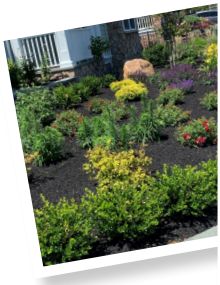
SUSTAINABLE LANDSCAPING

for Stone Harbor



Courtesy of The Stone Harbor Property Owners Association

People are drawn to Stone Harbor for many, and different, reasons but the town motto says it all: ***The Seashore at its Best.*** Year-round and seasonal residents alike appreciate the natural beauty that surrounds us, and many adopt this theme for the beautification of their own properties. People the world over have become increasingly sensitive to the need to care for the water, air, and land we need for ourselves and for future generations. Stone Harbor property owners can be good stewards of the environment in this community in several ways; conservation and protection of water is among the most important.

To help address the important issue of water usage, the Stone Harbor Property Owners Association (SHPOA) offers this brochure to our island community to inspire sustainable landscaping and gardening. At the urging of SHPOA and others, the Borough is undertaking important efforts to combat natural threats to the island. These sustainability initiatives include beach replenishment, inlet dredging, bay bulkhead fortification, improvements to the stormwater management system and the addition of pumping stations for flood risk management. An additional area of focus must be water conservation. Over-pumping of the island groundwater to meet rapidly growing supply demands is contributing to land subsidence and saltwater intrusion into our fresh water supply. Property owners can participate, NOW, with simple sustainable steps that ultimately will enhance the value of their Stone Harbor investments.

SHPOA, in association with the Garden Club of Stone Harbor, provides these ideas for "Water Conscious Landscaping". These methods are designed for Stone Harbor's climate, its unique ocean/bay setting, and the soil and water table underneath it. In fact, these natural horticultural features were in place on this island long before anyone arrived and over the years have helped to make Stone Harbor the unique place that it is.

HERE'S THE PROBLEM

Stone Harbor is faced with sea level rise and a sinking island which together have made it vulnerable to the destructive forces of more frequent flooding – even on sunny days. *(impact.rutgers.edu/the-rising-tide)*

The island is sinking, in part, because coastal communities are depleting the aquifer, the fresh water source underneath the island. *(pubs.usgs.gov/sir/2009/5187/pdf/SIR2009-5187.pdf)* Each summer in the last decade or so, those communities withdraw more water from the aquifer than is replaced. In addition to reducing the supply of water, this creates the serious risk of saltwater intrusion into the fresh water supply. One neighboring community has already experienced this problem. The solution is expensive and difficult. It also demands excessive energy and does not address the problem of overdrawing water in the first place. *(www.stoneharborpoa.org/current-events/stone-harbor-water-supply)*

HERE'S WHAT CAN BE DONE

Reducing water consumption will help slow the rate of aquifer depletion. Property owners can have a positive impact by embracing sustainable landscaping and gardening. The vast majority of the water used in the Borough of Stone Harbor goes to watering landscapes and gardens. Some landscaping choices, like turf grass, require twice as much water and fertilizer to exist in our island than in inland regions. Turf grass, once saturated by rain or sprinkler systems, sends water right into the street like the water coming off roofs and pavements. It then goes to storm drains and ultimately to the bay and ocean, worsening the potential of flooding, and then lost to the aquifer forever. The AC800 aquifer, which is the source of fresh water on the island, is about 800 feet below ground and is best protected by not using more water than it can provide. Losing fresh water to flooding and thirsty non-native plants, including turf, is a practice which this coastal community cannot afford to continue.

So how may we use less water? And how do we ensure that water gets back to the aquifer?

Here are some suggested ways to do just that:

- **Reduce or eliminate plantings and turf which require lots of water.** One simple way to accomplish this is to use rocks or gravel in the strips between the sidewalk and the street, and other places, instead of dense turf grass. If an irrigation system is used, do not water the sidewalk and street! Make sure the sprinkler heads are hitting plants or turf instead of the pavement and, eventually, storm drains. Irrigation systems should be equipped with soil moisture probes to suspend operation in wet weather, a practice which will also save money.

