



## Cattail Management for Stormwater BMPs January 2021

Stormwater Best Management Practices, or “BMPs”, are structures designed and constructed to minimize flooding and capture the pollutants in stormwater runoff prior to flowing downstream into rivers, ponds and wetlands. Examples of BMPs found in Watertown include:

- Stormwater Ponds
- Infiltration Basins
- Dry Ponds
- Constructed Wetlands
- Biofiltration Systems & Swales
- Underground Proprietary Devices (Stormceptors, Up-Flo Systems)
- Underground Detention Systems



The above-ground BMPs have vegetation that helps filter and collect pollutants, allowing clean water to flow through to the rivers, ponds and wetlands. Just like a flower garden, vegetable garden, or any lawn in the City, the vegetation in the stormwater BMPs needs to be maintained. Routine weeding, cutting or herbicide applications are typical measures to maintain vegetation in these BMPs.

### Why are Cattails a Problem in Stormwater BMPs?

Cattails (*Typha* sp.) are commonly present in stormwater BMPs, however they are usually not intentionally planted. The shallow ponds and soft sediments that get deposited in the stormwater ponds are wonderful conditions for cattails to grow voluntarily. Managed, limited growth of cattails around the perimeter of a stormwater pond can help stabilize banks and can be a deterrent to children or geese and other waterfowl from entering the pond. However cattails can grow aggressively, taking over large areas of the BMP. Excessive cattails are problematic in stormwater BMPs due to:

- Tall, thick leaves that die off and fill in the bottom of a stormwater BMP; the biomass takes up storage area for heavy rains that is designed to minimize upstream flooding
- Decaying cattail leaves may release phosphorus back into the water, which can flow in the dissolved form to the nearest river, pond or wetland.

- Loose cattail leaves can float on the water surface toward the outlet and clog or block the outlet, creating potential flooding conditions.
- Interwoven cattail root systems, or rhizomes, can form a tightly woven layer underground, preventing infiltration of stormwater into the ground

## Cattails as an Indicator of Stormwater BMP Conditions

The presence of cattails in stormwater BMPs can be an indicator of deteriorating BMP conditions that should be monitored and investigated further.

- Cattail growth near the inlet pipes may indicate deposits of sediment; *sediment removal by hand may be applicable*
- Cattail growth throughout a stormwater wet pond can be indicative of loose sediment in much of the pond; *sediment removal throughout the pond may be necessary.*
- Cattail growth in an infiltration basin; standing water for long periods for time, allowing cattails to grow, may indicate clogged soils or high groundwater, or a thick underground network of cattail rhizomes, impacting the ability of water to infiltrate into the ground as designed. *Soils remediation or re-vegetation of the original plantings may be required for the water to infiltrate again.*



## Cattail Management Options

Cattail management is a routine task that will most likely occur annually. It is very difficult to completely eliminate or eradicate cattails from a stormwater BMP, but they can be managed to allow room for additional, diverse plant species to thrive.

### Cattail Management Methods

Management Method	Considerations
Cutting & Drowning	Winter task; must remove cut cattails from BMP to avoid clogged outlets/potential flooding issues; cattails to be cut as low as possible so snow melt and spring rains can drown the remaining plant structure
Cutting	<i>Not recommended in spring/summer (promotes re-growth at this time of year)</i>
Herbicide Treatments	Specific herbicides may impact cattails; Requires DATCP certification for aquatic herbicides applications; may require WDNR permitting
Plant & Root (Rhizome) Removal (Dredging)	Dredging will most likely remove accumulated sediment from the BMP bottom and will require sediment disposal, which may require WDNR permits/approvals.
Burning	<i>Not allowed within City limits per Ch. 18 Municipal Code - Fire Prevention &amp; Protection</i>

### **Phragmites sp.**

*Phragmites* sp. (Phragmites) is an aggressive invasive plant species that often grows in or near the same conditions that cattails grow in. Phragmites can quickly become the dominant species, outcompeting other desired species including the aggressively growing cattails. Control of this invasive species is important as the plants can be transported to colonize shallow wetland areas quickly, changing plant and animal diversity and impacting the water quantity and quality benefits of a wetland complex. Management methods for Phragmites include the methods listed above for Cattails.

