Set it & Forget It No More! Maintenance Enforcement for Post-Construction SW BMPs

Presented by: City of Brookfield Theresa Caven, P.E., CFM <u>caven@ci.Brookfield.wi.us</u> 262-787-3547

Does this look familiar?

How about this?

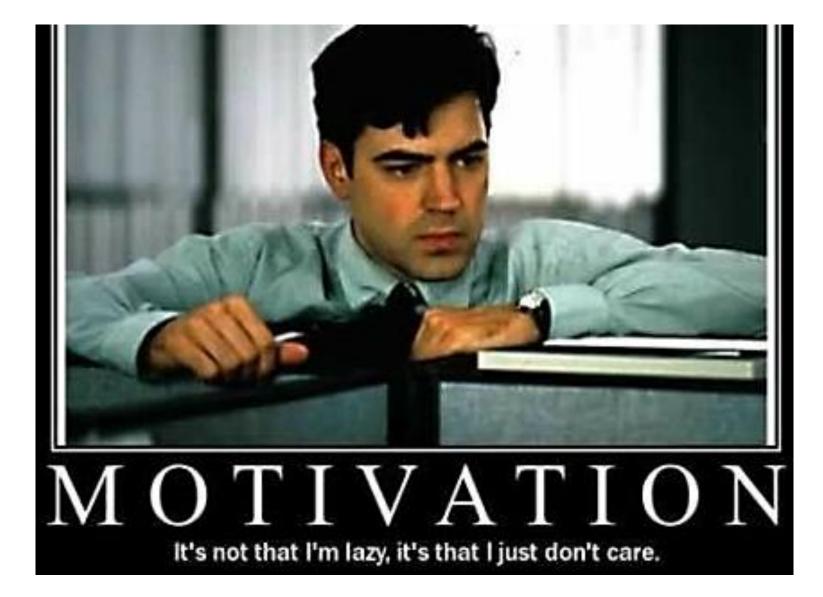
Pond? What pond...?



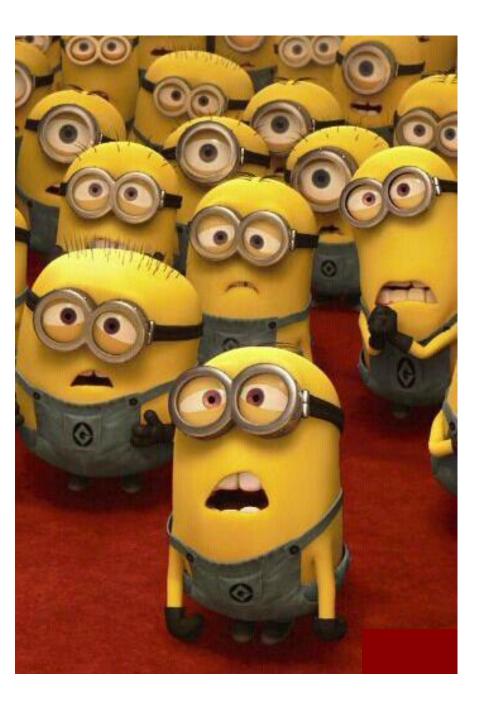
Overgrowth of woody veg. in basin

Newly planted trees on berm

Drop in permanent pool



Why?



We're supposed to be doing what???

Why?

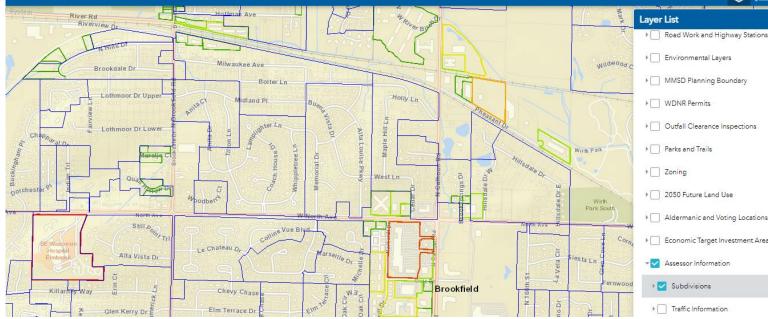
The "How" of it all...

Source: Waukesha County LIS



The "How" of it all...