- **Avoid non-native invasive plant species.** Instead use sustainable, native species. Plants that are naturally occurring in this area are adapted to flourish here without the need for additional watering once they are established. There are dozens of hardy and drought-resistant plants which are beautiful and do not require special treatment or excessive fertilization to thrive here. These include Black-Eyed Susan, Butterfly Weed, Foxglove, and Clematis. Plants have been around longer than humans, and there are many good sources to identify those native to this area. These native species also provide important side benefits such as more butterflies, pollinators, birds, and other wildlife.

Native Alternatives for Non-Native Invasives

Courtesy of the Jersey Shore Chapter of the Native Plant Society of New Jersey

Invasive	Native Alternatives
Autumn Olive	Northern Bayberry *(Morella Pensylvanica or Myrica Pensylvanica)*
Barberry	Winterberry Holly *(Ilex Verticillata)*, Inkberry (Ilexglabra)
Burning Bush (Winged Euonymus)	Highbush Blueberry *(Vaccinium Corymbosum)*
Butterfly Bush	Nectar plants for butterfly adults: Sweet Pepper Bush/Summersweet *(Clethra Alnifolia)*, Blazing Star *(liatris)*, Wild Bergomot *(Monarda Jistulosa)*, Joe-Pye Weed *(Eupatorium Maculatum)*, Seaside Goldenrod *(Solidago Sempervirens)* or any native Goldenrod Host plants for butterfly caterpillars: Swamp Milkweed *(Ascelpias Incarnata)* or any native milkweed, Northern Spicebush *(Lindera Benzoin)*, Highbush Blueberry *(Vaccinium Corymbosum)*, Ninebark *(Physocarpus Opulifolius)*, Hoptree, Pipevine *(Aristolochia Tomentosa)*
Callery Pear	Eastern Redbud *(Juniperus Virginiana)*, Flowering Dogwood *(Cornusjlorida)*, Shadbush/Serviceberry *(Amelanchier Canadensis)*
English Ivy	Allegheny spurge (Pachysandra procumbens), Christmas Fern (Polystichum Acrostichoides)
Honeysuckle: Japanese, Morrows, Amur, Tartarian	Trumpet Honeysuckle (Lonicera sempervirens)
Japanese Knotweed	Sweet Pepperbush (Clethra alnifolia), Oakleaf Hydrangea (Hydrangea Quercifolia)
Japanese Clematis	Virgin's Bower (Clematis Virginiana)
Japanese Spirea *(Japanese Meadowsweet)*	Meadowsweet *(Spiraea alba var. Latifolia)*, Arrowwood Viburnum *(Viburnum dentatum)*, Virginia Sweetspire *(Itea Virginica)*, Pinxterbloom Azalea *(Rhododendronpericlymenoides)*
Multiflora Rose	Virginia Rose *(Rosa Virginiana)*
Norway Maple	Sugar Maple *(Acer Saccharum)*, Red Maple *(Acer Rubrum)*, Silver Maple *(Acer Saccharinum)*
Porcelain Berry	Virginia Creeper *(Parthenocissus Quinquefolia)*, Arrowwood Viburnum *(Viburnum Dentatum)*
Purple Loosestrife	Blazing Star *(Liatris Spicata)*, Sweet Pepperbush *(Clethra Alnifolia)*

- **Avoid plants that consume more water (and require more care) than their native counterparts.** Some of these have been long time staples of gardeners here and are often recommended by landscapers who have stocked them over the years. But nature knows best about what works for the soil, wildlife, and water cycles of this unique island, and nature has provided a rich mix of choices if the island's natural water cycle is to be restored. This is especially true of natural grasses, the rich variety of which can add beauty, texture, and interest to a landscape. Selecting the correct plants for a landscape is a great way to start. There are many good resources to help, and several native plant gardens in the area to visit including the SHPOA Rain Garden at the Water Tower, the Stone Harbor Bird Sanctuary with extensive native plant gardens, and the Wetlands Institute gardens dominated by native plants.

