
02/19/2021



Municipal Storm Water Pollution Prevention Plan

Sycamore Avenue Public Works Site



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1. Introduction

1.0 SWPPP Overview

This storm water pollution prevention plan (SWPPP) has been developed as required under Section C.(6) of Wisconsin Pollutant Discharge Elimination System (WPDES) No. WI-S0584163 for storm water discharges and in accordance with good engineering practices. This SWPPP describes each facility and its operations, identifies potential sources of storm water pollution at the facility, recommends appropriate best management practices (BMPs) or pollution control measures to reduce the discharge of pollutants in storm water runoff, and provides for periodic review of this SWPPP.

This Storm Water Pollution Prevention Plan:

- identifies the SWPPP coordinator with a description of the coordinator's duties;
- identifies members of the SWPPP team and lists their responsibilities;
- describes the facility, with information on location and activities, a site map, and a description of the storm water drainage system;
- identifies potential storm water contaminants;
- describes storm water management controls and various Best Management Practices (BMPs) needed to reduce pollutants in storm water discharges;
- describes the facility's monitoring plan; and
- describes the implementation schedule and provisions for amendment of the plan.

1.1 Background

The City of Madison is a Phase 1 NR216 community permitted through the Wisconsin Department of Natural Resources (WDNR). The NR216 legislation ultimately came from the Clean Water Act which is administered by the Environmental Protection Agency (EPA) and the WDNR.

The City of Madison is a member of the Madison Area Municipal Storm water Partnership (MAMSWaP) a group comprised of 21 central Dane County municipalities, Dane County, and UW-Madison. Members of MAMSWaP are co-permittees under WI DNR WPDES Permit No. WI-S058416-4. This permit regulates storm water discharges in accordance with ch. 283, Wis. Stats. and subch. I of ch. NR 216, Wis. Adm. Code, and implements the non-agricultural and transportation facility performance standards of ch. NR 151, Wis. Adm. Code. A copy of this permit is provided in Appendix 1.

This permit covers all areas under the ownership, control or jurisdiction of the City of Madison that contribute to discharges from a Municipal Separate Storm Sewer System (MS4). An MS4 is defined as “a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains), that are owned or operated by a co-permittee and designed or used for collecting or conveying storm water”. Permit requirements are intended to reduce the amount of pollutants entering storm water runoff or otherwise entering MS4s. Discharges from these MS4s consist of runoff from rain, and snow and ice melt. Pollutants of concern in storm sewer system discharges include organic materials, suspended solids, metals, nutrients, bacteria, pesticides, fertilizer, and traces of toxic materials.

A major component of this permit includes pollution prevention at municipal garages, public works facilities, and storage areas. Section C.6. (e) requires each co-permittee to carry out pollution prevention procedures at municipal garages, public works facilities, and storage areas. A Storm Water Pollution Prevention Plan is required to be developed and implemented for each of these facilities operated by the City of Madison.

1.2 Goals & Objectives

The City of Madison has made it a priority to reduce nonpoint source pollution to surface water and groundwater from urban storm water sources. This SWPPP is a component of the City’s comprehensive city-wide storm water management efforts to identify nonpoint source pollution loadings and investigate mitigating measures.

This SWPPP is intended to satisfy the following goals:

- Implement and maintain Best Management Practices (BMPs) that identify, reduce, eliminate, and/or prevent the discharge of storm water pollutants;
- Prevent violations of surface water quality, ground water quality, or sediment management standards; and
- Eliminate the discharges of unpermitted process wastewater, domestic wastewater, non-contact cooling water, and other illicit discharges to storm water drainage systems.

Given these goals, the specific objectives of this SWPPP are to:

- Identify potential sources of storm water and non-storm water contamination to the storm water drainage system;
- Identify and prescribe appropriate “source area control” type best management practices designed to prevent storm water contamination from occurring;
- Identify and prescribe “storm water treatment” type best management practices to reduce pollutants in contaminated storm water prior to discharge;
- Prescribe actions needed either to bring non-storm water discharges into compliance with WPDES permit or to remove these discharges from the storm drainage system;
- Prescribe an implementation schedule so as to ensure that the storm water management actions prescribed in this SWPPP are carried out and evaluated on a regular basis; and
- Identify operations, maintenance, inspections and record keeping needed for these BMPs.