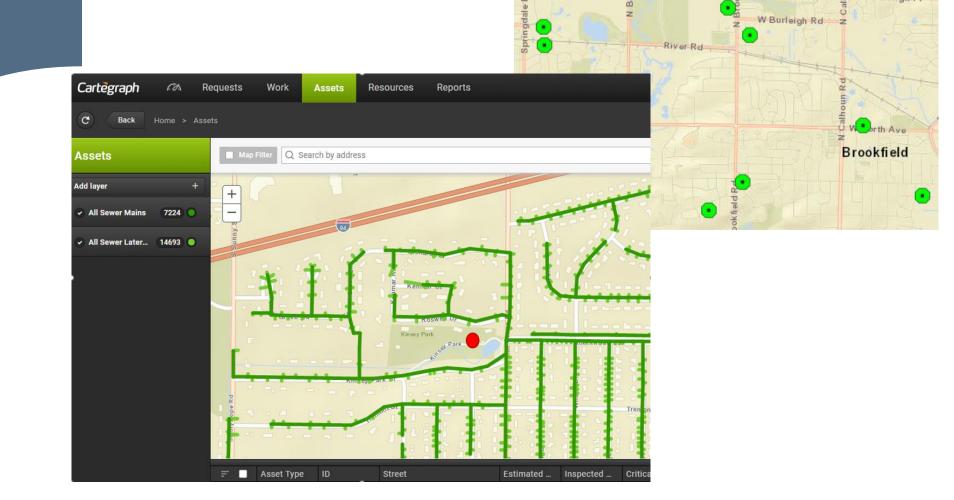
City of Brookfield, WI Waukesha County GIS Map



rr/) (5	:) > Development Review	
	Na	me	Date modified
		Fountain Square	6/22/2023 1:25 PM
		Bishops Woods Court	6/20/2023 9:12 AM
		Bishops Woods Executive Apartments - B	6/20/2023 9:10 AM
		Crest Cadillac	6/5/2023 5:22 PM
		Norhardt Crossing	5/31/2023 1:36 PM
		Black, Thomas & Lisa Parcel	5/24/2023 4:15 PM
		Wheel & Sprocket	5/24/2023 3:13 PM
		Emerald Pointe Condos	5/24/2023 1:54 PM
		Heather Ridge Condos	5/24/2023 1:46 PM
		Elite Sports Club	5/24/2023 9:24 AM
		Emerald Drive Landsplit	5/22/2023 9:08 AM
		Village of EG, Emerald Woods	5/17/2023 8:52 AM
		Marcello Condos, 18720 Hoffman Ave	5/16/2023 11:11 AM
		Bishops Woods Flats, 250 & 350 Bishops	5/11/2023 3:27 PM
6		CSM_ChadWyman_3335Parkside	5/4/2023 4:51 PM
		Georgetown Square	5/2/2023 8:52 AM
		Pet Suites, 3165 N 124th Street	4/27/2023 9:25 AM
		Gateway West - 21605 Gateway Ct	4/20/2023 5:01 PM
		Wisconsin Hills Middle School	4/20/2023 4:03 PM
		Milwaukee Tool - North Parking Lot	4/20/2023 2:39 PM
		Stark Pavement	4/20/2023 2:28 PM
		Brookfield Soccer Complex	4/17/2023 1:00 PM
		Elmbrook Plaza	4/14/2023 10:59 AM
BS		Milwaukee Electric Tool	4/4/2023 10:51 AM
		Lakeshore Burial Vault	4/3/2023 9:14 AM
		Unity Lutheran - Christ the King, Pilgrim	3/16/2023 4:54 PM
		Vincent Park	3/16/2023 2:44 PM

♦ 🗄

Where to store your data.



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GIS

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AutoSave (Ooff) 回り

Where to store your data.



