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: 35 NW
Property Tax ID Number: 0138999002
Name of Business/Subdivision: WILLOWOOD PARK
Address of Property: BADGER DR, MENOMONEE FALLS, WI 53051

Dry Pond	
Wet Pond	X
Other	

Description: SWP35N006 P-0242

Location Of Pond: SE CORNER OF SILVER SPRING & BADGER DR

Year Pond Constructed: 1968
Year of Last Certification: N/A

Compliance Verification	Design	Actual	Compliant Yes	Compliant No	Comments (Condition of Structure)
Primary Outlet Pipe					Outlet Pipe Material
Opening Diameter (inches) (ST015376)	N/A	N/A			N/A
Upstream Invert	N/A	N/A			
Downstream Invert	N/A	N/A			
Length (feet)	N/A	N/A			
Slope (%)	N/A	N/A			
Secondary Outlet Pipe	(If Applicable)				Outlet Pipe Material
Opening Diameter (inches)					
Upstream Invert					
Downstream Invert					
Length (feet)					
Slope (%)					
Riser	(If Applicable)				Riser Material
Opening Diameter (inches)					IN GOOD CONDITION.
Elevation					
Upper Discharge Control	(If Applicable)				
Opening Diameter (inches)					
Elevation					

Compliance Verification	Design	Actual	Compliant Yes	Compliant No	Comments
Lower Discharge Control	(If Applicable)				
Opening Diameter (inches)					
Elevation					
Other (Description)					
Opening Type and Size (inches)					
Elevation					
Emergency Spillway					
Elevation	N/A	777.41	-		ONLY OUTFLOW FEATURE
Length of spillway (feet)	N/A	10.5	-		

Embankment	Present Yes	Present No	Comments/Maintenance Requirements
Unauthorized Plantings, trees, or woody vegetation	X		VARIETY OF VEGETATION GROWING AROUND LAGOON. NO IMPAIRMENT TO ANY DRAINAGE AT THIS TIME.
Animal burrows or slope erosion		X	NO NEED TO REMOVE ANY VEGETATION AT THIS TIME.

Storm Sewer Outfalls	Type & Size	Location	Comments
Outfall 1 (ST020327)	12" CORGTD PVC	SW CORNER OF POND	PVC IN GOOD CONDITION, 776.70
Outfall 2			
Outfall 3			

Storage Properties	Design	Actual	Compliant Yes	Compliant No	Not Applicable	Equipment Used
Normal Water Elevation *(Wet Ponds)*	N/A	777.46	-			GPS EQUIPMENT: GEOMAX ZENITH35 & CARLSON SURVEYOR2 WITH SURV CE v5.04
Design High Water Elevation	N/A	778.50	-			
Area at Normal Water Elevation (Ac) (Wet Ponds)	N/A	1.794 AC	-			
Area at Design High Water Elevation (Ac)	N/A	1.998 AC	-			
Active Storage Available (Ac-Ft)*	N/A	1.989 ACFT	-			
Lowest Elevation at Top of Embankment (If Applicable)	N/A	778.20	-			
Average Elevation at Top of Embankment (If Applicable)	N/A	779.50	-			
Maximum Bottom Elevation	N/A	771.16	-			ELEVATIONS TO VARY SLIGHTLY FROM YEAR TO YEAR DUE TO GPS TECHNOLOGY
Average Pond Bottom Elevation	N/A	774.00	-			
Pond Bottom Area (Ac)	N/A	0.782 AC	-			
Maximum Pond Depth	N/A	7.3 FT	-			
Average Pond Depth	N/A	4.5 FT	-			
Average Permanent Pool Depth *(Wet Ponds)*	N/A	3.5 FT	-			

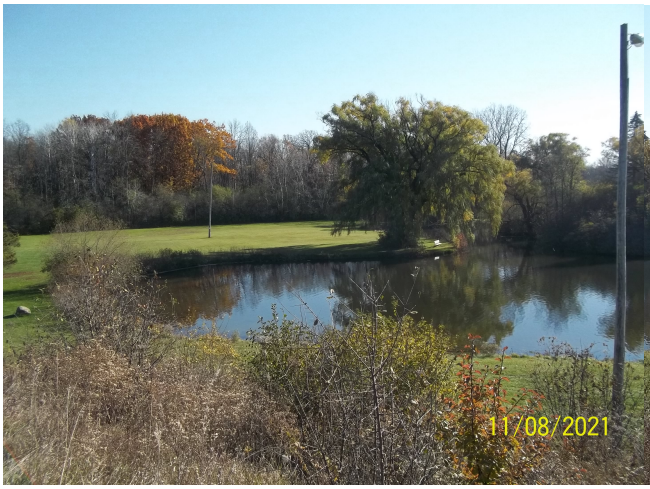
*To Determine Active Storage $V = ((H/3) (A1 + A2 + ((A1 + A2) ^ (½))))$