1.3 Coverage & Availability

This SWPPP covers the operations of the City of Madison Streets Division at the Sycamore Avenue Public Works Site.

A copy of this SWPPP will be maintained on-site.

2. Pollution Prevention (P2) Team

The Streets Department shall create a Storm Water Pollution Prevention (P2) team. The P2 team shall be responsible for implementing, maintaining the SWPPP at the Summit Maintenance Facility Public Works site.

The P2 Team is s responsible for:

- Coordination and oversight of plan development, implementation and update; and
- Implementation of preventive maintenance program;
- Oversight of good housekeeping activities inside and out in the public works yard;
- Spill response coordination;
- Oversight of employee training programs;
- Performance of quarterly inspections;
- Maintenance of all records and ensuring documentation submitted to City.

The Streets Department shall designate a SWPPP Coordinator to lead its P2 team. The Coordinator should have the authority to make decisions regarding site activity and have a working knowledge of the outdoor activities. Other members of the team should consist of representatives from the Streets Department.

The City Engineering shall assign a Professional Engineer to assist the P2 Team. The Engineer's responsibilities shall include:

- Providing technical assistance to identify potential pollutants;
- Develop and implement BMPs;
- Inspection and reporting of the facility

The P2 team member rosters are provided in Appendix 2.

3. Site Assessment

3.0 Site Description

The Sycamore Avenue Public Works site is located on Madison's East side at 4602 Sycamore Avenue in Madison, Wisconsin. The 13.54 acre parcel has access on Olin Avenue.

The Sycamore Avenue parcel is zoned LI (Industrial).

This site is operated jointly by the Streets and Parks divisions.

This site includes 3 buildings. The largest building provides office space, vehicle Storage, maintenance workshops, landscape equipment storage, vehicles washing facilities. The employee parking lot is located offsite south of the site. The second building in the NE corner of the site is a salt storage building. The small building to the west a tool shop for parks.



Figure 1

13.54 acre Sycamore Avenue Public Works Site

3.1 Site Drainage

3.1.1 Outfalls

The Sycamore Avenue Public Works (SAPW) site is located in Outfall Basin ST10-U-0143-D-MAD-C in the Starkweather Creek (ST10) watershed. The SAPW site makes up 14.5% of the basin's 92.85 acres. Appendix 6 presents a general location map of the facility and shows the following features:

- the facility location;
- the drainage area boundary for the storm water outfalls serving the facility;
- the name and location of receiving waters.

Storm water runoff from the SAPW is collected in the storm system and is discharged to a swale in the park to the south. From here water flows back into the public storm sewer and discharges near the Sycamore Avenue bridge over Starkweather Creek.

3.1.2 Site Drainage

The Sycamore Avenue Public Works yard storm water conveyance system consists of 2 drainage basins (A and B).

Basin A (4.83 ac) drains to the southwest via the storm sewer system and eventually discharges Starkweather Creek untreated. Basin A represents 35% of the total site drainage. The area identified as A contains the drainage area for the majority of the entrance to the large building and the roof of that building.

Basin B (8.71 ac) drains to the southwest, flows through a Coanda screen and connects to the municipal stormsewer system on the Water Utility property to the east. Basin B represents 64.33% of the total site drainage area. It contains the salt barn, recycling stations, brine tanks and fueling operations.

Appendix 6 shows the following site specific features:

- storm drainage collection and disposal system;
- structural storm water controls;
- secondary or other containment structures;

3.2 SITE ACTIVITIES

The Sycamore Avenue Public Works facility is the main hub of activity for the public works department on the east side of Madison. This site has a public drop off location for brush, large trash, electronics disposal and recycling. Additionally winter maintenance vehicles and salt storage and brine storage are on the site. There are vehicle washing bays and vehicle maintenance bays. The landscaping equipment for the east side parks department is stored and maintained at this facility as well.

3.3 Potential Pollutants

A site activity and materials inventory of potential to storm water contaminants and an accompanying map is provided in Appendix 7.

3.4 Illicit Discharges and Spills

There has been no history of illicit discharges or spills at this facility.

Future spills will be addressed under the Spill Prevention and Clean Up Plans to be prepared for each facility included in this document in Appendices 3 and 4.

4. Best Management Practices

There is currently a coanda screen structure that treats the majority of drainage basin B. Sweeping of the site is the only other water quality practice currently conducted.