AutoSave	List of Agreements -	PRIVATE.xIsx - Excel	General Description Search	
File Home Insert Page Layout	Formulas Data Review	View Help Ad	crobat	
Calibri Paste Scopy ~ B I U ~		 Nrap Text E → E Merge & Ce 	$[General] \rightarrow [Conditional]$	
	nt 🕠	Alignment	Number	/ lable /
A1 \checkmark f_x St	ormwater Management Practice Ag	greements		
A	В	C Characteria	D D	E
			iter Management Practice Agree	
2 Property	Location	Watershed	SW Management Practices Covered	Owner
Applewood of Brookfield	2800 N CALHOUN RD, Lot 2 of CSM No. 10998 S15 T7N R20E	Underwood Creek	Retention Basin (1), Curb Cuts (2), Grass Swale (1), Catch Basins	Apple-Brookfield LLC
Artisan at Georgetown Square	15905 W WISCONSIN AVE, NE 1/4 S27 T7N R20E	Dousman Ditch	Underground Detention System (1), Grass Swale (1), Catch Basin (1)	Artisan at Georgetown Square, LLC
Azura Memory Care	16030 W Capitol Drive, SE1/4 , S3 T7N R20E	Butler Ditch	Bioretention Basin (2)	Azura Memory Care
Bohmann & Vick - New Office Bldg.	3530 N 127th St, S12 T7N R20E	Lower Menomonee River	Bioretention Basin (1)	Bohmann & Vick
7 Bradon Preserve	BRADON TRL W & E, Heron Pass, NW 1/4 S5 T7N R20E	Upper Fox River	Retention Basin (1)	Bradon Preserve HOA
Brookfield Academy	3215 N BROOKFIELD RD., Lot 4 of CSM No. 3610742 S8 T7N R20E	Upper Fox River	Wet Retention Basin, Bioretention Basin, Grassed Swale	Brookfield Academy
Brookfield Christian Reformed Church & Brookfield				
Christian School	Lot 1 of CSM 10906	Underwood Creek	Grassed Swale (2)	Brookfield Christian Reformed Church
0 Brookfield High School - Central	16900 GEBHARDT RD., Lot 1 of CSM No. 10757	Upper Fox & Underwood	Retention Basin (1), Dry Basin (3), Swale (1)	School District of Elmbrook
1 Brookfield High School - East	Outlot 1, San Juan Estates, SE1/4 S11 T7N R20E	Underwood Creek	Detention Basin, Grassed Swale, Catch Basins (2), Underdrain system, Catch Basins (5)	School District of Elmbrook
2 Brookfield Hills - The Club at (Linx)	PINEHURST CT., Lots 1, 2 & 3 of CSM 11622	Deer Creek	Retention Basin (2)	Mark Wimmer, WB Hotel LLC
3 Brookfield Junction Phase II	NW 1/4 of \$16 T7N R20E	Upper Fox River	Catch Basins	Brookfield Junction LLC
4 Brookfield Retail Management / Capital Imperial	Outlot 1 CSM 10325 DOC 3443324 - 2006 Imperial Estates SW1/4 S4 T7N	Upper Fox River	Detention Basin (1)	Brookfield Retail Management, LLC
5 Brookfield Square - Hilton Garden Inn	265 S MOORLAND RD., Part of Lot 1 of CSM 11206	Deer Creek	Underground Detention Basin	Brookfield Square Anchor S, LLC
	Outlot 2 CSM 9024 Doc 2579376 REC 7-31-00			
δ Brookfield Station	V91 Pg 92-100 REDIV Outlot 1 CSM 8056 NE1/4 S8 T7N	Upper Fox River	Retention Basin	Brookfield Station, LLC

Searc

Building Your List What's Important to Record

Property	Location	Watershed
SKA Real Estate Brookfield, LLC / Schlossman's Auto	19100 W CAPITOL DR S5 T7N R20E	Upper Fox River
Sorens Ford (Nice Guy, LLC)	18900 W Capitol Drive, SE 1/4 of S5 T7N R20E	Upper Fox River
St. Dominic Congregation	18255 W Capitol Dr. Lots 1 - 7 of S8 T7N R20E	Upper Fox River
Stanford Place	Vanderbilt Street Outlot 2 STANFORD PLACE PT SW 1/4 SEC 10 T7N R20E	Underwood Creek

