

SWPPP Tips

Streamlining the MS4 Permit



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VLAWMO Education and Outreach
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MS4 & SWPPP



Municipal Separate Storm Sewer System



Stormwater Pollution Prevention Plan



MPCA Example Audit Questions:

vlawmo.org/agencies > "MS4 Support"

https://stormwater.pca.state.mn.us/images/5/53/Audit_Questions_Master_Worksheet_REVISED.pdf

Boosting the MS4 Game Plan

Minimum Control Measures 1-3:

- Communications staff, clerks, commissions, specialists

Minimum Control Measures 3-6:

- Engineering, inspections, public works

Minimum Control Measures (MCM):

1. Education and Outreach
2. Public Participation
3. Illicit Discharge
4. Pre-Construction
5. Post-Construction
6. Good Housekeeping

Custom Graphics: MCM 1-3



Pool & Spa Drainage Guide

Why careful pool water disposal matters:
Improper release of swimming pool water can harm local waterbodies, native vegetation, and wildlife habitat. Local waterbodies depend on responsible actions from everyone to remain healthy and functional for the community.

Pool draining steps:

1. A week prior to draining the pool, stop adding chlorine and any other substance.
2. Test the water before draining: pH should be 6.5-7.8, chlorine levels not detectable.
3. Pump pool water over an open area such as a lawn before letting it drain into a stormdrain. Look for natural drainage paths or alter the drainage path to keep water away from adjacent property and buildings. Monitor the pumped water to ensure it doesn't cause erosion and pick up debris as it runs into the stormdrain.
4. Never drain pool water directly into a body of water such as a lake, stream, or wetland.
5. Used pool filters can be thrown into the trash. Extra or partially used filters can be disposed of at the Ramsey County household hazardous waste collection site.



Pool draining tips:

- Careful use of pool chemicals can save money and help simplify the pool draining process.
- If pool drainage is a regular or semi-regular occurrence, it will be worth taking the time to make a permanent plan that includes hoses, pumps (pictured left), and potentially landscaping strategies.
- Consider a backyard raingarden with an overflow feature as a strategy to capture pool water and rooftop runoff.
- Filter out any paint chips before draining.
- If using an acid product to clean the pool, make sure pH levels have adjusted to normal before draining. Always follow instructions on chemical labels for disposal and usage. Never mix two or more chemicals.
- Remember that stormdrains connect directly to waterbodies.



City name/logo



Illicit Discharge Spotted

An illicit discharge (illegal dumping) has been detected in a nearby waterway. **We want to let you know because:**

- Illegal dumping is a preventable burden on public drainage systems + tax dollars.
- Illegal dumping may seem innocent but harms lakes, streams, and wetlands.



A fineable offense

Keep these out of ditches and stormdrains: Oil, paint, grease, chemicals, grass clippings, leaves, furniture, yard debris, water softener salt, trash, scrap metal, construction debris, and more.

Learn more and plan your next disposal at: VLAWMO.org/IDDE

Report a suspected illicit discharge to your city or township public works department.

"Only rain down the drain."



There is no poop fairy.

Please help us reduce pet waste pollution in our community.

Remember to bring a baggie when going out for walks or to a park.

Don't wait: More time on the ground is more opportunity to contaminate lakes, streams, and wetlands.



Scoop it, bag it, trash it.



Smart Salting protects local water & streets.

Try these 4 steps for a water-friendly approach:

Shovel & scrape Early and often so that ice has less opportunity to form. Store shovels and tools in for quick access. Chances are, little to no salt will be needed.

Select a de-icing product carefully. Sand or grit may be all it takes. Select salt based on the temperature, and allow for the expected melt time - adding more doesn't speed up melting and results in excess.

Scatter salt with 3" between crystals. Practice spot-treatment and allow melted crystals to disperse salt water across the surface before adding more.

Sweep up extra salt, sand, or grit. If dry, store to be reused for the next storm or next year.




Stay safe while reducing excess.



Grass clippings are rich in nutrients.

