

Municipal Best Management Practices (BMPs)

► Catch Basin Cleaning Programs

OVERVIEW

Every day, streets accumulate debris from a variety of urban activities. This debris harbors many pollutants, including heavy metals, phosphorus, nitrogen and fecal bacteria. During rain events, storm water carries debris and pollutants into storm drains. Catch basins with sumps are one best management practices (BMP) that allow solids containing pollutants to settle in the sump while the storm water is transported to surface water with fewer solids and pollutants.



Photo credit: Wisconsin DNR



Photo credit: Wisconsin DNR

Catch basins reduce the total suspended solids and result in minor reductions of fine soluble pollutants such as nitrogen, phosphorus and metals.

Over time, catch basin sumps can become filled with sediment, reducing the BMP's effectiveness. One way to prevent the buildup of sediment is through the implementation of catch basin cleaning programs. To implement the most effective catch basin cleaning program, it is important to establish a standard operating procedure for inspecting catch basins, removing sediments, tracking the progress of areas

inspected and cleaned and properly disposing of the material.

IMPLEMENTATION

Inspecting Catch Basins

Catch basin inspections may involve observations such as the structural integrity of the grates and catch basins, noting anything unusual, such as evidence of illicit dumping, and how much of the catch basin sump is filled with sediments. Some municipal programs clean catch basins when the sediment accumulation in the sump has reached a certain capacity. For examples of inspection protocols, see the Additional Resources section below.



Photo credit: Wisconsin DNR

Cleaning Catch Basins

Different methods are used to remove materials collected in the sump. A municipality should choose the methods that work best for their community's needs. Some common methods include removing debris from the storm grate by hand or with a shovel, removing material from the catch basin using a vacuum truck or using a vacuum truck to remove the collected material from the sumps. For examples of specific procedures, see the Additional Resources section below.

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 which catch basins were inspected and which ones were cleaned.
- Maintaining a log (written, excel spreadsheet, etc.) of when each catch basin was cleaned and the location.

For examples of record keeping and tracking, see the Additional Resources section below.

Storage And Disposal Of Collected Materials

Materials collected from catch basin cleanings are considered regulated waste. Therefore, it is best to take these materials directly to a landfill. However, landfills may not accept waste that has not been dewatered.

As a result, many municipalities temporarily store the collected material before final disposal at a licensed landfill. While staging materials, it is imperative that a plan is in place to store materials properly, so liquid does not run off into the environment. 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

- [Standard Operating Procedure, Catch Basin Inspection and Cleaning – Central Massachusetts Regional Stormwater Coalition](#)
- [Standard Operating Procedure, Sampling Catch Basins – City of Portland](#)

SOURCES

California Stormwater Quality Association. Drainage System Maintenance. Retrieved from: [Microsoft Word - SC-74 Storm water Drainage System Maintenance 1-07-03_HK.doc \(ucr.edu\)](#)

Michigan Department of Environment, Great Lakes, and Energy. Catch Basin Cleaning Activities. Retrieved from: [Catch Basin Cleaning Activities Guidance \(michigan.gov\)](#)

Selbig, W. R., Fienen, M. N., Horwath, J. A., Bannerman, R. T. 2016. *The Effect of Particle Size Distribution on the Design of Urban Stormwater Control Measures*. Water 8, <https://doi.org/10.3390/w8010017>.

U.S. Environmental Protection Agency (EPA). Storm Drain System Cleaning. Retrieved from: [Stormwater Best Management Practice, Storm Drain System Cleaning \(epa.gov\)](#)

U.S. Environmental Protection Agency (EPA). Parking Lot and Street Sweeping. Retrieved from: [Stormwater Best Management Practice, Parking Lot and Street Sweeping \(epa.gov\)](#)

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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