5. Monitoring Plan

The City is developing and implementing a storm water monitoring plan in accordance with its WPDES permit. City Engineering is the lead agency for implementation of the monitoring plan.

The following sections describe monitoring and reporting requirements for this SWPPP.

The purpose of monitoring is to:

- a) Evaluate stormwater outfalls for the presence of non-storm water discharges , and
- b) Evaluate the effectiveness of the company's pollution prevention activities in controlling contamination of storm water discharges.

Monitoring components are described in the following sections.

5.0 Illicit Discharge Detection and Elimination

The Engineering Division shall perform dry weather inspections of storm pipes in the street along the eastern edge of the parcel on an annual basis. Instances of dry weather flow, stains, sludge, color, odor, or other indications of a non-storm water discharge shall be documented and immediately reported to City Engineering and Madison/Dane County Public Health. Engineering and Public Health will work together to identify the sources of the illicit discharge and eliminate it.

5.1 Site Compliance Inspections

The City Engineer shall assign a Professional Engineer to perform an annual inspection to evaluate the effectiveness of the SWPPP. The inspection shall be adequate to verify that the site drainage conditions and potential pollution sources identified in the SWPPP remain accurate, and that the best management practices prescribed in the SWPPP are being implemented, properly operated and adequately maintained. Information reported shall include the inspection date, inspection personnel, scope of the inspection, major observations, and revisions needed in the SWPPP.

6.0 Implementation Schedule

This SWPPP becomes effective as of **03/01/2021**.

7.0 Record Keeping and Reporting

The bi-annual inspections, and maintenance activities will be record on the forms in Appendix 5 and kept onsite with the SWPPP.

8.0 Certification of the SWPPP

I certify that this document and attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information contained in the plan. Based on my inquiry of the person, or persons, who manage the system, or those persons directly responsible for gathering the information; the information contained in this document is, to the best of my knowledge and belief, true, accurate and complete. Based upon inquiry of persons directly under my supervision, and to the best of my knowledge and belief, the provisions of this document adhere to the provisions of the storm water permit for the development and implementation of a Storm Water Pollution Prevention Plan and that the plan will be complied with.

Robert Phillips, P.E. City Engineer

Date

Appendix 1 - WPDES Permit

Appendix 3: Spill Prevention, Control and Counter Measures Plan

The Sycamore Avenue Site currently has two above ground 5,000 gallon brine tanks. Additionally, there 500 gallon waste oil collection tank and two underground fuel tanks. The fuel tanks are inspected by fleet services.

In accordance with 40 CFR 112.5 (b), a review and evaluation of this Spill Prevention,

Control and Countermeasures Plan (SPCC) will be conducted every three years. A registered Professional Engineer shall certify any change or amendment to the SPCC plan. This certification must be completed within six months after a change in facility design, construction, operation or maintenance occurs which affects the facility’s potential for discharge of oil into or upon the Navigable Waters of the United States or adjoining shorelines.

Review Dates

Signature

- 1. August 1, 2024
- 2. August 1, 2027
- 3. August 1, 2030
- 4. August 1, 2033
- 5. August 1, 2036

* SPCC plan amended and certified by a Registered Professional Engineer per 40 CFR 112.3 (d)

Management Approval

The City of Madison is committed to the prevention of discharges of any nature into navigable waters or the surrounding habitat. Therefore, a regular review and update of spill prevention, control and countermeasures procedures will be held to the highest standards.

Authorized Facility Representative

Signature

Title

Date

Facility Distance to Navigable Waters and Adjoining Shorelines

Storm water runoff from the SAPW site sheet flows via Pipe to the South and then eventually into Starkweather Creek. The maps provided in Appendix 6 show outfall locations and drainage from the site to Starkweather creek. There is 3,238 feet of storm sewer between the facility and Starkweather Creek. If a large spill were to occur, the outlet pipes could be plugged at the creek or in the swale on the west side of sycamore park.