Grass clipping "do's":

- Leave them on the lawn
- Compost them, mix into garden soil, or bring them to a county compost facility.

What's in it for you?

- Grass clippings are 80-85% water: Keeping them on the lawn helps retain moisture as they break down.
- Grass clippings are 4% nitrogen, .5% phosphorus, and 2% potassium. A summer's worth of grass clippings is roughly equivalent to an application of fertilizer.
- Leaving grass clippings on the lawn saves money in fertilizer costs and spares the time spent bagging, hauling, or transporting the clippings.



What about thatch?

Clippings do not produce thatch due to their water content and quick decomposition. Thatch is caused by dead roots and stems most often caused by over-fertilizing and over-watering.

See reverse

Custom Graphics: MCM 1-3

Infographics

Salt melts more than what the **crystal touches.**

Spreading crystals 3" apart reduces salt corrosion, saves money, and protects freshwater.

Pet waste isn't harmless

Pets are more numerous than wildlife, with high E. coli and denser nutrient waste.

Help us keep people safe and water clean:

- Pick-up waste ASAP instead of letting it sit.
- Practice responsible habits: Always bring a doggie-bag on walks.
- Tell a friend that freshwater needs our help to balance nutrient and bacteria levels.

For more tips and info on the harms of pet waste visit www.vlawmo.org/residents

WHITE BEAR TOWNSHIP
1858 BARRETT COUNTY MINNESOTA

Help Prevent Illegal Dumping

Keep out of drains:	What goes into drains:
<ul style="list-style-type: none"> • Oil, paint • Chemicals, pool water • Grass clippings, yard debris • Water softener salt • Trash • Construction debris 	<p>Rain and snow melt.</p> <p><i>"Only rain down the drain"</i></p> <p><small>Accountability is a community effort. To anonymously report an illicit discharge infringement, call (651) 747-2750.</small></p>

There is no poop fairy.

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Custom Graphics: MCM 1-3

Place-based
Action shots – rain!



Custom Graphics: MCM 1-3

Mailing slips / kiosk slip



Smart salting, good habits:

- Use tools first: Shovel, scraper, or broom.
- Disperse salt or other de-icers evenly without piles. The goal is not to form a blanket, but to let each salt crystal spread as it melts.
- Once salt crystals infiltrate the ice/compacted snow, a scraper can chop through and scrape the surface. Removing the ice chunks reduces the need to re-apply. Salt diluted with melt-water can re-freeze, cause an uneven surface, and raise the risk for falls.
- More product doesn't mean faster results. The chemical reaction depends on temperature.
- Never apply de-icers to dry pavement or loose snow.
- Sweep up extra salt and sand. Excess salt clings to melt-water and runoff.



Help us keep surfaces safe & water clean.

1 teaspoon of salt permanently pollutes 5 gallons of freshwater.

Chlorides found in road salt are harmful to wildlife, soil, and groundwater. They also corrode cars, bridges, and streets, and disrupt the seasonal lake cycles that fish need and people enjoy.

Shovel - Select - Scatter - Sweep

See reverse for how to accomplish safe surfaces while reducing excess.



Keep out of drains/ditches:

Oil, paint, grease, chemicals, pool water, grass clippings, furniture, yard debris, water softener salt, trash, scrap metal, or construction debris. Informal/homemade connections to the stormdrain system are also illicit discharges. These go directly to our lakes, streams, and wetlands causing damage and a burden of clean-up costs on public tax dollars.



What goes into drains:

Rain and snowmelt.
"Only rain down the drain"

Accountability is a community effort.

To anonymously report an illicit discharge, call (651) 747-2750 or email wbt@whitebear township.org Subject line: "Illicit Discharge"



What's wrong with pet waste?

- Unlike wildlife waste, pet waste is nutrient dense. Cities and towns have lots of pets, and these excess nutrients harm local lakes and wetlands by producing excess algae.
- Excess algae poses risks for toxic algae blooms and impairs water quality for wildlife and people (fishing, recreation, etc.).
- Since pet waste is so rich in nutrients, it can take a single pile up to a year to break down.
- Pet waste contains harmful bacteria and parasites that can make people and pets sick.
- Pet waste could ruin someone's day in just one unlucky step!



