biology and Advanced Placement Environmental Science teacher, Mary Simun. When Mary and the students heard about an Ocean Friendly Garden planned for their School campus, they were stoked to learn they could help build a part of it. Then they thought: why not monitor the OFG after it's built for its benefits of pollution prevention tool and wildlife habitat.

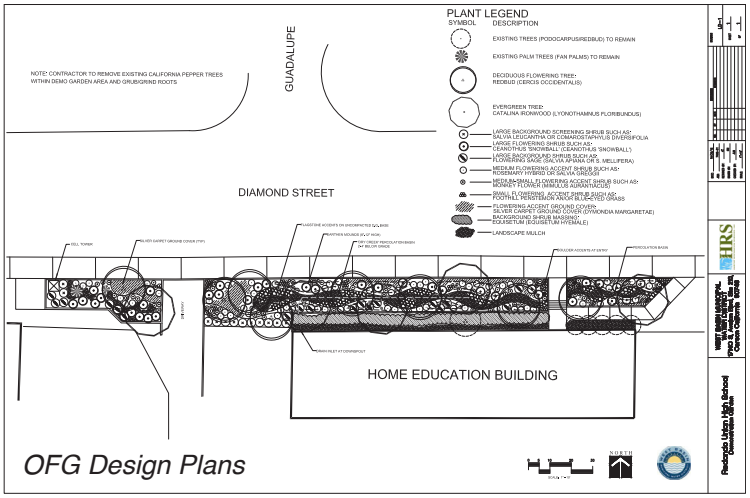
While the contractor was responsible for installing the majority of the OFG, the AP Environmental Science class, Special Education class, and community members who had attended OFG classes installed a small section. OFG partner, G3/The Green Gardens Group, guided OFG partner, G3/The Green Gardens Group, guided the students and community members through two Hands-On Workshops:

- Contouring for rainwater capture and sheet mulching (laying compost, paper and mulch to smoother remaining grass root and re-build healthier soil).

- Planting and drip irrigation installation.

The OFG is now a learning laboratory for the students. While increases in wildlife (birds, bees, butterflies) can be easily observed above ground, a network of healthy soil biology to help filter and move around water will take a 6 months-1 year to develop. Students will need to take core soil samples and look for the fine, white-colored hair-like mycorrhizal fungi "network" that can connect a tree in a front yard to one in the back (click here to read more about the "soil food web"). Surfrider activists provided some great quotes in a newspaper story about the RUHS OFG.

Funding for the OFG came from a grant through California State Proposition 50 that Surfrider and West Basin Municipal Water District partnered on getting, as we as funds from a local water retailer.



OFG Design Plans

Before

After

Indiatlantic Elementary School, Florida

Fresh off launching a Surfrider QUAD Youth Club, students at Indialantic Elementary School decided they wanted to get their hands in the soil and build an Ocean Friendly Garden. Their QUAD Club Advisor guided them through the process, from identifying a site on campus (pictured at left), to getting a grant and coordinating getting all materials and volunteers. The advisor learned from Surfrider Foundation's Youth QUAD Manager about a grant opportunity through the Darden Foundation, which owns restaurant chains like Red Lobster and Olive Garden. Darden awarded the Club a small grant to cover the costs of the project and Club membership.

Next, the advisor engaged a member of the Conradina Chapter of the Florida Native Plant Society, a native plant consultant/educator, who helped install a native plant garden at the School. Then a native plant nursery came out to consult about design (pictured at right), plant choices, and plants prices.

The day before the Garden Assistance Party, existing grasses and weeds were pulled out by hand. The advisor also got ahold of a basic set of tools and asked parents to bring what they had. The workday itself had a good turnout of solid students and parents. The kids loved planting and learning about native plants, with some naming those they planted and looking forward to watching them grow. All of the kids were looking forward to the next school day to show and tell their friends about the great garden they helped create.

The advisor created a bingo game centered on the native plants. The kids are such great learners that they can teach it to others. The kids were also very curious about the rainwater downspout dissipater and swale (shown below). The dissipater performs two key functions:

- It gets water away from a building's foundation or a cemented walkway.

- Slows down rainwater rushing out of the bottom of the downspout, preventing soil and plants from being blown out.

The swale (or dry stream bed) also helps to "receive" the water and clearly demonstrates to the all who pass by about how the garden sponges up rainwater in the soil and helps filter pollutants.