Facility Storage

Two 5000 gallon Brine tanks

Potential Spill Predictions, Volumes, Rates and Control

Aboveground Storage Tanks not associated with emergency generators

Source	Type of failure	Volume (gal)	Rate of Flow (Gal./Hr.)	Direction of Flow	Containment (Gal.)
Above Ground Brine Tank	Tank Rupture	5000	5000	Southwest	Zero
Above Ground Brine Tank	Tank Rupture	5000	5000	Southwest	Zero

Spill Prevention Measures

None

Spill Control Equipment and Cleanup:

- a. Spill control equipment on site includes absorbent pads and sorbent socks, granular sorbent, empty drums, brooms and shovels. Spill cleanup materials are located in the guard house near the brush pile. This would only be effective for small spills under 5 gallons associated with fueling operations.

Appendix 5: Site Inspection Form

<p>Equipment maintenance:</p> <ul style="list-style-type: none"> • Are maintenance tools, equipment and materials stored under shelter, elevated and covered? • Are all drums and containers of fluids stored with proper cover and containment? • Are exteriors of containers kept outside free of deposits? • Are any vehicles and/or equipment leaking fluids? Identify leaking equipment. • Is there evidence of leaks or spills since last inspection? Identify and address. • Are materials, equipment, and activities located so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas)? <p>Add any additional site-specific BMPs:</p> <hr/> <hr/> <hr/> <hr/>	Yes	No	NA	<p>Findings and Remedial Action Documentation:</p>
