

Ten 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. Storm drains 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 wash 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 pond 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 or along the water's edge. Once the materials decay they become a source of water quality problems.

4 Plant, don't pave. Ground-cover minimizes runoff and is prettier than concrete. Consider converting lawns near ponds to native vegetation; they act as buffers to control runoff and erosion. Plants native to the area should be used for landscaping.

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

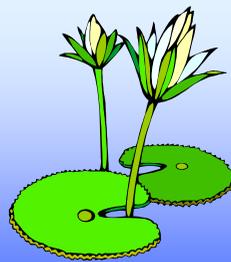
6 Watering the driveway won't make it grow. Save the hose for gardening, not sweeping. Wash your car on the lawn (easy on the soap), which will help filter out detergents. Use biodegradable detergents with little or no phosphate content.

7 Storm drains are only for rainwater. Never pour used motor oil, leaves, lawn clippings, or other waste materials into storm sewers. Motor oil is highly toxic to wildlife. Drop off used motor oil at recycling centers.

8 Not all plants are bad. Vegetation around stormwater ponds, including weeds, help 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.

9 Add swales and berms to your pond-side yard. A swale is a small dip in the slope of your yard. It catches stormwater and filters it through the ground before draining into the pond. A berm is a small hump next to the swale. It helps hold water in a swale until it seeps into 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 to provide a valuable wildlife habitat and attractive environment for the community.



Aquatic Plant Descriptions

Least Desirable Aquatic Plants...



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 an excellent mosquito-breeding habitat. Water lettuce has minimal wildlife value except for providing a resting area for small fish and aquatic insects.

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).



Cattail
(*Typha* spp.)

Cattail are extremely hardy and grow to cover large areas of wetlands, lakes and rivers. Cattail 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.



Desirable Aquatic Plants

Cord grass (*Spartina bakeri*)

Cord grass has 3-6 feet tall culms that grow in large, dense clusters. The absence of creeping, scaly rhizomes makes this plant well adapted for ponds. The roots of cord grass are an important food source for wintering geese along the Atlantic Coast. The seeds are occasionally eaten by ducks, marsh birds, and songbirds, but provide the main diet of the sharp-tailed and seaside sparrows.



Pickerelweed (*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. Flowers are seen during the spring and summer and grow 3-4 feet tall in shallow water. Pickerelweed provides important habitat for fish, waterfowl, and other aquatic animals.

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 an important fishery habitat, the seeds of this plant are consumed by waterfowl.



Desirable Aquatic Plants

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 in length and bright yellow in color. Rare or infrequent in wet ditches, marshes, and swamp margins of Florida.



Soft-stem bulrush (*Scirpus validus*)

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

Soft rush (*Juncus effusus*)

The pale green hollow stems of soft rush are cylindrical, about 1/4 inch in diameter and grow 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. Vegetation is sometimes browsed upon by deer in late fall or early winter.



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A Citizen's Guide to Stormwater Ponds

Proper landscaping on the bank 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.

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 stormwater.
- Untreated stormwater contributes approximately 80% to 95% of the heavy metals (lead, zinc, copper, cadmium) that enter Florida's waters.
- Nutrient load (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.
- Stormwater ponds collect and treat stormwater runoff, which helps to safeguard water quality, as well as provide flood protection.
- Native aquatic plants in stormwater ponds 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.