



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 _____ Name of Business/Subdivision Woodman's Food Market
 Property Tax ID Number _____ Address of Property W124N8145 STH 145
Menomonee Falls, WI 53051

| | |
|----------|---|
| Dry Pond | |
| Wet Pond | X |
| Other | |

Location Of Pond Northeast corner of Woodman's Food Market Site
 Description: Wet detention pond Asbuilt "POND 1" 125013

Year Pond Constructed 2009 Year of Last Certification _____

| Compliance Verification | Design | Actual | Compliant | | Comments (Condition of Structure) |
|--------------------------------|-----------------|--------|-----------|----|---|
| | | | Yes | No | |
| Primary Outlet Pipe | | | | | Outlet Pipe Material <u>PVC</u> |
| Opening Diameter (inches) | 10 | 10 | X | | Primary 10-inch PVC outlet pipe installed 0.85-feet above design elevation, which reduces design pond volume. |
| Upstream Invert | 795 | 795.85 | | X | |
| Downstream Invert | 794.90 | 794.99 | X | | |
| Length (feet) | 7.0 | 8.1 | X | | |
| Slope (%) | 0 | 10.6 | | X | |
| Secondary Outlet Pipe | (If Applicable) | | | | Outlet Pipe Material <u>RCP</u> |
| Opening Diameter (inches) | 18 | 18 | X | | |
| Upstream Invert | 794.98 | 794.79 | X | | |
| Downstream Invert | 794.80 | 794.40 | X | | |
| Length (feet) | 34.6 | 32.8 | X | | |
| Slope (%) | 0.52 | 1.19 | X | | |
| Riser | (If Applicable) | | | | Riser Material <u>PRECAST CONC</u> |
| Opening Diameter (inches) | 48 | 48 | X | | |
| Elevation | 798 | 798.13 | X | | |
| Upper Discharge Control | (If Applicable) | | | | |
| Opening Diameter (inches) | — | | | | |
| Elevation | — | | | | |

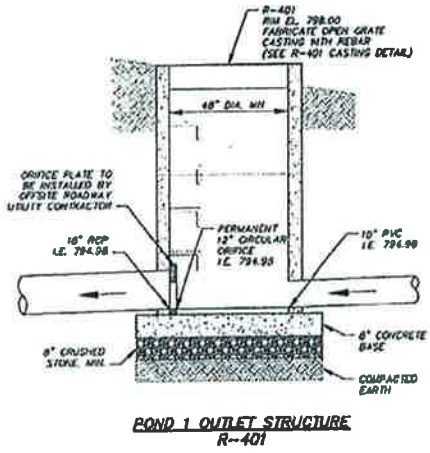
| Compliance Verification | Design | | Actual | | Compliant | | Comments |
|--|-----------------|--------|---------------|-----------------------------------|----------------|----------------|---|
| | Yes | No | Yes | No | Yes | No | |
| Lower Discharge Control | (If Applicable) | | | | | | |
| Opening Diameter (inches) | 12 | | NOT INSTALLED | | X | | 12" circular orifice plate not installed by contractor. |
| Elevation | 795 | | — | | X | | |
| Other (Description) | | | | | | | |
| Opening Type and Size (inches) | — | | | | | | |
| Elevation | — | | | | | | |
| Emergency Spillway | | | | | | | |
| Elevation | 802 | | 802.3 | | X | | |
| Length of spillway (feet) | 14 | | 15 | | X | | |
| Embankment | Present | | | Comments/Maintenance Requirements | | | |
| | Yes | | no | | | | |
| Unauthorized Plantings, trees, or woody vegetation | | | X | | | | |
| Animal burrows or slope erosion | | | X | | | | |
| Storm Sewer Outfalls | Type & Size | | | Location | | Comments | |
| Outfall 1 | R-100 | RCP | 42-INCH | Northwest | | | |
| Outfall 2 | R-200 | RCP | 15-INCH | West | | | |
| Outfall 3 | R-300 | RCP | 42-INCH | Southwest | | | |
| Storage Properties | Design | Actual | Compliant | | Not Applicable | Equipment Used | |
| | | | Yes | No | | | |
| Normal Water Elevation (Wet Ponds) | 795 | 795.85 | | X | | | |
| Design High Water Elevation | 802 | 802.3 | X | | | | |
| Area at Normal Water Elevation (Ac) (Wet Ponds) | 0.47 | 0.57 | X | | | | |
| Area at Design High Water Elevation (Ac) | 1.22 | 1.25 | X | | | | |
| Active Storage Available (Ac-Ft)* | 6.98 | 6.81 | | X | | | |
| Lowest Elevation at Top of Embankment (If Applicable) | 804 | 803.9 | X | | | | |
| Average Elevation at Top of Embankment (If Applicable) | 804 | 804 | X | | | | |
| Maximum Bottom Elevation | 790 | 789.2 | X | | | | |
| Average Pond Bottom Elevation | 790 | 789.5 | X | | | | |
| Pond Bottom Area (Ac) | 0.09 | 0.10 | X | | | | |
| Maximum Pond Depth | 5 | 6.65 | X | | | | |
| Average Pond Depth | 4 | 4 | X | | | | |
| Average Permanent Pool Depth (Wet Ponds) | 5 | 5 | X | | | | |

