

Fitchburg Stormwater Pond Algae Analysis

***Reports and analysis from Professor Linda Graham at University of Wisconsin - Madison (lgraham@wisc.edu)*

Location	Date Collected	Species Present	Recommendation	Notes	Photos	Reported
Swan Creek	8/22/2011	Toxic cyanobacteria	Immediate signage to deter people from letting dogs drink from or play in it	also some euglenoids associated with organic input; that's of some concern, but the worst problem by far is the cyanobacterial signal		8/29/2011
The Crossing	8/22/2011	Filamentous green algae: Spirogyra, Oedogonium		Some people might think that material unsightly, but it is MUCH better to have those algae sequestering nutrients than to have a lot of cyanobacteria.		8/29/2011
Northern Lights	8/22/2011	Low populations of filamentous green Zygnema		Harmless		8/29/2011
Arrowhead East	8/22/2011	High population of filamentous green Pithophora, some Anabaena and Planktothrix	Watch this pond to ensure that the cyanobacteria don't get abundant	grows in shallow lakes under fairly hot conditions (more abundant in the Southern US). It is not worrisome except to indicate high nutrient status. Anabaena and Planktothrix that can produce toxins		8/29/2011
Northern Lights	8/17/2012	Large filamentous green algae, mostly Rhizoclonium, which is related to Cladophora and Pithophora, with Oedogonium and Spirogyra mixed in	High input of N, P into this pond, so intercepting those nutrients with pond-edge plantings would be the thing to do. Could be removed by raking	With algicides there is the risk of switching the community to toxic cyanobacteria	\\Pubwrks	8/22/2012
Swan Creek	8/17/2012	Dominated by the cyanobacterium Planktothrix	People and pets should stay out of this pond	Can be a toxin producer, most dangerous pond	\\Pubwrks	8/22/2012
The Crossing East	8/17/2012	Mats of large filamentous green algae like Rhizoclonium and Oedogonium	Can be removed by raking	Not harmful, just obnoxious looking	\\Pubwrks	8/22/2012
The Crossing West	8/17/2012	Lots of the potentially harmful cyanobacterium Anabaena, phytoplankton species were Euglena and Trachelomonas	People and pets should not get into this pond	Indicates high organic content of the pond	\\Pubwrks	8/22/2012
McKee Farms North	8/17/2012	Phytoplankton dominated by a large, deeply colored cyanobacterium, probably an Oscillatoria, but the green unicells Closterium and Cosmarium also present	Recommend planting a lot of pretty, native flowering plants around the edges of these ponds to intercept nutrients. Grassy edges make it too easy for fertilizers to get into the wate	Heavy buildup of Eurasian Water Milfoil	\\Pubwrks	8/22/2012
Longford	8/17/2012	Mixture of the large, filamentous green alga Cladophora and related Pithophora. Some Spirogyra and Oedogonium were mixed in. plankton included a surprising number large green Closterium cells (see attached image) with diverse smaller green algae and a bit of the cyanobacterium Anabaena	Use a leaf rake to remove the large filamentous mats; you could make compost with the biomass. Use protective equipment just to avoid contact with bacteria. I do not recommend the use of algaecide because of the risk of fostering cyanobacteria, which could take over once the large-celled, P-storing green algae are gone	Look obnoxious, but are not particularly harmful (with possible exception of Anabaena) P:\Engineering\Environmental\ECSWM\Storm Water\Algae\Photos\LongfordClost7970.jpg	\\Pubwrks	8/22/2012
Arrowhead West	7/19/2013	Anabaena and Microcystis, which can form toxin-producing blooms were present in addition to some less alarming algae (Pandorina and Scenedesmus).	There is cause for concern ; pets should not be allowed to drink pond water.			7/22/2013
McKee Farms North	7/19/2013	Micrasterias, Cosmarium, and Oedogonium		Harmless and interesting green algae		7/22/2013
Oak Bank	7/19/2013	Small amount of Oedogonium		Harmless and interesting green algae		7/22/2013
Longford	7/19/2013	Green Closterium, euglenoid Trachelomonas, cryptomonad Cryptomonas		Harmless and interesting green algae		7/22/2013
The Crossing West	7/19/2013	Large amounts of Aphanizomenon, which can form toxic blooms:	Cause for concern ; pets should not be allowed to drink.			7/22/2013
The Crossing East	7/19/2013	Large amounts of potentially harmful Aphanizomenom	Cause for concern ; pets should not be allowed to drink.			7/22/2013
Swan Creek	7/19/2013	Large amounts of Anabaena, which can produce toxic blooms	Cause for concern ; do not allow pets to drink the water!			7/22/2013
Ashbourne	7/19/2013	Eugenoid Trachelomonas		Indicates some organic input, not harmful		7/22/2013

Arrowhead East	7/19/2013	Anabaena		Can cause harmful, toxic blooms; cause for concern		7/22/2013
McKee Farms South	7/19/2013	Green filamentous algae Rhizoclonium, Oedogonium	These filamentous forms can easily be removed by raking.	No health concerns.		7/22/2013
Northern Lights Pond	7/19/2013	Cryptomonad Cryptomonas		No health issues.		7/22/2013

Swan Creek and Wet Pond Water Quality Sampling

July 22, 2010

Nutrient	The Crossing Wet Pond	Swan Creek Stream Monitoring	Northern Lights Wet Pond	Wetland Release Structure	Swan Creek Wet Pond
Nitrate+Nitrite (As N) [mg/L]	0.029	1.600	0.997	0.034	0.024
Total Phosphorus (As P) [mg/L]	0.046	0.458	0.052	0.375	0.569
Dissolved Reactive Phosphorus [mg/L]	0.009	0.135	0.002	0.052	0.045
Suspended Solids [mg/L]	3	179	7	27	33