



Village of Menomonee Falls
W156 N8480 Pilgrim Road
Menomonee Falls, WI 53051-3140
Telephone: (262) 532-4200

STORMWATER MANAGEMENT FACILITIES OPERATION AND INSPECTION REPORT

Quarter Section
Property Tax ID Number
Date: 8/14/2021

NE1/4, Sec 34
0133.216
Name of Business/Subdivision
Address of Property
Ravenswood Subdivision

Dry Pond		Pond ID: SWP34n004	Location of Pond	Outlet 2 – Pond #1
Wet Pond	X			Southern Pond
Other				

Year Pond
Constructed

2004

Year of Last
Certification

2014

Compliance Verification	Design	Actual	Compliant Yes	No	Comments (Condition of Structure)
Primary Outlet Pipe					
Opening Diameter (inches)	12"	12"	X		Outlet Pipe Material
Upstream Invert	804.00	804.08	X		Outlet pipe material is RCP.
Downstream Invert	803.00	803.03	X		RCP is in good condition and no evidence of sediment accumulation within pipe, appears to be operating as originally intended.
Length (feet)	334	333	X		
Slope (%)	0.30%	0.32%	X		
Secondary Outlet Pipe	(If Applicable)				
Opening Diameter (inches)					Outlet Pipe Material
Upstream Invert					
Downstream Invert					
Length (feet)					
Slope (%)					
Riser	(If Applicable)				
Opening Diameter (inches)	24"x36"	24"x36"	X		Riser Material
Elevation	807.90	808.02	X		Riser is a concrete structure with a metal inlet grate
Upper Discharge Control	(If Applicable)				
Opening Diameter (inches)					
Elevation					

Compliance Verification	Design	Actual	Compliant Yes	No	Comments
Lower Discharge Control	(If Applicable)				
Opening Diameter (inches)	6"	6"	X		Orifice is in good condition and operating as intended, however, with the orifice elevation of 803.95 and a water elevation of 804.56, there appears to be some sort of plug in the system, most likely caused by undesirable vegetation or trash, which should be removed.
Elevation	804.20	803.95	X		
Other (Description)					
Opening Type and Size (inches)					
Elevation					
Emergency Spillway					
Elevation	808.90	808.31	X		
Length of spillway (feet)	20'	21'	X		Some weedy vegetation growing, spray or hand remove
Embankment	Present Yes	no	Comments/Maintenance Requirements		
Unauthorized Plantings, trees, or woody vegetation	X		There are several trees and woody vegetation within the basin, mainly on the north and west edges of the basin that should be removed. There is some significant erosion on the south edge of the basin that should be restored and seeded. There is erosion at the water's edge throughout the perimeter of the wet pond. Typically, this is caused by not providing a native vegetation buffer or some sort of armoring system at the water's edge. Recommend to only mow the first 5' from the water's edge twice per year to help secure and minimize the erosion. In addition, may be necessary to armor the edge with an Envirolok system, or equivalent.		
Animal burrows or slope erosion	X				
Storm Sewer Outfalls	Type & Size		Location		Comments
Outfall 1	RCP. 20"		West Edge		No signs of sediment accumulation at the end of the pipe. The little bit of riprap that is there appears to be stable, but there are areas in which soil is exposed and eroding into the Wet Pond. Recommend to remove riprap, add a geotextile fabric and replace the riprap along with additional riprap stones to secure the slope from the pipe to the water. The trees and woody vegetation between the pipe and the water should be removed. The endwall section of the pipe appears to have broken off of the main line pipe. This should be fixed.
Outfall 2	RCP, 24"		South Edge		There is some sediment accumulating within the endwall section, but most likely is due to the fact that the invert is slightly lower than the orifice of the outlet structure, causing water to pool and sediment to filter out in the pipe. The endwall starting to break away from main pipe. Excavate around endwall and re-attach endwall.
Outfall 3					