Building Your List What's Important to Record

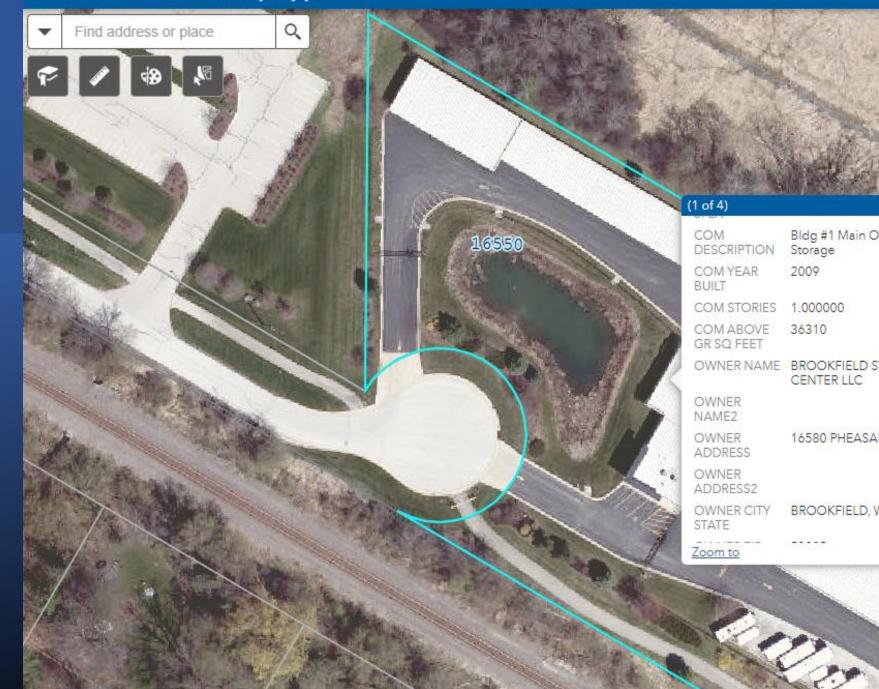
SW Management Practices Covered	Owner	Signed	Dated	Recorded
				Development
Underground Detention (2)	B&MBrookfieldLLP	Bradley Schlossmann	6/29/1905	Agreement
Bioswale with Underdrain	Nice Guy, LLC	Robert Sorens	8/21/2017	8/25/2017
Vegetated Swale	St. Dominic	Michael Ricci, Trustee	8/26/2020	10/5/2020
Retention Basin	Stanford Place HOA	Vincent Kuttemperoor, VK Dev, President	9/3/1993	Development Agreement
Wet Detention Basin (1), Grass Swale (1)	Storage Master, LLC	Alex Simic	5/27/2021	6/3/2021
Wet Detention Basin, Grass Swale	Sutter Creek LLC	Roberet Gake	11/17/2014	11/21/2014

DatedRecordedFor Maintenance ContactDatedRecorded??????2004Development
Agreement??????

The only thing that's certain in life is death & SW BMP's needing maintenance

Brookfield Staff Web Map Application

City of Brookfield, WI



RE: Stormwater Management Practice Agreement

Dear Property Owner:

As you are aware, **Reconce of December of December of Network** has a recorded Stormwater Management Agreement. As time passes, the "Owner" of this Agreement can change and the name the City has on record is no longer accurate. Since it is vital to have an accurate record of the current "Owner" I am requesting this information from you. Please provide me with a contact name or title (e.g., Facility Manager, Association President, etc.), mailing address, telephone number, email, and website (if available). Furthermore, if there is an individual or company that currently handles the maintenance of the stormwater facility, please provide me with that information as well. An email containing this information is preferred; however, you are welcome to call me or mail me back this information. In the event that you are not the correct individual to provide this information to me, please forward this letter on, or provide me with this individual's contact information.

Additionally, in accordance with said Agreement, and under State of Wisconsin Administrative Code, Chapter NR 151.121, the owners/management for the stormwater facility must perform routine inspections and maintenance of the facility as outline in the signed Agreement. **Beginning in 2024, the City is requiring that evidence** of inspections, maintenance and any repairs be submitted to the City. The submittal shall include all inspection and maintenance documents from the previous 24 months (e.g., a report submitted in January of 2024 will include documents for all of 2022 and 2023).

Inspection reports must be received by the City on or before **January 31st**. Documents can be mailed to the attention of the Stormwater Engineer, City of Brookfield, 2000 N. Calhoun Road, Brookfield, WI 53005, or email to <u>caven@ci.brookfield.wi.us</u>.

Please feel free to contact me with any questions.





