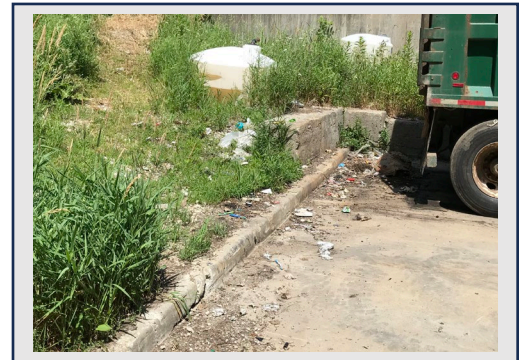


# Municipal Best Management Practices (BMPs)

## ► Street Sweeping Programs

### OVERVIEW

Over time, streets can accumulate debris on the curb line. This debris harbors many pollutants, including heavy metals, phosphorus, nitrogen, fecal bacteria and other particulates. During rain events, storm water carries the debris and pollutants into storm drains, where they enter surface water and elevate pollutant levels.



*Photo credit: Wisconsin DNR*

Street sweeping is a common best management

practice (BMP) used to remove debris, so it is not transported to storm drains. Sometimes,



*Photo credit: Wisconsin DNR*

street sweeping can also be combined with leaf collection programs. During leaf collection, leaves can break into tiny pieces and could run off into nearby storm water drains. Broken fragments of leaves have the potential to enter waterways and can release three times the amount of phosphorus (Cowen and Lee, 1973) than a leaf intact would. Street sweeping after a leaf collection operation is an effective BMP to collect broken pieces and prevent large amounts of phosphorus from entering nearby waterways.

To implement the most effective street sweeping programs, it is important to consider the types of equipment, how often to perform street sweeping, how to track the progress of implementing this BMP and the final disposal of collected materials.

## IMPLEMENTATION

### Types Of Equipment

**Mechanical** – Mechanical street sweepers use brooms to sweep particles off the street onto a conveyor belt, which carries the material to the storage unit. This type of street sweeper is less expensive but only effective at removing large particles and has been shown to result in lower pollutant removal efficiencies. Also, this activity can lead to dust, so consider street sweepers that apply water before sweeping to prevent dust.

**Regenerative Air/Vacuum Assist** – These street sweepers use vacuums to collect debris. They have been shown to result in greater pollutant removal efficiencies but are more expensive than mechanical street sweepers.



*Photo credit: Wisconsin DNR*

### How Often, When And Where?

Your municipality should determine the most appropriate frequency to maximize pollutant removal. Additionally, the time of the year could be a large contributor to when a municipality determines when and how often the streets should be swept. For example, after the winter season, snow melt can leave behind debris, litter, and other particulates. Street sweeping after a significant snowmelt event could help maximize pollutant removal. Additionally, the municipality should consider where street sweeping occurs. For example, a municipality may prioritize street sweeping to areas likely to have the highest contributions of pollutants, such as more densely populated areas.

### Tracking Progress

It is important to track the implementation and effectiveness of BMPs to understand what is working and where improvements are needed. Some examples of tracking could be:

- Utilizing a mapping system that tracks street sweeping routes, observations made out in the field (e.g., curb lines in one area appear to be much dirtier in another area), etc.

- Maintaining a log (written, excel spreadsheet, etc.) of when streets are swept.

## Storage And Disposal Of Collected Materials

If repurposing collected street sweeping material, you must submit a [low-hazard waste exemption application](#) to the DNR, demonstrating the material will not cause environmental harm. For general information on low-hazard waste exemption, please refer to the DNR's [Exempting Low-Hazard Wastes from Solid Waste Regulations](#).

If not repurposing the material, collected material should be disposed of at a licensed landfill. However, landfills may not accept collected material that has not been dewatered. As a result, many municipalities temporarily stage the materials before disposal, ensuring liquid from the collected material does not discharge to nearby storm water inlets, waterways or wetlands. For more information on material staging BMPs, see the [Collection Services Material Handling BMP](#) fact sheet within the [MS4 BMP Menu](#) under the Storm Water Management Programs section.

## ADDITIONAL RESOURCES

- [Street Sweeping Program Example - City of Madison, Wisconsin](#)
- [Leaf and Yard Material Collection Practices in Wisconsin](#)

## SOURCES

Minnesota Pollution Control Agency (MPCA). Screening of street sweeping waste. Retrieved from: [Disposal options for street sweeping materials - Minnesota Stormwater Manual \(state.mn.us\)](#)

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**Disclaimer:** This fact sheet is intended to be used for informational purposes only. These examples and references are not intended to be comprehensive and do not preclude the use of other technically sound practices.

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