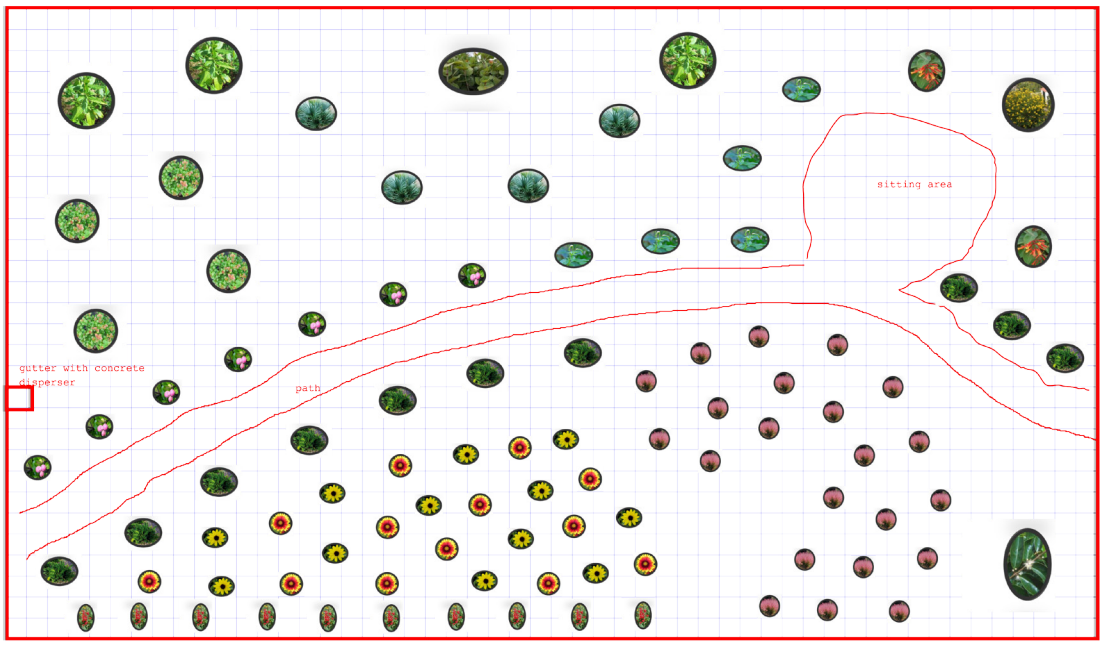
Before

After

In addition to being an on-going learning tool for students (water use, water quality, habitat), the site can be utilized as part of classes and events for the surrounding community. Speaking of the nearby community, under the City's swale program, the City digs the swales, but requires installation of St. Augustine grass.

This presents an opportunity for the nearby Sebastian Inlet Surfrider Chapter to partner with the native plant consultant to approach the town's Mayor and City Manager about using a native plant palette. The Chapter might also be able to help the City with outreach and education to inspire all residents to install swales.

The School's principal loved the educational and beautification benefits. The native plant consultant will continue to advise the Club about maintenance.



OFG Design Plans

Installing plants

Laying out plants

Downspout extension and swale

Jersey Shore, NJ - Bradley Beach Workshop a Barrel of Fun-ction

With their monthly or bi-monthly rains, the Jersey Shore Chapter launched their OFG Program by showing the value of capturing rain water in barrels to both prevent runoff and to water gardens. Not having any experience in such workshops, the Chapter reached out to those who lead them as well as government agencies wanting to educate about rainwater.