### **For Additional Information**

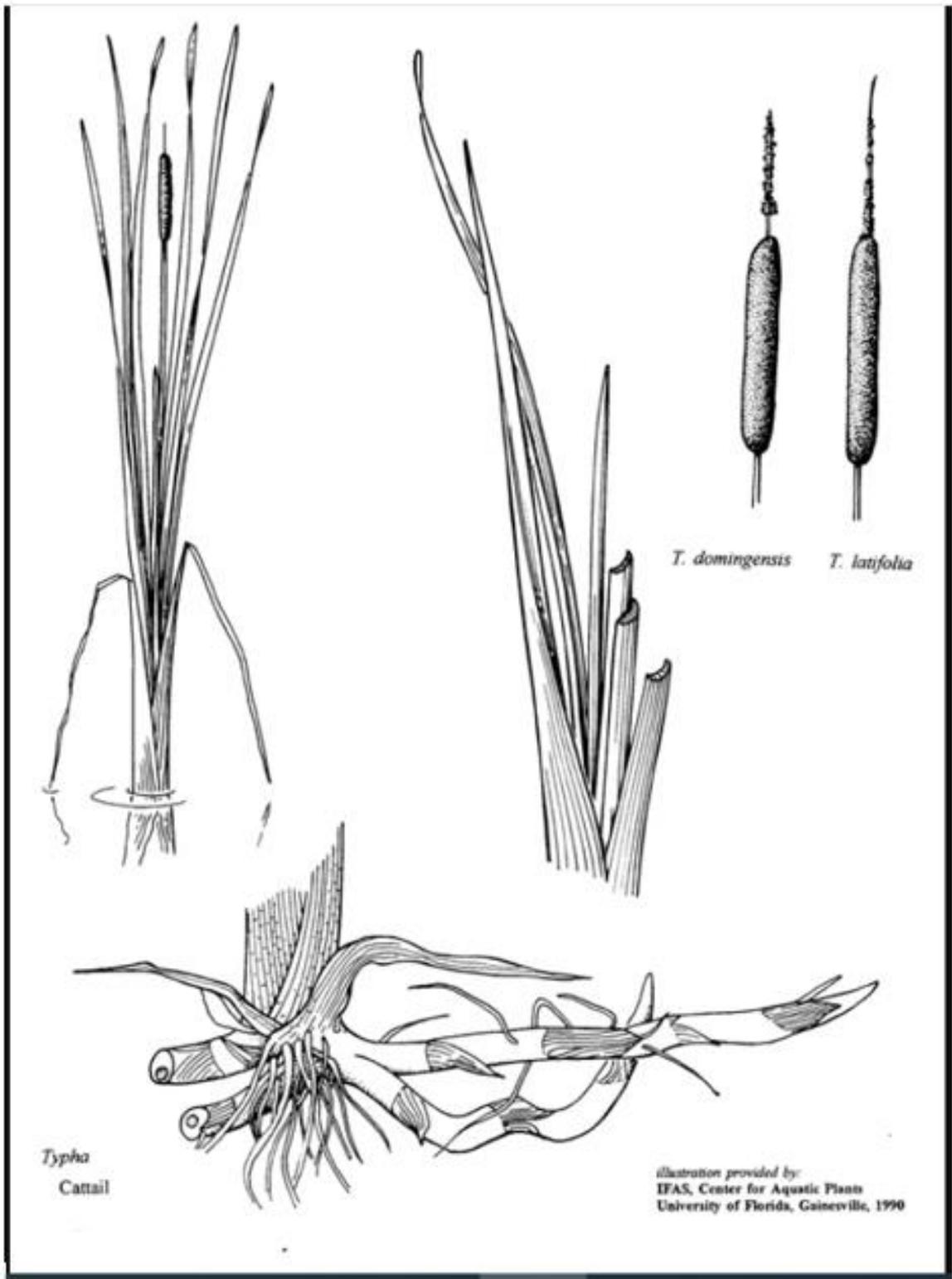
Additional information about stormwater BMP management and maintenance can be found online and at the following sites:

Stormwater BMP Maintenance: City of Watertown  
<https://www.ci.watertown.wi.us/Stormwater%20Facility%20Maintenance%20Links.pdf>

Cattails: Wisconsin Department of Natural Resources (WDNR):  
<https://dnr.wisconsin.gov/topic/Invasives/fact/NarrowLeavedCattail.html>

Phragmites: Wisconsin Department of Natural Resources (WDNR):  
<https://dnr.wisconsin.gov/topic/Invasives/fact/Phragmites.html>

Commercial Herbicide Applicator Certification: Wisconsin Department of Trade and Consumer Protection (DATCP): [https://datcp.wi.gov/Pages/Licenses\\_Permits/CommercialApplicator.aspx](https://datcp.wi.gov/Pages/Licenses_Permits/CommercialApplicator.aspx)



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