Help keep people safe & water clean:

Don't wait: More time on the ground is more opportunity to contaminate lakes, streams, and wetlands.

Remember to bring a baggie when going out for walks or to a park.

Scoop it, bag it, trash it.

[LOGO]

Water Conservation Tips

What can we do to conserve water?

- ◆ Choose a sprinkler that disperses water low and in drops opposed to a high mist.
- ◆ Pay attention to rainfall and adjust watering schedules accordingly, in addition to odd/even watering days. Turf generally needs just 1"/week. Water in early morning/ evening.
- ◆ Consider allowing a dormant or slightly dormant "brown" look. Dormancy is a normal part of turf grass' annual cycle.
- ◆ Never water pavement. Stray irrigation heads are often an easy fix, and sprinkler placement can always try to keep water on the lawn.
- ◆ Mow lawn at 3" or more to encourage deeper roots that hold more moisture. This also buffers times of drought.
- ◆ Try introducing native plants, a bee lawn, sedge ground covers, or low-mow fescues.

Water conservation in the home:

- ◆ Keep a pitcher of cold water in the fridge to reduce time spent waiting for the faucet to change temperature.
- ◆ Try "army showers" that turn the water off when lathering, and aim for 3-5 minutes total.
- ◆ Check toilets and faucets for leaks often and make repairs quickly.
- ◆ Visit commercial car washes to send wash water and road gunk to a water treatment plant. Driveway washing sends this material to local waterways. To be adventurous at home, try washing cars on the lawn.

Other ways to help:

- ◆ Visit your local watershed website for more water tips and cost-share grants for yard and drainage improvements.
- ◆ Visit adopt-a-drain.org to adopt a nearby stormdrain and volunteer to keep it clean.



Back side

Custom Graphics: MCM 1-3

Full page PDFs

IDDE

Wetland dumping

Illicit Discharge is Illegal Dumping

Keep out of drains and ditches:
Oil, paint, grease, chemicals, pool water, grass clippings, furniture, leaves and other yard debris, water softener salt, trash, scrap metal, mop bucket or carpet cleaning water, or construction debris.
Irresponsible dumping goes directly to our lakes, streams, and wetlands unfiltered. This causes damage, increases maintenance, and puts a burden of clean-up on public tax dollars.

What goes into drains:
Rain and snowmelt.
"Only rain down the drain"

Accountability is a community effort.
To anonymously report an illicit discharge, call (###) ###-#### or email info@emailaddress.org

How do I know if I see an illicit discharge?

Detecting illicit discharge:

- Residues, stains, odors, or unusual damage around stormdrains.
- Sediment running off of a construction site.
- Fowl smells gathered around storm outputs.
- Water flowing in roadside ditches or into stormdrains when it hasn't rained.
- Pipes or hoses directed into stormdrains or ditches.
- Piles of debris or trash in ditches, ponds, lakes, or wetlands.
- Spotting someone in the act. Kindly inform them that the drain leads to a waterbody. Many times people just aren't aware.

See reverse for responsible disposal.

Responsible disposal: Contact your county waste department for questions or more info.

Substance	Disposal
Oil, grease, and automotive liquids	Household Hazardous Waste (HHW) collection
Paint and paint thinners	Household Hazardous Waste (HHW) collection
Pet waste	Trash or sanitary sewer
Grass clippings, leaves, yard debris	Yard waste collection site or yard waste hauler service
Cleaning chemicals	Household Hazardous Waste (HHW) collection
Needles/syringes	Household Hazardous Waste (HHW) collection
Medicine	Medicine collection sites (i.e. police depts) - contact county
Water softener salt	Small amounts (single tank): Trash Large amount: Hauler service
Road salt/de-icer	Road salt/de-icer into trash or sweep-up and reuse
Pool/hot tub water	Chlorination stopped 1 week prior to discharge. Sanitary sewer or to upland soil surface
Pool/hot tub chemicals and filters	Household Hazardous Waste (HHW) collection
Mop bucket and carpet cleaning water	Sanitary sewer, filtered debris into trash
Building materials, cement, and construction/demolition waste	Contact trash hauler or seek a disposal company. Small amounts of wallboard/drywall/sheetrock in trash
Hardware: knobs, nails, bolts, etc.	Trash or scrap metal recycling facility
Scrap metal	Scrap metal recycling facility
Sawdust	Small amounts into trash or backyard compost (untreated)
Furniture and appliances	Bulky waste hauler service, search for individual appliance disposal options and contractors