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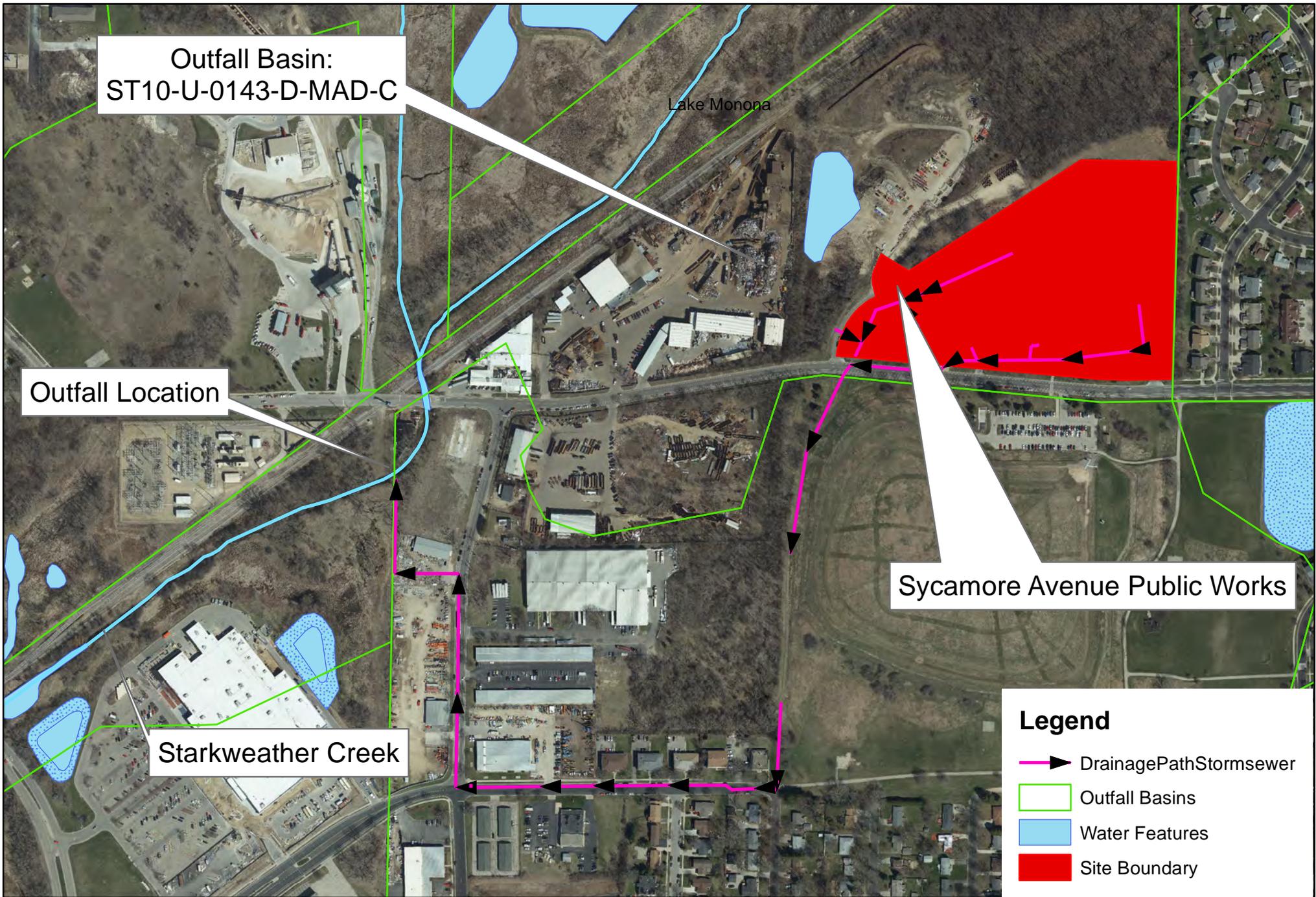
I. POTENTIAL POLLUTANT SOURCE AREA INSPECTION AND BEST MANAGEMENT PRACTICES EVALUATION				
<p>Good Housekeeping BMPs:</p> <p>1. Are paved surfaces free of accumulated dust/sediment and debris?</p> <ul style="list-style-type: none"> • Date of last quarterly vacuum/sweep _____ • Are there areas of erosion or sediment/dust sources that discharge to storm drains? <p>2. Are all waste receptacles located outdoors:</p> <ul style="list-style-type: none"> • In good condition? • Not leaking contaminants? • Closed when is not being accessed? • External surfaces and area free of excessive contaminant buildup? <p>3. Are the following areas free of accumulated dust/sediment, debris, contaminants, and/or spills/leaks of fluids?</p> <ul style="list-style-type: none"> • External dock areas • Pallet, bin, and drum storage areas • Maintenance shop(s) • Equipment staging areas (loaders, tractors, trailers, forklifts, etc) • Around bag-house(s) • Around bone yards • Other areas of industrial activity: <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	Yes	No	NA	<p>Findings and Remedial Action Documentation:</p>