ENGINEERING DIVISION Theresa J. Caven, P.E., CFM, WiSECI Stormwater Project Engineer 2000 North Calhoun Road Brookfield, Wisconsin 53005-5095 (262) 787-3547 <u>FAX</u> (262) 782-1323 caven@ci.brookfield.wi.us

SECOND NOTICE

March 7, 2023

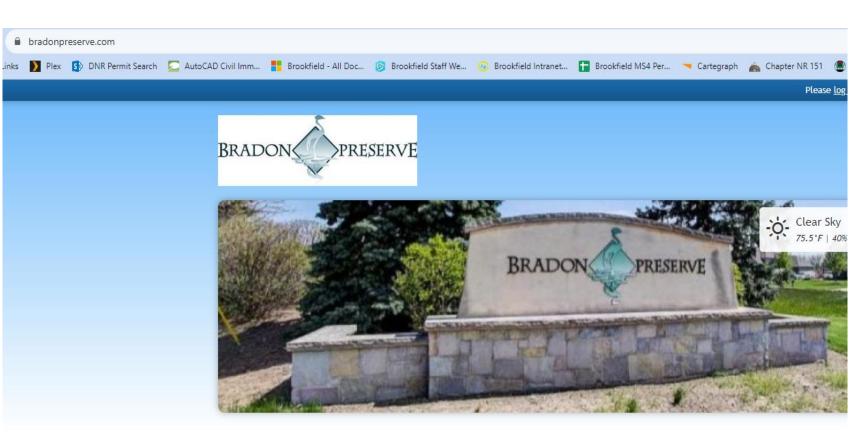
Hales Corners, WI 53000

RE: Stormwater Management Practice Agreements

Dear Owner:

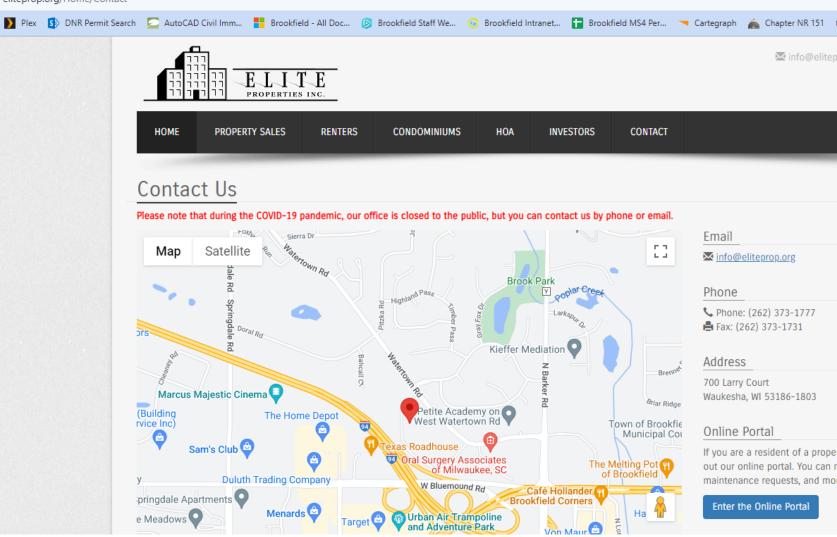
As you are aware, **Theoretical Statistics**, **Securities**, **Securities**,

Additionally, in accordance with said Agreement, and under State of Wisconsin Administrative Code, Chapter NR 151.121, the owners/management for the facility must perform routine inspections and maintenance of the on-site stormwater facilities as outline in your signed Agreement. **Beginning in 2024, the <u>City</u> is requiring that evidence of inspections**, maintenance and any repairs be submitted to the City. The submittal shall include all inspection and maintenance documents from the previous 24 months (e.g. a report submitted in January of 2024 will include documents for all of 2022 and 2023). Inspection reports must be received by the <u>City</u> on or before **January 31st**. Documents can be mailed to the attention of the Stormwater Engineer, City of Brookfield, 2000 N. Calhoun Road, Brookfield, WI 53005 or email to <u>caven@ci.brookfield.wi.us</u>.



