



*A Citizen's Guide To
Stormwater
Ponds*

Southwest Florida
Water Management District



Introduction

Proper landscaping on the banks and shallow areas of urban stormwater ponds is critical to the health of our lakes, rivers, estuaries and bays. Use of appropriate aquatic vegetation can halt erosion and retard the entry of pollutants into stormwater pond water. Not only is the cleaner water necessary to sustain healthy wildlife habitats, but this cleaner water will eventually end up in our water resources. It just makes sense to stop the pollution at its point of entry instead of trying to purify the water at the time of withdrawal for human consumption.

This brochure is designed to provide:

- An understanding of how citizens can contribute to the improvement of surface water and habitat.
- A guide to proper landscaping and maintenance of urban stormwater ponds.
- Descriptions of some Florida native aquatic plants and their value as wildlife habitat.

Facts

- Untreated stormwater runoff is now considered the state's leading source of water pollution.
- The uncontrolled growth of algae and undesirable aquatic plants in lakes, ponds and rivers is often the result of poorly managed storm water.
- Untreated storm water contributes nine times more oxygen-demanding substances to water bodies than industrial effluents.
- Storm water contributes approximately 80% to 95% of the heavy metals (lead, zinc, copper, cadmium) that enter Florida waters.
- Nutrient loads (nitrogen and phosphorus — the same chemicals found in lawn fertilizer) from stormwater runoff are comparable to those in treated sewage.
- Restoration projects have demonstrated that with proper treatment the detrimental effects of stormwater pollution can be reversed.

Aquatic Plant Descriptions

Least Desirable



Water lettuce (*Pistia stratiotes*)

The plant resembles a floating open head of lettuce. Large colonies of water lettuce often completely cover quiet rivers, canals, lakes and ponds, blocking water flow and boat traffic. Dense infestations of water lettuce are known to provide excellent mosquito-breeding habitat. Water lettuce has minimal wildlife value except for providing a resting area for small fish and aquatic insects.



Cattail (*Typha* spp.)

Cattails are extremely hardy and grow to cover large areas of wetlands, lakes and rivers. Cattails are probably the most problematic plant associated with urban lakes. Dense stands of cattail provide little benefit to a lake's fishery and provide mosquito breeding sites.

Wild taro

(*Colocasia esculenta*)

The wild taro is an exotic plant imported from the Pacific Islands as an ornamental. Its leaves are arrowhead-shaped with heart-shaped leaf bases. This plant generally grows along the shoreline and can cause problems by shading out native vegetation. It has limited value to wildlife and fisheries.



Water hyacinth (*Eichhornia crassipes*)

Water hyacinth is a noxious floating plant. The flower is showy light blue to violet. It is one of the worst weeds in the world and is now under "maintenance control" in Florida. It is illegal to collect, transport, possess or cultivate this plant (Rule 62C-52.011 FAC).



Desirable

Cord grass **(*Spartina bakeri*)**

Cord grass has 3-6 feet tall culms that grow in large, dense clusters. One of the characteristics of this species of cord grass is its absence of creeping, scaly rhizomes. The roots of cord grass are an important food source for geese wintering along the Atlantic coast. The seeds are occasionally eaten by various ducks, marshbirds and songbirds, but provide the main diet of the sharp-tailed and seaside sparrows.



Pickereelweed **(*Pontederia cordata*)**

The leaf of this plant has the shape of an upside-down heart; however, the most striking characteristic is the long cluster of numerous violet-blue flowers associated with each stem seen during the spring and summer. Growing 3-4 feet tall in shallow water, pickereelweed provides important habitat for fish, waterfowl and other aquatic animals.



Soft-stem bulrush **(*Scirpus validus*)**

The stems of soft-stem bulrush are cylindrical in cross section, light-green colored, spongy in texture, and 0.8-1.2 inches wide at the base, gradually tapering to a flower. The seeds are heavily utilized by all species of waterfowl and by many marsh and songbirds.



Duck potato **(*Sagittaria lancifolia*)**

Duck potato, also known as common arrowhead, has narrow lance-shaped leaves that grow as a rosette from a horizontal underground stem. The white flowers of duck potato, seen in the spring and summer months, are on stalks that often extend 12 inches above the leaves. In addition to its value as important fishery habitat, the seeds of this plant are consumed by waterfowl.