<p>Spill Response and Equipment:</p> <p>Are spill kits available, in the following locations?</p> <ul style="list-style-type: none"> • Fueling stations • Transfer and mobile fueling units • Vehicle and equipment maintenance areas <p>Do the spill kits contain all the permit required items?</p> <ul style="list-style-type: none"> • Oil absorbents capable of absorbing 15 gallons of fuel. • A storm drain plug or cover kit. • A non-water containment boom, a minimum of 10 feet in length with a 12 gallon absorbent capacity. • A non-metallic shovel. • Two five-gallon buckets with lids. <p>Are contaminated absorbent materials properly disposed of?</p>	Yes	No	NA	<p>Findings and Remedial Action Documentation:</p>
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I. POTENTIAL POLLUTANT SOURCE AREA INSPECTION AND BEST MANAGEMENT PRACTICES EVALUATION

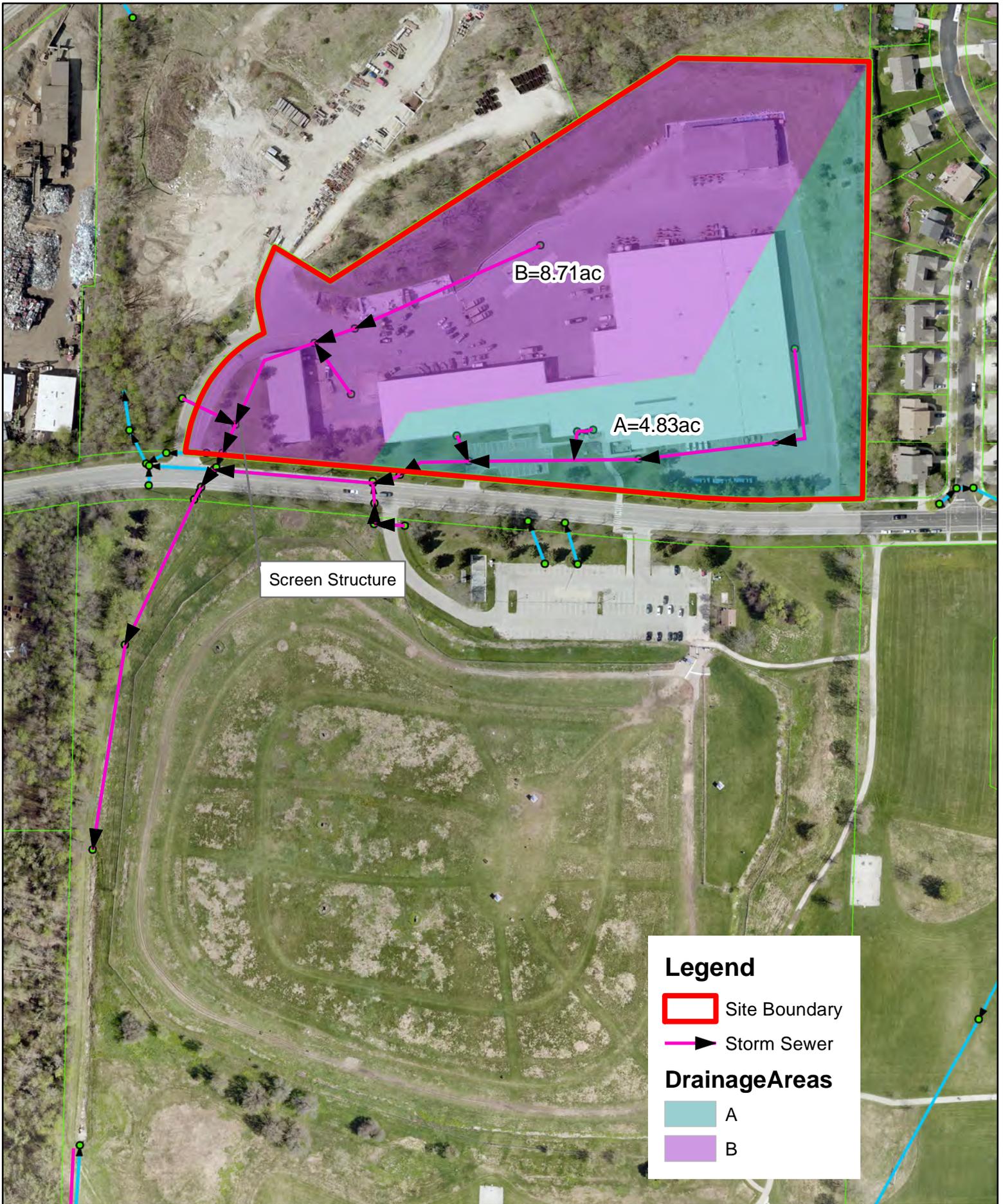
<p>General Material Storage Areas:</p> <ul style="list-style-type: none"> • Are damaged materials stored inside a building or another type of storm resistance shelter? • Are all uncontained material piles stored in a manner that does not allow discharge of impacted stormwater? • Are scrap metal bins covered? • Are outdoor containers covered? 	Yes	No	NA	<p>Findings and Remedial Action Documentation:</p>
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Appendix 6: Drainage Map

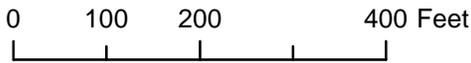


Appendix 6:
Sycamore Avenue
Drainage Map





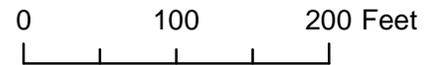
Sycamore Avenue Public Works Site
Drainage Map