Informal/homemade connections to the stormdrain system or ditches are also illicit discharges.

Reporting an illicit discharge:

- 1. Photograph.** Document the substance that's been dumped into a ditch, pond, or water conveyance system with a photo. (I.e. grass clippings, paint, automotive fluids, construction site run-off, cleaning substances, etc.). If a photo isn't possible, note the substance or what you expect the substance to be.
- 2. Think like a detective.** Document the specific location with a street, cross street, or cardinal directions of the ditch or stormdrain. Note the day and time as well as vehicle type or license plate.
- 3. Call** the [City/Township] at (###) ###-#### to report the infringement. If you're not sure if it's illegal dumping but suspect it, staff will investigate to determine the nature of the problem. Staff will pursue remediation and clean-up as necessary.
- 4. Celebrate your success!** Clean water is everyone's business and responsibility. Reporting may seem difficult or intimidating, but can be anonymous and is the responsible thing to do for the community, water quality, and wildlife.

Education: MCM 1

VLAWMO web calendar

Annual theme, seasonal graphics, downloads, and tidbits

ALL EVENTS

today

March 2022

month week day

Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28	1 Watershed Care Tips: March	2	3	4	5
6	7	8 8:30am Technical Commission Meeting	9	10	11	12
13	14	15	16	17 6:00pm Watershed Action Volunteers (WAV) Meeting	18	19
20	21	22	23	24	25	26
27	28	29 7:00pm Resilient Yards: Blue Thumb Workshop	30	31	1 Watershed Care Tips: April	2
3	4	5	6	7	8	9

Watershed Turfcare JUNE

This month:

- Continue mowing at a 3" height to encourage root growth and retain moisture, sediments, and nutrients.
- Sweep grass clippings from the street or driveway back onto the lawn to reduce nutrient pollution and excess algae growth in lakes/wetlands.
- Plan for watering 1"/week and account for rainfall. Spot pull undesired weeds by hand or with a "Grampa's Weeder" when feasible.
- Over-seed to help compete with weeds, try using hardy drought-resistant fescues when possible.

Looking ahead:

- Expect turf to start to show signs of dormancy (brown) in areas of high sun exposure. Dormant grass only needs ~1" water/week to survive, helps save water for the community, and will green up again when moisture returns with rainfall.
- Hand-pull isolated and undesired weeds from early to mid-July to take a bite out of the warm season (late summer) specialists. Pulling them early reduces their abundance in August and reduces the amount of seeds that will germinate next year.
- If pressed for time, cut the stalks of undesired grasses and weeds before they go to seed.

Raingardens & Native Plants JUNE

This month:

- For deep root growth on new plantings, water deeply and allow soil to dry between waterings. Keep base of stem exposed for air.
- Continue weeding as needed. If strapped for time, clip seed heads or focus on a sweep of garden borders.
- Flag plants that are supposed to be there to help identify them as they grow and to distinguish them from weeds.

Looking ahead:

- Watch for plant diseases such as signs of yellowing and summer heat stress such as excessive leaf drop.
- Trim groundcovers, grasses, or other vegetation overhanging curbs and sidewalks.
- Get ready for intentional weeding from 4th of July weekend to mid-July. New warm-season species will be sprouting and getting them early will make the rest of summer easier.