Pages	Welcome to the Bradon Preserve Homeowners Association			
Home	Website!			
Alerts 2021	Peaceful, Tranquil, Serene.			
Alerts 2020				
Alerts 2019	Located along the Fox River Conservatory in desirable Brookfield, Wisconsin, The Bradon Pre			
Contact Form	Subdivision is the perfect location to call home.			
Useful Contacts	Located west of Brookfield Road on Lisbon Road, Bradon Preserve offers easy access to schoo			
Bradon HOA Board	shopping, recreational facilities and the Sharon Lynne Wilson Center for the Arts.			

eliteprop.org/Home/Contact



D & L Grading 1820 S Johnson Rd New Berlin WI 53146 Business (262) 521-9050 (262) 521-9095 Fax Mobile (414) 573-5542 Marek Landscaping LLC 820 E Knapp Street Milwaukee WI 53202 Business (414) 272-0242 The Drainage Doctors N27W26643 Lauderdale Dr. Pewaukee WI 53072 Cell Pho (608) 576-2369

Maintenance Enforcement – No SWMMA vs. SWMMA

NR 151.121 Post-construction performance standards.

NR 151.121(3) Responsible party.

The landowner of the post-construction site or other person contracted or obligated by other agreement with the landowner to implement and maintain post-construction storm water BMPs is the responsible party and shall comply with ss. NR 151.121 to 151.128.

Owner agrees to indemnify and hold harmless the City, its officers, agents and employees against any and all
actions, damages, judgments, costs, or fees of any kind whatsoever arising out of any act, error, or omission of the
Owner, its agents, or employees relating to this agreement.

 Copies of all inspection reports must be submitted to the City of Brookfield every other year, beginning on the first even year after the signing of the Agreement (e.g. Agreement signed in 2023, first report is due in 2024, then 2026, and so on). Inspection reports must be sent by January 31 to: ATTN: Stormwater Engineer, City of Brookfield – Engineering, 2000 N. Calhoun Road, Brookfield, WI 53005.

Dated this 18th day of August , 202 A

Owner: Temich Investments X, LLC

Owner's Signature

Owner's Typed/	Printed Name
Mailing Address	. Drive
	Waukesha, Wisconsin 53186
Phone Number:	262-1
Email Address:	in the second

Brookfield Municipal Code

Title 14 STORMWATER MANAGEMENT

Chapters:

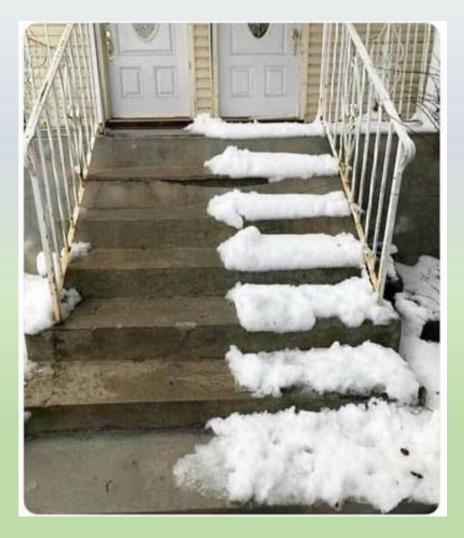
- 14.04 Introduction
- 14.08 General Provisions
- 14.12 Design Criteria and Standards
- 14.20 Financial Guarantee
- 14.24 Maintenance
- 14.28 Enforcement
- 14.32 Permit
- 14.36 Appeals
- 14.40 Definitions

For Maintenance Contact	Last Updated	Mailed 2022 letter	2nd Notice 1/20/23	3nd Notice 3/7/23	Received 2024 Inspectio	Met With
Canage opplement living.com, Deb Bersedy , Principal, 917- 887-5814 & Mayn e Kaplan, Principal, 516- 858-1888 Premier Senior Living, LLC, 245 Park Avenue, 39th Floor, New York, NY 10167	8/6/18	x	x	х		
Deniel Hulinanaa, Assistant Corp. Counselor, 5300 S 108th St, Hales Corners, 53130, 414- 523-5300 m158 dwimmer Quain and Statemeric Sciences, Hulinana Qualmeric Com	8/7/21	х	x	х		
Menthembyung, 1999 MMeyfair Road, Suite 301, Milwaukee, 53226, 1999–291– 4838, ment@eenreliving.com Aenre Menney Gare, 1999 MMeyfair Road, Suite 301, Milwaukee, WI 53226	9/9/22	х	N/A	N/A		х
Tricia Teulaíf, 24 Teulaíf, 8589 H 127d Street, Brookfield 53005, 262-798- 5688, minis@botatalaíf.com	1/23/23	х	х	N/A		

Take every opportunity to meet with the HOA or business – make sure you are all on the same page as to what is expected...