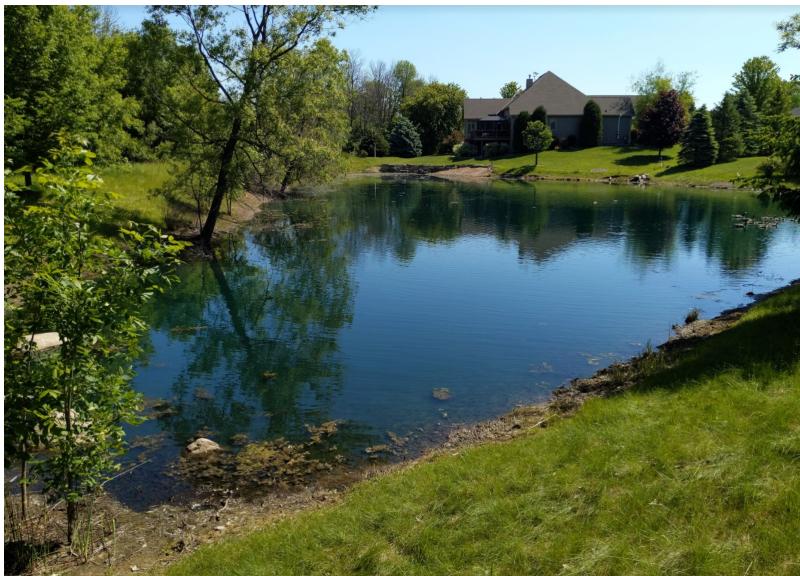
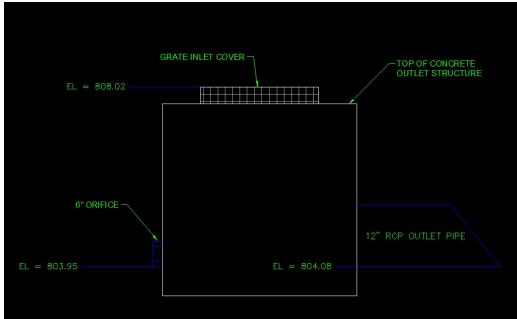
Storage Properties	Design	Actual	Compliant Yes	Compliant No	Not Applicable	Equipment Used
Normal Water Elevation (Wet Ponds)	804.00	804.56	X			Drone technology and laser level To determine elevations and contours HydroCAD 10.0 to determine areas and pond volumes
Design High Water Elevation	808.26	808.25	X			
Area at Normal Water Elevation (Ac) (Wet Ponds)	0.44	0.45	X			
Area at Design High Water Elevation (Ac)	0.67	0.65	X			
Active Storage Available (Ac-Ft)*	2.30	2.57	X			
Lowest Elevation at Top of Embankment (If Applicable)	809.90	809.80	X			
Average Elevation at Top of Embankment (If Applicable)	809.90	809.80	X			
Maximum Bottom Elevation	796.00	795.73		X		
Average Pond Bottom Elevation	796.00	795.64	X			
Pond Bottom Area (Ac)	0.14	0.12	X			
Maximum Pond Depth	8.0 ft	8.83 ft	X			There are two localized spots that are significantly higher than the originally pond bottom. One is near the east infall pipe and one is near the outlet structure. These two spots will need to be reviewed at the next inspection to confirm they are not growing in size and reducing the wetted volume portion of the pond.
Average Pond Depth	8.0 ft	8.92 ft	X			
Average Permanent Pool Depth (Wet Ponds)	8.0 ft	8.92 ft	X			

*To Determine Active Storage $V=(H/3)(A1+A2+(\sqrt{A1+A2}))$

Wet Ponds Use $H = \text{Height of Section}$, $A1 = \text{area at normal water elevation}$, $A2 = \text{area at top section}$

Dry Ponds Use $H = \text{Height of Section}$, $A1 = \text{pond bottom area}$, $A2 = \text{area at top section}$

Sketch Outlet or Attach to Document



01/06/2021 10:23:34 AM
View of overall wet pond. Trees and woody vegetation shown here that should be removed.