Golden canna **(*Canna flaccida*)**

The large oval to spear-shaped leaves of this perennial are 3 feet long and 2 to 6 inches wide. The showy flowers are up to 2 inches long and yellow in color. Rare or infrequent in wet ditches, marshes and swamp margins of Florida.



Soft rush **(*Juncus effusus*)**

The pale-green hollow stems of soft rush are cylindrical, about 1/4 inch in diameter and up to 4 feet tall. Large clumping stands are common along the edges of freshwater marshes, ponds, lakes and low pasture lands. The seeds are utilized by waterfowl, while the other vegetative parts are sometimes browsed upon by deer as a late fall to early winter food item.



Aquatic Landscaping



Unlandscaped



Landscaped

10 Steps to Maintaining Stormwater Ponds and Preventing Water Pollution

You may not have waterfront property, but the rain that runs off your roof, lawn and driveway can eventually end up in the nearest water body. Water enters storm drains along your street, which lead to the nearest lake, pond, river, stream or bay. By following the ten steps listed below, you can help prevent the pollution of our waterways.

1. Easy on the pesticides and herbicides. Don't overspray your lawn or garden with pesticides and herbicides, since they may be toxic to wildlife and may contaminate nearby water bodies. Use them sparingly and strictly according to label directions. Seek nontoxic alternatives whenever possible, and pull weeds by hand.

2. Use chemical fertilizers sparingly. Don't overuse fertilizers, especially near the water's edge. Rain and lawn watering washes excess fertilizers into ponds and other natural water bodies, causing nutrient pollution, which contributes to the overgrowth of algae.

3. Don't throw grass clippings into ponds or other water bodies. If you do not use your clippings for mulch or compost, put them in the trash instead of a storm drain, a swale or along the water's edge. These materials decay and are a source of water quality problems.

4. Plant, don't pave. Ground cover minimizes runoff and is prettier than concrete. Consider converting lawns adjacent to ponds to native vegetation, which act as buffers to control runoff and erosion. Plants native to the area should be used for landscaping, since they have reduced needs for fertilizers and pesticides.

5. Redirect rain runoff from roofs, patios and driveways. Minimize flow by redirecting runoff to grassed areas or swales where it can infiltrate through the soil and recharge groundwater levels. Runoff that goes directly into a water body carries leaves, fertilizers, pesticides, grass clippings and trash.

6. Watering the driveway won't make it grow. Save the hose for gardening, not sweeping. Wash your car on the lawn (easy on the soap), which will help filter out detergents. Use biodegradable detergents with little or no phosphate.

7. Storm drains are only for rainwater. Never pour used motor oil, leaves, lawn clippings or other waste material into storm sewers. Motor oil is extremely toxic to wildlife. Drop off used motor oil at gas stations or garages that recycle.

8. Not all plants are bad. Vegetation around stormwater ponds, including weeds, helps trap and absorb nutrients and pollutants that might otherwise contaminate a water body. “Good” plants growing in the pond can also absorb nutrients that might cause blooms of “bad” plants, such as hydrilla or algae. “Good” plants also make water bodies a better place for fishing.

9. Add swales and berms to your pondside yard. A swale is a small dip in the slope of your yard. It catches storm water and filters it through the ground before draining into the pond. A berm is a small hump next to the swale. A berm helps hold water in a swale until it seeps in the ground.

10. Educate your neighbors. Pass this guide on to your friends and neighbors and discuss it with them. Working together, you and your neighbors can maintain your stormwater pond to improve water quality, provide valuable wildlife habitat and an attractive environment for the community.

Questions

Q. What is a stormwater pond?

A. A stormwater pond collects and treats stormwater runoff, which helps to safeguard water quality, as well as providing flood protection.

Q. Why are aquatic plants important for stormwater ponds?

A. Native aquatic plants reduce erosion and utilize excess nutrients, helping to maintain water quality. They also provide habitat for many types of water birds, insects and other aquatic animals, including fish.

Q. Where can aquatic plants be obtained?

A. Native aquatic plants can be obtained from many local nurseries.

Q. Who can I contact for additional information?

A. The Southwest Florida Water Management District at 1-800-423-1476, ext. 4226, or your local environmental or stormwater management agency.

Southwest Florida
Water Management District



WaterMatters.org • 1-800-423-1476

This information will be made available in accessible formats upon request. Please contact the Communications Department at (352) 796-7211 or 1-800-423-1476 (FL only), ext. 4757; TDD only at 1-800-231-6103 (FL only).