



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

NW1/4, Sec 25 Name of Business/Subdivision Harmony Hills II
N0098090 Address of Property _____

| | | | |
|----------|---|------------------|--------------------|
| Dry Pond | | Location of Pond | Outlet 4 – Pond #4 |
| Wet Pond | X | | _____ |
| Other | | | _____ |

Year Pond Constructed 2007 Year of Last Certification 2011

| Compliance Verification | Design | Actual | Compliant Yes | No | Comments (Condition of Structure) |
|--------------------------------|-----------------|---------|------------------|----|--|
| Primary Outlet Pipe | | | | | |
| Opening Diameter (inches) | 30" | 30" | X | | Outlet Pipe Material Outlet pipe material is RCP. |
| Upstream Invert | 779.80 | 779.80 | X | | RCP is in good condition and no evidence of sediment accumulation within pipe, appears to be operating as originally intended. |
| Downstream Invert | 779.65 | 779.68 | X | | |
| Length (feet) | 123 | 122 | X | | |
| Slope (%) | 0.12% | 0.10% | 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 Riser is a concrete structure with a metal rebar grate bolted to concrete structure. There is some slight erosion around the west side of the structure. |
| Elevation | 785.85 | 785.64 | X | | |
| 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) | 10" cmp | 10" cmp | X | | The elevation difference confirms that the outlet orifice pipe appears to have dropped at the water's edge and is not at the design invert elevation. | | |
| Elevation | 779.80 | 779.65 | X | | | | |
| Other (Description) | | | | | | | |
| Opening Type and Size (inches) | | | | | | | |
| Elevation | | | | | | | |
| Emergency Spillway | | | | | | | |
| Elevation | 787.00 | 786.75 | X | | Some weedy vegetation growing, spray or hand remove | | |
| Length of spillway (feet) | 20' | 21' | X | | | | |
| Embankment | Present Yes no | | Comments/Maintenance Requirements | | | | |
| Unauthorized Plantings, trees, or woody vegetation | | X | | | | | |
| Animal burrows or slope erosion | | X | | | | | |
| Storm Sewer Outfalls | Type & Size | | Location | | Comments | | |
| Outfall 1 | RCP. 42" | | Northeast Side | | From Dry Pond #3. End section has detached and volunteer trees starting to grow around end section. Needs to be repaired. | | |
| Outfall 2 | RCP, 24" | | Middle East Side | | Good working condition. | | |
| Outfall 3 | RCP, ??? | | Southeast Corner | | End of pipe is filled with sediment, recommend cleaning out sediment and installing a riprap outfall to water's edge | | |
| Storage Properties | Design | Actual | Compliant Yes | No | Not Applicable | Equipment Used | |
| Normal Water Elevation (Wet Ponds) | 779.00 | 778.95 | X | | | Drone technology and laser level To determine elevations and contours | |
| Design High Water Elevation | 788.00 | 788.00 | X | | | HydroCAD 10.0 to determine areas and pond volumes | |
| Area at Normal Water Elevation (Ac) (Wet Ponds) | 1.14 | 1.14 | X | | | | |
| Area at Design High Water Elevation (Ac) | 1.93 | 2.08 | X | | | | |
| Active Storage Available (Ac-Ft)* | 13.73 | 14.25 | X | | | | |
| Lowest Elevation at Top of Embankment (If Applicable) | 788.5 | 788.5 | | | | | |
| Average Elevation at Top of Embankment (If Applicable) | 788.5 | 788.5 | | | | | |
| Maximum Bottom Elevation | 774.0 | 774.28 | X | | | | |
| Average Pond Bottom Elevation | 774.00 | 773.14 | X | | | | |
| Pond Bottom Area (Ac) | 0.52 | 0.64 | X | | | | |

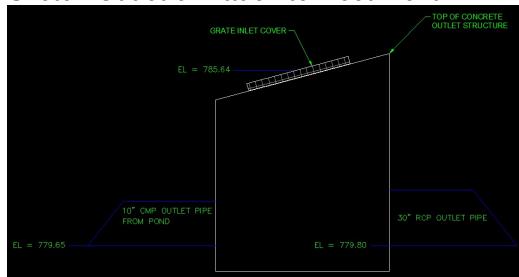
| | | | | | |
|--|--------|---------|---|--|--|
| Maximum Pond Depth | 5.0 ft | 6.17 ft | X | | |
| Average Pond Depth | | | | | |
| Average Permanent Pool Depth (Wet Ponds) | 5.0 ft | 5.81 ft | X | | |

*To Determine Active Storage $V=(H/3)(A_1+A_2+(\sqrt{(A_1+A_2)}))$

Wet Ponds Use $H = \text{Height of Section}$, $A_1 = \text{area at normal water elevation}$, $A_2 = \text{area at top section}$

Dry Ponds Use $H = \text{Height of Section}$, $A_1 = \text{pond bottom area}$, $A_2 = \text{area at top section}$

Sketch Outlet or Attach to Document



Overall view of pond and outlet structure



Emergency riprap outflow weir



Infall pipe from Dry Pond #3 with detached end section

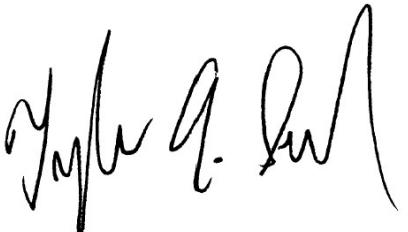
Inspection Firm: Drainage Doctor, LLC
Phone Number: 608.535.9380
Address: 416 W Red Pine Circle
Dousman, WI 53118

Inspector Name : Tyler Smith, PE
Inspection Date: 05.25.2021

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

*Affix Seal
Here*



| | |
|--------------------------------|---|
| Date: <u>08.14.2021</u> | Signature:  |
|--------------------------------|---|

10-3-2012