It's human nature is to do the least amount of work.





Private Stormwater Management Facility

Operation & Maintenance Manual

City of Brookfield

(Expires: December 2025)

Do it yourself... up to a point.

Private Stormwater Management Facility Operation and Maintenance Manual

Table of Contents

- Compliance with Stormwater Facility Maintenance Requirements Ι.
- П. Inspection & Maintenance - Reporting
- Preventative Measures to Reduce Maintenance Costs III.
- IV. Access and Easements
- ν. Safety
- VI. Field Inspection Equipment
- VII. Inspecting Stormwater Management Facilities A. Inspection Procedures B. Inspection Report C. Verification of Inspection and Form Submittal

Maintaining Stormwater Management Facilities VIII.

- A. Maintenance Categories B. Maintenance Personnel
- C. Maintenance Forms

Appendices

Appendix A – Maintenance Agreement(s) Appendix B – Inspection & Maintenance Forms



ENGINEERING DIVISION Theresa J. Caven, P.E., CFM Project Engineer 2000 North Calhoun Road Brookfield, Wisconsin 53005-5095 (262) 787-3547 FAX (262) 782-1323 caven@ci.brookfield.wi.us

STORMWATER MANAGEMENT FACILITIES OPERATION & INSPECTION REPORT

Maintenance Enforcement

Business/Site Name:_____

Address:

_, Brookfield, WI

Complete the attached checklist(s); if you have more than one of any of the Best Management Practices (BMP) facilities listed (e.g. 4 catch basins, 2 detention ponds, etc.), please copy the checklist and complete one for each of the facilities separately. If you require more space for notes or comments, feel free to attach additional sheets. If you have questions, please contact Theresa Caven at the City of Brookfield.

<u>Please Note</u>: It is recommended that you have an engineering or BMP specialist assist you in the inspection of your stormwater BMP facilities.

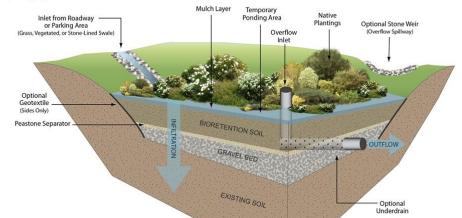
Frequency	Date(s) Checked	Problem	Conditions to Check For	Conditions That Should Exist	Score (0-3, N/A)
SPRING FALL		Trash & Debris	Any trash and debris which exceed 1 ft ³ per 1,000 ft ² . In general, there should be no visual evidence of dumping. If less than threshold, all trash and debris will be removed as part of next scheduled maintenance.	All trash and debris cleared from site.	
ANNUAL		Poisonous Vegetation and noxious weeds	Any poisonous or nuisance vegetation which may constitute a hazard to maintenance personnel or the public. Any evidence of noxious weeds as defined by State or local regulations. (Apply requirements of adopted IPM policies for the use of herbicides).	No danger of poisonous vegetation around BMP or where the public might normally be. Complete eradication of noxious weeds may not be possible. Compliance with State eradication policies required.	
SPRING FALL		Contaminants and Pollution	Any evidence of oil, gasoline, contaminants, or other pollutants. Removal removal/cleanup may need to be coordinated with local water	No contaminants or pollutants present.	

Bioretention / Biofiltration Basin

Bioretention basins (bioretention cells, rain gardens, biofiltration ponds) use soil, plants and microbes to treat stormwater before it is infiltrated or discharged. Bioretention areas are shallow depressions filled with sandy soil, topped with a thick layer of mulch, and planted with dense vegetation.

Stormwater runoff flows into the bioretention basin, percolates through the soil (which acts as a filter) and eventually drains into the groundwater; some of the water is also absorbed by the plants. Bioretention areas are usually designed to allow ponded water and with an overflow outlet to prevent flooding during larger storm events. Where soils have low permeability or where faster drainage is desired, designers may incorporate a perforated underdrain that routes to a storm drain system.