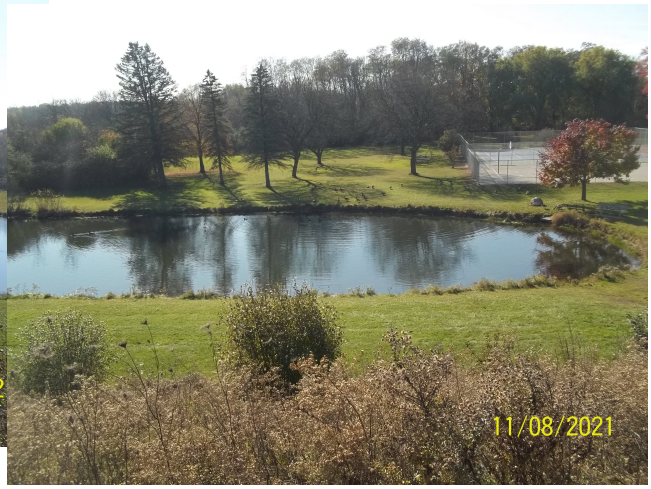
Wet Ponds Use *H = Height of Section , A1= area at normal water elevation, A2=area at top section*

Dry Ponds Use *H= Height of Section, A1= pond bottom area, A2=area at top section*

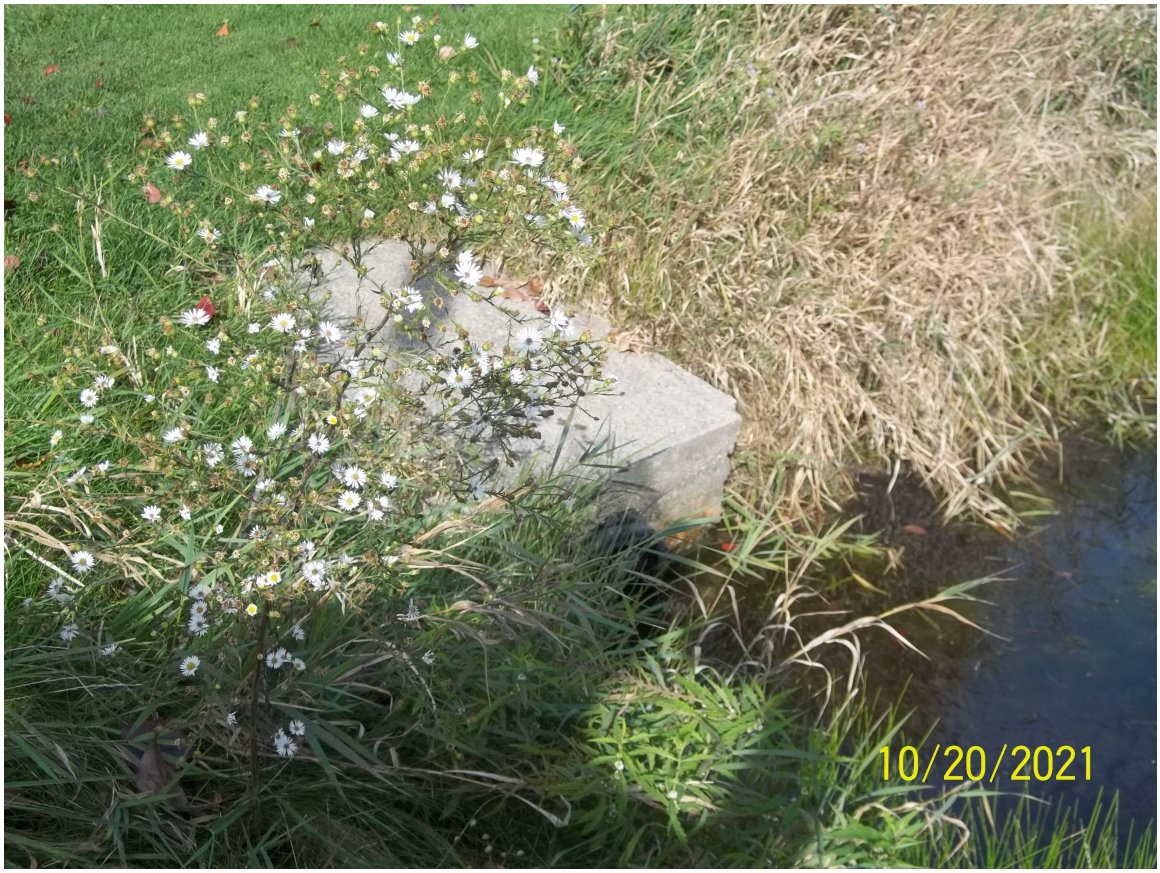
Willowood Park Lagoon – SWP26N006

