

### CITY OF DICKSON STORMWATER MANAGEMENT

CITY OF DICKSON
STORMWATER MANAGEMENT PROGRAM

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## Permanent Stormwater Solutions



A Guide to Retention Pond Maintenance



Unlike pollution from industry or sewage treatment facilities, which is caused by a discrete number of sources, stormwater pollution is caused by the daily activities of people everywhere. As rainwater and snowmelt run over streets, lawns, farms and construction sites, pollutants such as fertilizers, soil, pesticides, oil, grease, and pathogens are picked up and carried by the stormwater. Permanent stormwater solutions are structures that are designed into the landscape to catch this runoff, slow the flow of stormwater runoff, and reduce the amount of pollution entering the aquatic ecosystem in order to maintain the integrity of our streams.



### What is a Retention Pond?

- A retention pond, also called a wet pond, has two main functions:
  - 1. Pollutant removal
  - 2. Control of stormwater runoff
- Retention ponds are one of many water quality best management practices that developers may choose to install to meet local, state, and federal water quality requirements.

## Who is Responsible for Retention Pond Maintenance?

- In most cases, maintenance of a retention pond located on private property is the responsibility of the landowner, not the Town. In residential subdivisions, this is often the HOA.
- Most retention ponds are located on an easement, which is a portion of land that is reserved for a specific use, in this case stormwater runoff. Easements are typically designated on the property plat.





# Why is a Retention Pond Important?

- Impervious surfaces, such as roof tops and roads, increase the volume and velocity of stormwater runoff
- Pollutants, such as sediment, nutrients, pathogens, and oil/grease frequently pollute waterways as they get picked up and carried in stormwater runoff.
- Excess pollutants can harm aquatic species, such as the Flame Chub, an endangered fish species.
- Standing water in a retention pond promotes pollutant removal through gravitational settling, biological uptake and microbial activity before this water discharges into waterways.
- The retention pond also controls the rate at which stormwater is released into waterways.

#### Common Issues



Algae Bloom



Bank Erosion



Dirty Water



Nuisance Wildlife

### Guidelines for Maintenance

- Algal blooms are caused by excess nutrients. Limit the use of fertilizers, herbicides, and pesticides from near the pond and establish an aquatic bench (a shallow shelf using wetland plants) to take up excess nutrients and increase aesthetic value.
- Bank erosion can be caused by inadequate bank stabilization. Do routine inspections of the pond and be sure the banks of the pond are not actively eroding or slumping. Installing wetland plants around the bank will reduce erosion and stabilize the bank
- Dirty water is an indicator of pollution whether it is sediment, animal waste, detergents, or illicit discharges. Use BMPs to limit sedimentation, pick up after pets and consider installing pet waste stations around HOAs, wash vehicles on grass, and do not pour anything down the storm drain.
- Some wildlife may choose to call your retention pond home. In large numbers, waterfowl can erode shore banks and contribute to pollution. It is recommended that no more than two waterfowl per acre be allowed to reside in the retention pond. Beavers and muskrats should be removed as they will cause damage to the retention pond.