*To Determine Active Storage $V = ((H/3)(A1 + A2 + ((A1 + A2)^{(1/2)})))$

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

Sketch Outlet



Place Photograph of Pond

Place Photograph of Pond

Inspection Firm: _____
 Phone Number: _____
 Address: _____

Inspector Name : _____
 Inspection Date: _____

Certifying
 Professional Name: _____
 Phone Number: _____

Affix Seal Here

Date: _____

Signature: _____



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STORMWATER MANAGEMENT FACILITIES OPERATION AND INSPECTION REPORT

Quarter Section _____ Name of Business/Subdivision Woodman's Food Market
 Property Tax ID Number _____ Address of Property W124 N 8145 STH 145
Menomonee Falls, WI 53051

| | |
|----------|---|
| Dry Pond | |
| Wet Pond | X |
| Other | |

Description: Wet detention pond
"POND 2" 125011

Location Of Pond Southeast corner of Woodman's Food Market site.

Year Pond Constructed 2009 Year of Last Certification _____

| Compliance Verification | Design | Actual | Compliant | | Comments (Condition of Structure) |
|--------------------------------|-----------------|--------|-----------|----|--------------------------------------|
| | | | Yes | No | |
| Primary Outlet Pipe | | | | | Outlet Pipe Material <u>PVC</u> |
| Opening Diameter (inches) | 6 | 6 | X | | |
| Upstream Invert | 783 | 782.92 | X | | |
| Downstream Invert | 782.34 | 782.23 | X | | |
| Length (feet) | 27 | 27.2' | X | | |
| Slope (%) | 2.44 | 2.54 | X | | |
| Secondary Outlet Pipe | (If Applicable) | | | | Outlet Pipe Material <u>RCP</u> |
| Opening Diameter (inches) | 12 | 12 | X | | |
| Upstream Invert | 781.84 | 781.89 | X | | |
| Downstream Invert | 781.14 | 781.14 | X | | |
| Length (feet) | 23.2 | 22.7 | X | | |
| Slope (%) | 3.02 | 3.30 | X | | |
| Riser | (If Applicable) | | | | Riser Material <u>N/A</u> |
| Opening Diameter (inches) | — | | | | |
| Elevation | — | | | | |
| Upper Discharge Control | (If Applicable) | | | | |
| Opening Diameter (inches) | — | | | | |
| Elevation | — | | | | |

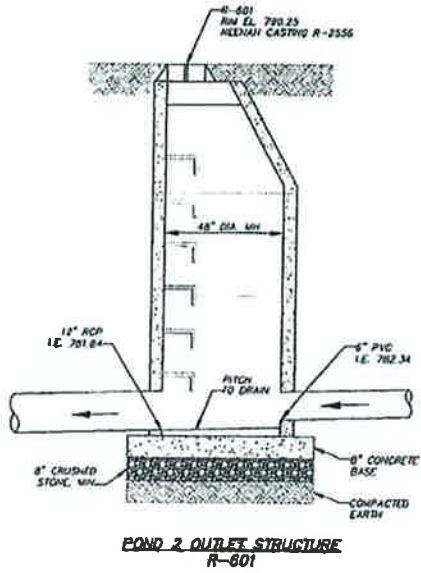
| Compliance Verification | Design | Actual | Compliant | | Comments | |
|--|-------------------|--------|-----------------------------------|----|------------------------------|----------------|
| | (If Applicable) | | Yes | No | | |
| Lower Discharge Control | (If Applicable) | | | | | |
| Opening Diameter (inches) | 6 | 6 | X | | Same as primary outlet pipe. | |
| Elevation | 783 | 782.92 | X | | | |
| Other (Description) | | | | | | |
| Opening Type and Size (inches) | — | | | | | |
| Elevation | — | | | | | |
| Emergency Spillway | | | | | | |
| Elevation | 789 | 789.0 | X | | | |
| Length of spillway (feet) | 14 | 16 | 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 R-550 | RCP 30-INCH | | Northwest | | | |
| Outfall 2 R-500 | RCP 18-INCH | | Southwest | | | |
| Outfall 3 | | | | | | |
| Storage Properties | Design | Actual | Compliant | | Not Applicable | Equipment Used |
| | | | Yes | No | | |
| Normal Water Elevation (Wet Ponds) | 783 | 782.92 | X | | | |
| Design High Water Elevation | 788 | 788 | X | | | |
| Area at Normal Water Elevation (Ac) (Wet Ponds) | 0.71 | 0.71 | X | | | |
| Area at Design High Water Elevation (Ac) | 1.17 | 1.16 | X | | | |
| Active Storage Available (Ac-Ft)* | 5.42 | 5.48 | X | | | |
| Lowest Elevation at Top of Embankment (If Applicable) | 790 | 789.8 | X | | | |
| Average Elevation at Top of Embankment (If Applicable) | 790 | 790 | X | | | |
| Maximum Bottom Elevation | 778 | 777.2 | X | | | |
| Average Pond Bottom Elevation | 778 | 777.3 | X | | | |
| Pond Bottom Area (Ac) | 0.29 | 0.30 | X | | | |
| Maximum Pond Depth | 5 | 5.8 | X | | | |
| Average Pond Depth | 5 | 5.7 | X | | | |
| Average Permanent Pool Depth (Wet Ponds) | 5 | 5.7 | X | | | |