Overview



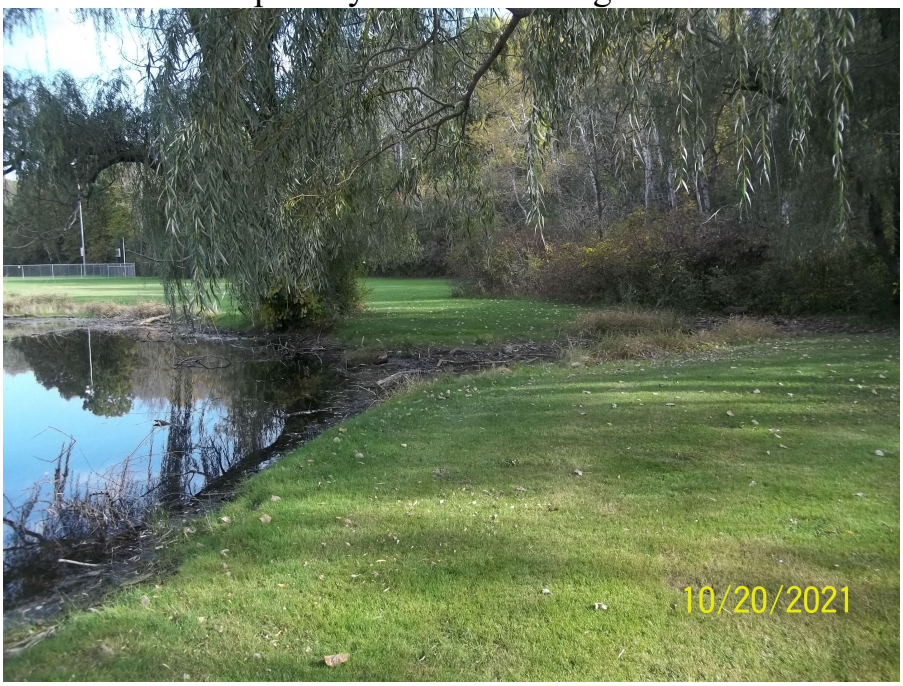


Storm Water Outlet ST020327

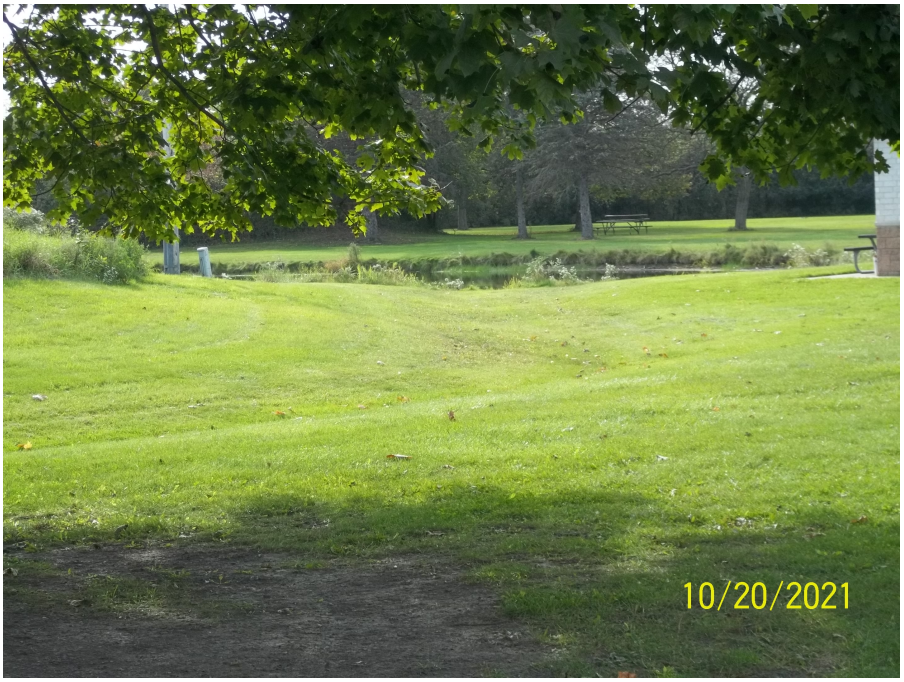


Willowood Park Lagoon – SWP26N006

Spillway at E End of Lagoon



Swale Leading to NW Corner of Lagoon



Willowood Park Lagoon – SWP26N006

Repairs Needed (11/08/21)