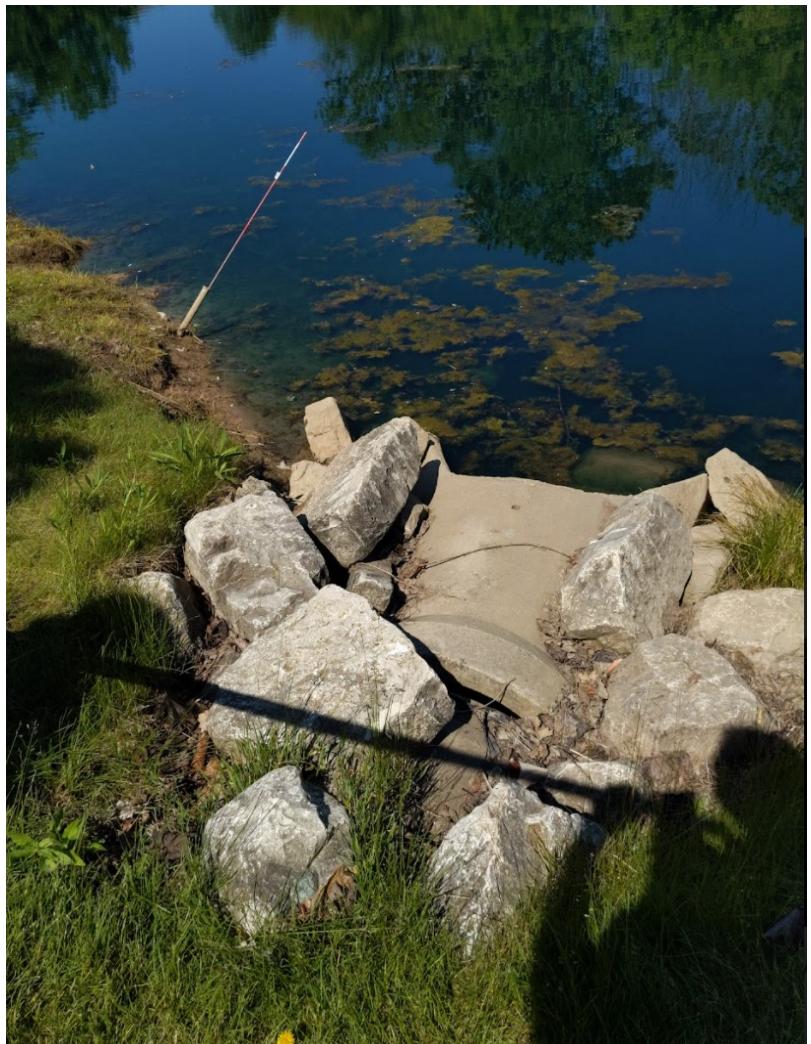


01/06/2021 10:24:27 AM
View of south infall pipe.



01/06/2021 10:24:48 AM

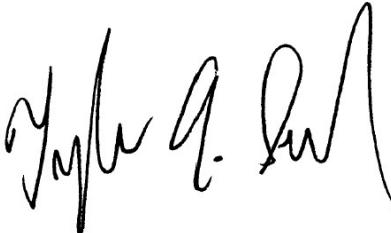
South infall pipe that is broken off at the endwall section.

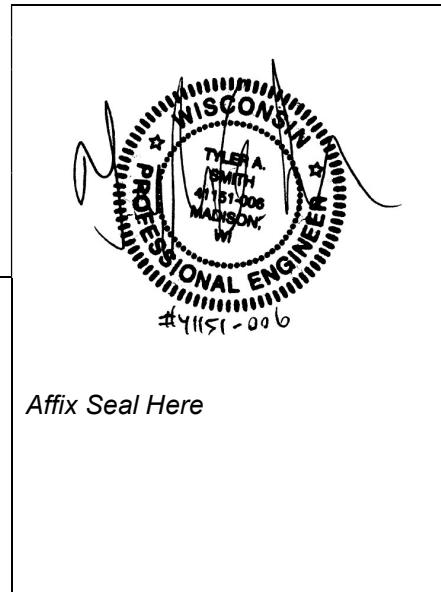


Inspection Firm: Drainage Doctor, LLC
Phone Number: 608.535.9380
Address: 416 W Red Pine Circle
Dousman, WI 53118

Inspector Name : Tyler Smith, PE
Inspection Date: 06.01.2021

Certifying Professional Tyler Smith, PE
Name: _____
Phone Number: 608.535.9380

Date: <u>08.14.2021</u>	Signature: 
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Affix Seal Here

10-3-2012