*To Determine Active Storage $V = \left(\left(\frac{H}{3} \right) \left(A1 + A2 + \left(\left(A1 + A2 \right)^{\left(\frac{1}{2} \right)} \right) \right) \right)$

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

Sketch Outlet



Place Photograph of Pond

Place Photograph of Pond

Inspection Firm: _____
 Phone Number: _____
 Address: _____

Inspector Name : _____
 Inspection Date: _____

Certifying
 Professional Name: _____
 Phone Number: _____

Affix Seal Here

Date: _____

Signature: _____



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STORMWATER MANAGEMENT FACILITIES OPERATION AND INSPECTION REPORT

Quarter Section _____ Name of Business/Subdivision Woodman's Food Market
 Property Tax ID Number _____ Address of Property W124 N8145 STH 145
Menomonee Falls, WI 53051

| | |
|----------|---|
| Dry Pond | |
| Wet Pond | X |
| Other | |

Description: Net detention pond
"POND 3" 123012

Location Of Pond Southwest corner of Woodman's Food Market Site.

Year Pond Constructed 2009 Year of Last Certification —

| Compliance Verification | Design | Actual | Compliant | | Comments (Condition of Structure) |
|--------------------------------|-----------------|--------|-----------|----|--------------------------------------|
| | | | Yes | No | |
| Primary Outlet Pipe | (If Applicable) | | | | Outlet Pipe Material <u>PVC</u> |
| Opening Diameter (inches) | 12 | 12 | X | | |
| Upstream Invert | 798 | 798.11 | X | | |
| Downstream Invert | 798 | 798.05 | X | | |
| Length (feet) | 40 | 39.9 | X | | |
| Slope (%) | 0 | 0.15 | X | | |
| Secondary Outlet Pipe | (If Applicable) | | | | Outlet Pipe Material <u>RCP</u> |
| Opening Diameter (inches) | 12 | 12 | X | | |
| Upstream Invert | 798 | 798.05 | X | | |
| Downstream Invert | 797.64 | 797.60 | X | | |
| Length (feet) | 34.4 | 34.4 | X | | |
| Slope (%) | 1.05 | 1.31 | X | | |
| Riser | (If Applicable) | | | | Riser Material <u>N/A</u> |
| Opening Diameter (inches) | — | | | | |
| Elevation | — | | | | |
| Upper Discharge Control | (If Applicable) | | | | |
| Opening Diameter (inches) | — | | | | |
| Elevation | — | | | | |