None

Sketch Outlet	*Place Photograph of Pond*
	Place Photograph of Pond

Inspection Firm:	VILLAGE OF MENOMONEE FALLS	Inspector Name :	CHRISTOPHER M. GARIEPY
Phone Number:	(262) 532-4411	Inspection Date:	NOVEMBER 8, 2021
Address:	VILLAGE OF MENOMONEE FALLS W156N8480 PILGRIM RD MENOMONEE FALLS, WI 53051		

Certifying Professional Name: THOMAS M. HOFFMAN, P.E.
Phone Number: (262) 532-4415

Date:	*Signature:*	*Affix Seal Here*
4/14/2022		WISCONSIN THOMAS M. HOFFMAN E-39270 BROOKFIELD WIS PROFESSIONAL ENGINEER

Water Elevation
November 8, 2021
was 777.46.

SWP35N006
Willowood Park Pond
2021 Pond Inspection
Land Survey 10/20/2021 CMG
Pond Bottom Survey 11/08/2021 CMG

SWP35N006
P-0242

SWP35N006

VILLAGE OF Menomonee Falls

N W E S

0 3.75 7.5 15 22.5 30 Feet

1 inch = 30 feet

Acre Feet pond storage volume calculations for:

WILLOWOOD PARK POND
SWP35N006

= Entered Value
= Calculated Value
= Description of Elevations Calculated

Year of Inspection: **2021**

Example: H = H2-H1, where H2 > H1

H1 =	777.46	Lower Height Elevation in Feet (Pond Bottom for Dry Pond **OR** Top of Observed Water Level)
H2 =	777.66	Height at Bottom of Spillway (Wet or Dry)
H3 =	778.50	Higher Height Elevation in Feet (Top of Bank Around Pond - Wet or Dry)
H4 =	774.00	Bottom of Wet Pond Elevation in Feet (Wet Ponds Only)

	Sq.Ft.	Acres		
Area 1 =	78,126.40	**1.7935**	Area of H1	Area 1 = Area at Top of Observed Water Level
Area 2 =	78,494.10	**1.8020**	Area of H2	Area 2 = Area at Bottom of Spillway
Area 3 =	87,031.80	**1.9980**	Area of H2	Area 3 = Area at Top of Bank
Area 4 =	34,060.70	**0.7819**	Area of H3	Area 4 = Area at Bottom of Pond

Equation to determine Volume (AcFt) of pond storage capacity from
Top of Water to Bottom of Spillway:

V = (((H2-H1)/3)(A1+A2 + (√(A1+A2))))

	Feet		Acres		Acres
V=	((H2-H1)/3)	x	(A1+A2	+	√(A1+A2))
V=	0.0667	x	3.5955	+	1.8962
V=	0.0667	x	5.4917		
V=	**0.3661**	**AcFt**			

Equation to determine Volume (AcFt) of pond storage capacity from
Top of Water to Top of Bank at Spillway:

V = (((H3-H1)/3)(A1+A3 + (√(A1+A3))))

	Feet		Acres		Acres
V=	((H3-H1)/3)	x	(A1+A3	+	√(A1+A3))
V=	0.3467	x	3.7915	+	1.9472
V=	0.3467	x	5.7387		
V=	**1.9894**	**AcFt**			

Equation to determine Volume (AcFt) of pond storage capacity from
Bottom of Pond to Top of Water:

V = (((H1-H4)/3)(A1+A4 + (√(A1+A4))))

	Feet		Acres		Acres
V=	((H4-H1)/3)	x	(A1+A4	+	√(A1+A4))
V=	1.1533	x	2.5755	+	1.6048
V=	1.1533	x	4.1803		
V=	**4.8213**	**AcFt**			

Equation to determine Volume (AcFt) of pond storage capacity from
Bottom of Pond to Top of Bank at Spillway:

V = (((H3-H4)/3)(A3+A4 + (√(A3+A4))))

	Feet		Acres		Acres
V=	((H3-H4)/3)	x	(A3+A4	+	√(A3+A4))
V=	1.5000	x	2.7799	+	1.6673
V=	1.5000	x	4.4472		
V=	**6.6708**	**AcFt**			