Bioretention areas can provide excellent pollutant removal and recharge for the "first flush" of stormwater runoff. Properly designed bioretention areas will remove suspended solids, metals, and nutrients. Distributed around a property, bioretention areas can enhance site aesthetics. In residential developments they are often marketed as property amenities. Routine maintenance is simple and can be handled by homeowners or conventional landscaping companies, with proper direction.



Inspection Report

Actual Site Conditions



Require Pictures!

Check for Free Resources



Stormwater Wet Pond and Wetland Management Guidebook



CITY OF BROOKFIELD OWNED SW BMPs

SITE	SECTION	LOCATION	WATERSHED	BMPs	Inspected B
		Sunset Industrial Park ADDN 1 PT NE 1/4			
124th St Industrial Park	12	S12 T7N R20E	Lower Menomonee River	Stormwater Trees, Engineered Soils	Eng
		3017 N. Calhoun Rd, Outlot 1 Willow			
Calhoun Road North 3017	16	Brook CSM 7140, NE1/4 S16 T7N R20E	Underwood Creek	Retention Basin	Eng
Calhoun Road North 3175	9	3175 N. Calhoun Rd, S9 T7N R20E	Underwood Creek	Retention Basin	Eng
Calhoun Road North 3605	9	3605 N. Calhoun Rd, S9 T7N R20E	Upper Fox River	Retention Basin	Eng
		Outlot 2 Camelot Meadows PT S18 T7N			
Camelot Meadows	18	R20E	Upper Fox River	Retention Basin	Parks
Conference Center at Brookfield					
Square	34	Lot 2 of CSM 11737, S34 T7N R20E	Deer Creek	Underground Retention Basin (1)	N/A
Congress Street	1	CSM 8871 SE 1/4 S1 T7N R20E	Lower Menomonee River	Retention Basin	Eng
Fairview Park	4	Lot 1 of CSM No. 4121 S4 T7N R20E	Upper Fox River	Detention Basins, Biofiltration Swale, Grass Swale (2)	Parks
Greenfield Ave	33	17844 Greenfield Avenue, S33	Poplar Creek	Retention Basin	ENG
		Lot 2 CSM 11462 PT NW 1/4 S13 T7N R20E			
Hidden Lake Park	13	DOC 4213976	Underwood Creek	Water Quality Swale	Parks
Kinsey Park	36	PT SW 1/4 S36 T7N R20E	Underwood Creek	Retention Basin	Parks
Lamplighter Park	12	Outlot 3 Lamplighter Park PT SW 1/4 S12 T7N R20E	Butler Ditch	Retention Basin	Eng
	12	Lot 1 CSM 1592 PT W 1/2 NW 1/4 S22 T7N	buller bitch		Ling
Library	22	R20E DOC #3598324 V101	Upper Fox River	Catch Basins, Stormceptor	Hwy
		PT N 1/2 SE 1/4 S2 T7N R20 & PT N 1/2 SE			
Lilly Heights Park	2	1/4 S2 T7N R20	Butler Ditch	Retention (1), Detention Basin (1), Bioretention (2)	Parks
Patrick Drive Extension	33	NW1/4 NE1/4 S33 T7N R20E DOC 4288347	Deer Creek	Bio Filtration Basin, Catch Basins	Eng
Pilgrim Parkway Path	22	PT SE 1/4 S22 T7N R20E	Dousman Ditch	Pervious Pavement	Hwy
Public Works Facility	17	SE 1/4 NW 1/4 & SW 1/4 NE 1/4 S17 T7N R20E	Upper Fox River	StormCeptor, Retention Basin, Catch Basins	Hwy
Wirth Park	15	SE 1/4 S15 T7N R20E	Underwood Creek	Green Roof	Parks

Maintenance Enforcement

You Got This!



Questions?

"Nigglywiggly" is the actual name of the little paper flag thingy sticking out of the top of Hershey's kisses! The national animal of Scotland is the Unicorn.

"Dammit I'm mad" spelled backwards = "dammit I'm mad".

It's impossible to hum when you pinch your nose closed. In the early 1900's, lobster was considered trash and regularly fed to prisoners... until it was deemed "cruel & unusual punishment" for the prisoners.