Appendix 7: Site Assessment



Sycamore Street Facility
Madison, WI



	A	B	C	D	E	F	G	H	I	J	K	L
1	ACTIVITY/MATERIAL	LOCATION MAP ID		POTENTIAL POLLUTANTS					STORM WATER RISK		CURRENT PRACTICE	
2		Indoors	Outdoors	Sediment	Nutrients	Metals	Hydrocarbons	Toxins	other	Likelihood of Contact		Risk of release
3												
4												
5												
6	Vehicle repair and maintenance	B-2		○	-	●	●	●	Leaks and spills - Fuel benzene, oil, hydraulic oil, transmission fluids, brake fluids, ethylene glycol, lead acid	○	○	<ul style="list-style-type: none"> ● Vehicles repaired and maintained indoors ● Floor drains in these facilities are connected to the sanitary sewer system
7	Vehicle storage and parking	B-1C B-4C	M-1	●	-	●	●	○	Leaks and spills - Fuel benzene, oil, hydraulic oil, transmission fluids, brake fluids, ethylene glycol, lead acid	●	○	<ul style="list-style-type: none"> ● Outside vehicle storage drains to stormsewer
8	Vehicle washing	B-1D		●	●	◐	◐	●		○	○	<ul style="list-style-type: none"> ● Vehicle washing is performed indoors ● Washbays are connected to the sanitary sewer system
9	Metals recycling		M-11	-	-	●	●	-		●	◐	<ul style="list-style-type: none"> ● Material stored in uncovered dumpsters outside
10	Refuse		M-13	●	●	-	-	-		○	○	<ul style="list-style-type: none"> ● Garbage collected in standard covered municipal garbage can
11	Waste oil and used anitfreeze		M-13 M-12	-	-	-	●	●	ethylene glycol	◐	◐	<ul style="list-style-type: none"> ● Single walled outside storage tank without secondary containment
12	Gasoline and diesel fuel dispensing		M-15 M-14	-	-	●	●	●		●	○	<ul style="list-style-type: none"> ● Vehicles fueled outside
13	Cold Patch	B-1B		-	-	-	○	-		○	○	<ul style="list-style-type: none"> ● Stored indoors in bunker
14	Tack for Asphalt	B-1A		-	-	-	◐	-		○	○	<ul style="list-style-type: none"> ● Stored indoors in bunker
15	Pea gravel	B-1A		◐	-	-	-	-		○	○	<ul style="list-style-type: none"> ● Stored indoors in bunker
16	Spray patch equipment	B-1A		-	-		◐	-		○	○	<ul style="list-style-type: none"> ● Stored indoors in 55 gallon drums
17	Snow plow storage		M-7 M-4	-	-	○	●	-		●	○	<ul style="list-style-type: none"> ● Stored outdoors uncovered
18	Sweeper dumps/transfer location		M-5	●	●	●	-	●		●	●	<ul style="list-style-type: none"> ● Conducted on concrete slab outdoors
19	Salt / Sand storage 90% and 10% Salt	B-3		●	-	-	-	○	Sodium Chloride, Ferrocyanide	○	○	<ul style="list-style-type: none"> ● Stored in building
20	Brine Solution tanks		M-10	-	-	-	-	-	Sodium Chloride	○	◐	<ul style="list-style-type: none"> ● Stored in tanks outside

	A	B	C	D	E	F	G	H	I	J	K	L
1	ACTIVITY/MATERIAL	LOCATION MAP ID		POTENTIAL POLLUTANTS					STORM WATER RISK		CURRENT PRACTICE	
2		Indoors	Outdoors	Sediment	Nutrients	Metals	Hydrocarbons	Toxins	other	Likelihood of Contact		Risk of release
3												
4												
5												
21	Public recycling drop off		M-16								-	
22	Public brush drop off		M-20	●	●	-	-	-		●	●	● Brush is stockpiled outside, shredded and used as mulch
23	Used batteries		M-16	-	-	●	-	●	Lead, acid	○	○	● Stored in a coverd container
24	Fertilzers	B-4		-	●	-	-	-	22-0-3 fertilizer	○	○	● Stored inside cage, inside building with floordrains connected to sanitary sewer
25	Mulch		M-19	◐		-	-	-		●	○	● Stockpiled uncovered outside
26	Mower blowoff material		M-21	◐	●	-	-	-		●	○	● Material removed from mowers with air hose
27	Paint	B-4		-	-	-	-	●		○	○	● Paint stored in locked cage
28	LP storage		M-8	-	-	○	●	-		○	○	● Cylinders stored outside uncovered in cement barrier
29	Tool Shop	B-5		◐	-	●	●	●	Sovlents, Spray Paint	○	○	
30	Mowing equipment storage	B-4C		◐	-	-	◐	-		○	○	● Stored in building
31	Picnic table storage		M-17	-	-	○	-	-		●	○	● Stockpiled outside
32	Playing field paint	B-3		-	-	-	-	-		○	○	● Stored indoors in five gallon buckets
33	Pressure washer	B-4D		●	●	◐	◐	●		○	○	● Washing is performed indoors ● Area connected to the sanitary sewer system
34	<p>KEY</p> <p>● High</p> <p>◐ Medium</p> <p>○ Low</p> <p>- Not Applicable</p>											
35												
36												
37												
38												
39												