- **Plant a rain garden.** *(www.npsnj.org/pages/nativeplants_Rain_Gardens.html)* Rain Gardens may be a striking and beautiful addition to your coastal home, and they are a living machine that provides both beauty and water saving capacity to a property. *(Please visit the SHPOA Rain Garden at 95th Street and Second Avenue to see an example we are proud of.)*

RAIN GARDENS

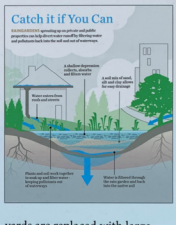
Soaking Up the Rain is Easy

A rain garden is a man-made landscape technique that collects rainwater runoff and allows it to percolate into the ground beneath us. Utilizing river rock along with drought resistant grasses and flowering perennials is a cost effective and attractive way to reduce flooding while providing food and shelter for butterflies, songbirds and other native wildlife.

SHPOA, in partnership with the Borough, has invested in this demonstration rain garden, which we hope will educate and motivate our homeowners to do the same.

A significant contributor to street flooding in Stone Harbor is excessive runoff from our properties. As modest beach cottages with gravel yards are replaced with large homes, impermeable driveways and patios along with pools, we are eliminating areas through which water used to percolate into the sand below.

We must all join in the effort to increase permeable areas, reduce runoff from our homes and develop drainage systems to handle future stormwater.



There are many other water conservation measures that promote island sustainability, some of which are just plain common sense:

- **Conserve water inside the home**, with proper plumbing maintenance, low flow toilet devices, full loads for dishes and clothes and showers of short duration.
- **Pools and spas should be managed with responsible water conservation in mind**, minimizing supply water and loss due to evaporation.
- **Use permeable surfaces.** An especially useful approach is to use permeable surfaces for hardscaping projects. These will let water get to the aquifer efficiently and not get diverted to the storm drainage system. Consideration should also be given to the use of engineered vaults and French drains for mitigation of rain water runoff.
- **Consult a landscaper or landscape architect.** Many are alert to these emerging issues and can help make the right choices in native plants and water preservation techniques. Some may still recommend their own favorite water thirsty plants, or favor conventional turf, however property owners may insist on sustainable plantings and landscaping options. Be specifically aware that the Borough of Stone Harbor does NOT require turf and in fact may soon prohibit grass in new construction between the street and sidewalk.
- **Finally, a word about turf grass.** While the term is used to describe the suburban cover that is common to lawns nationwide, there are many kinds of grasses in all shapes and sizes. In Stone Harbor, dune and wetland varieties have existed here many years and are ideally suited to the topography, sandy soil, and climate. Many residents find these grasses add visual interest, color, and authenticity to a shore landscape, and they are often easier and less expensive to care for than conventional turf. Better yet, they help to conserve water.

IT'S YOUR TURN

Protect our environment and your investment with sustainable practices and save a substantial amount on borough water utility charges for irrigation, as well as potentially paying less for flood insurance. ***(avalonboro.net/avalon-attains-class-3-crs-rating-35-percent-discounts-on-flood-insurance-come-in-2020)***

LEARN MORE

The internet is a rich source of information on this important topic. To get started here are some selected websites:

www.capemaywildlife.com
www.wildflower.org
www.water.rutgers.edu
www.plants.usda.gov
www.patsuttonwildlifegarden.com
www.njwildlifegardener.com
www.surfrider.org
www.extension.psu.edu

Other useful links include:

Water Conservation Gardening Techniques:
www.njaes.rutgers.edu/home-lawn-garden

The Native Plant Society of New Jersey:
www.npsnj.org/index.html

The Cape Atlantic Conservation District offers useful tips for water conservation, including early morning watering, how to install a drip irrigation system, and low-water plants suitable to native soils.
Learn more: *www.capeatlantic.org*

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