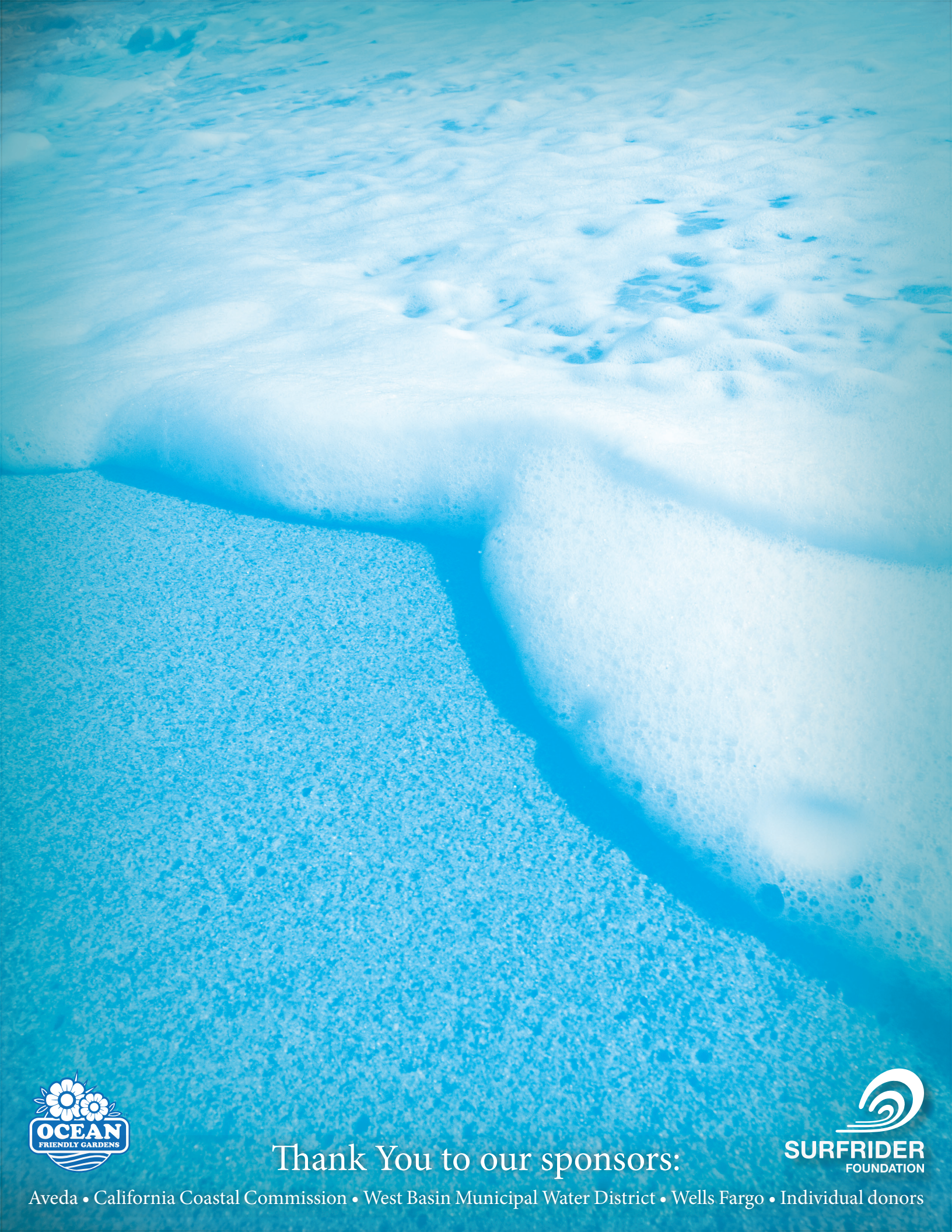
The Chapter partnered with the Bradley Beach Environmental Commission to host the workshop. Sara Mellor from the Water Resources Program at the Rutgers University Cooperative Extension presented on the water quality issues impacting New Jersey. She also talked about how water conservation, pollution source controls, planting rain gardens, and installing rain barrels can all be solutions. Rutgers then led the group in transforming used 55-gallon olive barrels into rain barrels. All it took was drilling two holes, one for the spigot and one for the overflow, a little bit (or a lot) of caulk, some screen to keep out the mosquitoes, and some elbow grease to screw on the top. Workshop participants built their very own that night to take home - and decorate as they choose. Rutgers charges $500 per workshop for their expertise and $45 per participant for materials. Check with your University Cooperative Extension about rain garden or rain barrel workshops.

Over 30 enthusiastic attendees built 42 rain barrels. With each barrel able to capture 1,300 gallons of rainwater in a year, 54,600 gallons are now nurturing landscapes and not polluting waterways. The water can be used for non-drinkable uses, including landscaping, rinsing off sandy feet or washing the dog. More rain barrel-building workshops are planned.

Based on this good partnership, the Chapter is working with Rutgers on conducting a landscape retrofit at a church in Bradley Beach, accomplished through a series of classes and hands-on workshops (like the OFG Series model). The project could be rolled into a Rutgers rain garden training program for Monmouth County. More photos from the event are at the Jersey Shore Chapter's Facebook page.

54,600 gallons saved from the water captured by all the barrels

Surfrider's Mid-Atlantic Regional Manager John Weber drilling holes for hose bib (overflow)



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