B-1A Cold Patch Storage



B-1B Pea Gravel Storage



B-1A Road Tack Storage



B-1A Indoor vehicle storage – trench drain connected to sanitary sewer



B-1C Indoor Vehicle Storage



B-1A Waste oil from mowing equipment



M-1 Outside Vehicle Storage



B-3 Sand and Salt Storage



M-2 Barricade Storage



M-5 Street Sweeper Transfer Location



M-6 Asphalt Hauler Storage



M-7 Snow Plow Storage



M-8 Liquid Propane Storage



M-10 Brine Tanks



B-1D Vehicle Washing



B-1E Vehicle Maintenance



M-11 Scrap Metal Recycling



M-11 Metal Recycling



M-12 Used Anti-Freeze



M-13 Waste Oil Storage



M-14 Fuel Station



M-14 Anti-Freeze and Oil Stored in Fuel Station



M-15 Fuel Station



M-16 Metals and Large Appliance Recycling



M-16 Large electronics recycling



M-16 Used Batteries Recycling



M-17 Picnic Table Storage



M-18 Bur lapped Tree Storage



M-19 Mulch Stock Pile



M-20 Public Brush Drop Off



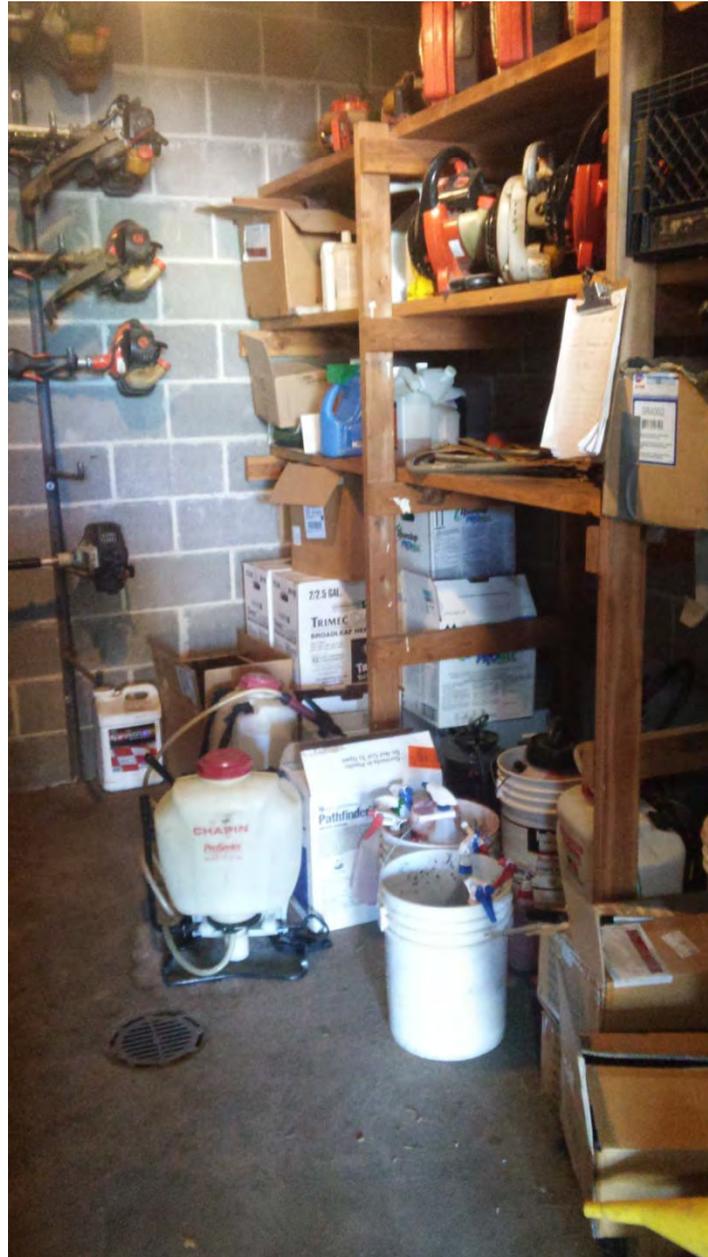
B-4 Fertilizer Storage



B-4C Forestry Vehicle Storage



B-4B Forestry Waste Oil Storage



B-4A Chemical Storage



M-21 Mower Blow-off Area



B-3 Tool Shop