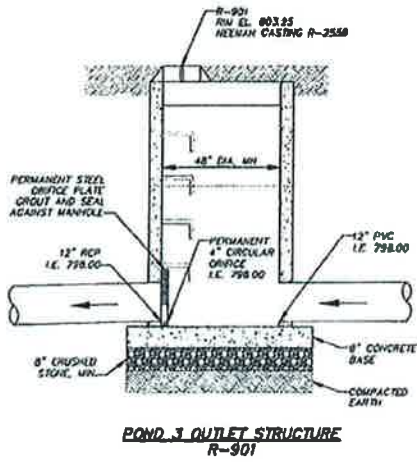
| Compliance Verification | Design | Actual | Compliant | | Comments | |
|--|-------------------|---------------|-----------------------------------|----|----------------|----------------|
| | | | Yes | No | | |
| Lower Discharge Control | (If Applicable) | | | | | |
| Opening Diameter (inches) | 4 | NOT INSTALLED | | X | | |
| Elevation | 798 | — | | X | | |
| Other (Description) | | | | | | |
| Opening Type and Size (inches) | — | | | | | |
| Elevation | — | | | | | |
| Emergency Spillway | | | | | | |
| Elevation | 802 | 802.00 | X | | | |
| Length of spillway (feet) | 14 | 15 | 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 | R-700 | RCP 15-INCH | Northeast | | | |
| Outfall 2 | R-800 | RCP 12-INCH | Northwest | | | |
| Outfall 3 | — | | | | | |
| Storage Properties | Design | Actual | Compliant | | Not Applicable | Equipment Used |
| | | | Yes | No | | |
| Normal Water Elevation (Wet Ponds) | 798 | 798.11 | X | | | |
| Design High Water Elevation | 801 | 801 | X | | | |
| Area at Normal Water Elevation (Ac) (Wet Ponds) | 0.14 | 0.15 | X | | | |
| Area at Design High Water Elevation (Ac) | 0.30 | 0.31 | X | | | |
| Active Storage Available (Ac-Ft)* | 1.10 | 1.10 | X | | | |
| Lowest Elevation at Top of Embankment (If Applicable) | 803 | 802.3 | X | | | |
| Average Elevation at Top of Embankment (If Applicable) | 803 | 802.7 | X | | | |
| Maximum Bottom Elevation | 793 | 792.3 | X | | | |
| Average Pond Bottom Elevation | 793 | 792.4 | X | | | |
| Pond Bottom Area (Ac) | 0.02 | 0.02 | X | | | |
| Maximum Pond Depth | 5 | 5.81 | X | | | |
| Average Pond Depth | 5 | 5.71 | X | | | |
| Average Permanent Pool Depth (Wet Ponds) | 5 | 5.71 | X | | | |

*To Determine Active Storage $V = \left(\left(\frac{H}{3} \right) \left(A1 + A2 + \left((A1 + A2)^{\frac{1}{2}} \right) \right) \right)$

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

Sketch Outlet



**POND 3 OUTLET STRUCTURE
R-901**

Place Photograph of Pond

Place Photograph of Pond

Inspection Firm: _____
 Phone Number: _____
 Address: _____

Inspector Name : _____
 Inspection Date: _____

Certifying
 Professional Name: _____
 Phone Number: _____



Date: _____

Signature: _____

Affix Seal Here

POND 1 – WOODMAN’S FOOD MARKET



125013

POND 2 – WOODMAN'S FOOD MARKET



123011

POND 3 – WOODMAN'S FOOD MARKET



125 012

Woodman's

*see 1/11/11
(after construction)*

Greifenhagen, Nancy

From: Bretl, Jonathan
Sent: Wednesday, January 12, 2011 8:01 AM
To: Greifenhagen, Nancy
Subject: FW: Woodman's Menomonee Falls - Draft Stormwater Operation and Inspection Report
Attachments: pond 1.pdf; pond 2.pdf; pond 3.pdf; pond pictures.pdf

next due 2014

FYI

From: Smith, Ricky A. [mailto:Ricky.Smith@rasmithnational.com]
Sent: Tuesday, January 11, 2011 4:51 PM
To: Bretl, Jonathan
Cc: Schneider, Aaron
Subject: Woodman's Menomonee Falls - Draft Stormwater Operation and Inspection Report

Jon,

Attached to this e-mail are four PDFs containing draft versions of the Village of Menomonee Falls Stormwater Management Facilities Operation and Inspection Report for the three stormwater ponds on the Woodman's Menomonee Falls site.

The first three PDFs (pond1.pdf, pond2.pdf, pond3.pdf) contain the Stormwater Management Facilities Operation and Inspection Reports for each of the three ponds. The fourth PDF (pond pictures.pdf) contains photographs of the stormwater ponds.

Please do not hesitate to call me at 262.317.3279 or e-mail me back at this address with any questions or comments pertaining to these reports. I will send you a second e-mail containing asbuilt drawings of the Woodman's Menomonee Falls public utilities and road improvements.

Thanks,

Ricky

Richard A. Smith, Jr., P.E.
Director of Land Development Services
262-317-3279
262-781-8466 fax

R.A. Smith National, Inc.
16745 West Bluemound Road, Suite 200, Brookfield, WI 53005-5938

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