For more watershed care tips visit: vlawm.org/residents

Education: MCM 1

VLAWMO.org/agencies

MPCA MS4 Toolkit: www.pca.state.mn.us/water/complying-ms4-general-permit



Annual meeting:

Advertised and posted

“MS4” → Stormwater strategies, community efforts in water quality, water quality protection for safe surface waters

Public Participation: MCM 2

Adopt-a-Drain

- Adopt-a-Drain.org

ADOPT
A STORM
DRAIN



Service projects, clean-ups

- Trash pick-up (spring/fall)
- Stormdrain stenciling and clean-up kit for rent
 - Adopt-a-drain door hangers
- Brush-up public raingardens: “Adopt-a-Raingarden”
- Ditch clean-ups/roadsides, too!

Macroinvertebrates:

- Volunteer monitoring and telling the story



Illicit Discharge: MCM 3

“Only rain down the drain”

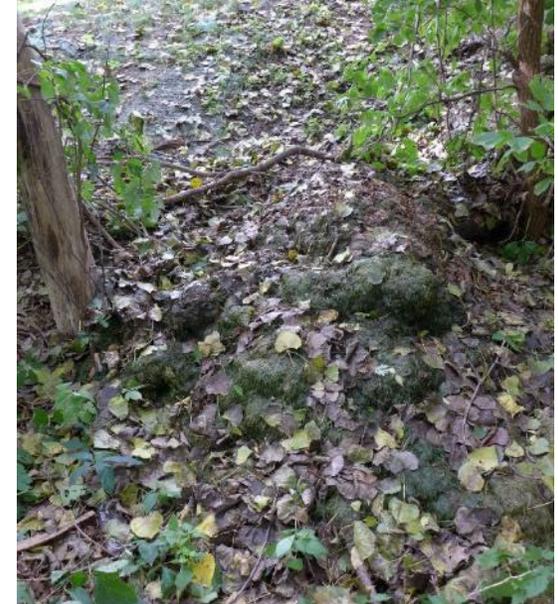
(or ditch)

Illicit discharge is illegal dumping. Keep out of drains:

- Paint, automotive fluids
- Construction debris, concrete mix
- Mop bucket water, carpet cleaning water
- Holiday greens
- Pool water – follow procedure

Enforcement and training:

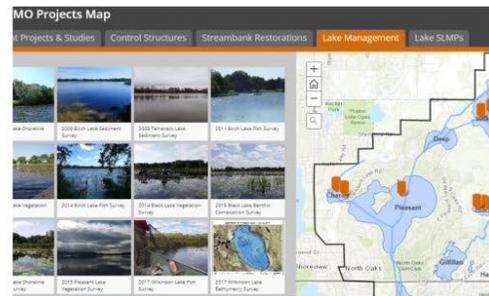
- Public works, inspections, engineering, contracted service, staff, commission volunteers
- Training resources



Website Tools: MCM 6

RESOURCES FOR LOCAL GOVERNMENT

Support and resources for stormwater permitting.



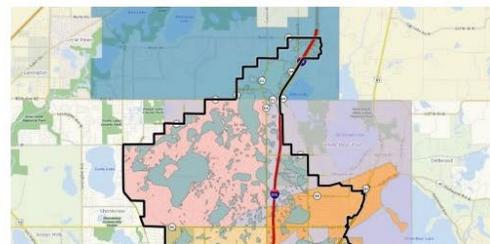
Projects



Policies and Rules



MS4 Support



Housekeeping: MCM 6

Public works, streets, parks:

- Smart salting training, equipment use, contracting
- Turf maintenance best practices
- Taking care of public stormwater infrastructure:
Stormponds, raingardens, bioswales, erosion control



Heritage Hall Bioswale/ Raingarden



Anti-icing equipment as a public works "smart salting" strategy

JPA: A hidden gem

VLAWMO.org/residents

- Watershed Care calendar
- Annual workshops
- Active social media
- Cost-share program and neighborhood spotlights
- VLAWMO web project map
- VLAWMO's monthly E-newsletter



*VLAWMO Cost-share program:
Projects that protect and improve the watershed*

Interests and Needs

From cautious to confident



Questions & Discussion



Thank you!

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