



# City of Columbia Heights

Public Works Good Housekeeping Training

June 9<sup>th</sup>, 2016

## Buzzwords

**Best Management Practice or "BMP"** - means practices to prevent or Reduce the pollution of the Waters of the State, including schedules of activities, prohibitions of practices, and other management practices, and also includes treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge, or waste disposal or drainage from raw material storage.

**MS4 - Municipal Separate Storm Sewer System** means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

**Outfall** - means the point source where a MS4 discharges from a pipe, ditch, or other discrete conveyance to receiving waters, or to other Municipal Separate Storm Sewer Systems. It does not include diffuse runoff or conveyances which connect segments of the same stream or water systems.

**Storm Water Pollution Prevention Program or "SWPPP"** - BMPs to address the six minimum control measures and other provisions of the MS4 permit, that is designed and managed to Reduce the discharge of pollutants from your MS4 to the Maximum Extent Practicable as appropriate to your community.

## Buzzwords

**Total Maximum Daily Load or "TMDL"** is the process established by the USEPA for the allocation of pollutant loads, including Storm Water, to a particular water body or reach of a water body.

### Governing Agencies

**USEPA or EPA** - U.S. Environmental Protection Agency

**MPCA** - Minnesota Pollution Control Agency

**BSWR** - Board of Soil and Water Resources

**DNR** - Department of Natural Resources

**MWMO** - Mississippi Watershed Management Organization

**RCWD** - Rice Creek Watershed District

## What is the goal of training employees about storm water?

To stress the importance of being **AWARE** of and **ALERT** to conditions that could result in the discharge of pollutants in storm water.

To be aware of the requirements of the **MS4 permit**.

To be good public stewards.

## Why we do this?

### Federal and State Mandates

The Municipal Separate Storm Sewer System (MS4) general permit is mandated by the federal regulations under the [Clean Water Act](#) and administered by the [Minnesota Pollution Control Agency](#).

## Requirements of the MS4 General Permit

All owners or operators of MS4 permits are required to satisfy the requirements of the general permit. Basically, the MS4 general permit requires the MS4 operator or owner (City of Columbia Heights) to create a Storm Water Pollution Prevention Program with six important components:

- **Public education and outreach:** which includes teaching citizens about better storm water management.
- **Public participation:** Include citizens in solving storm water pollution problems. This includes a required public annual meeting and an annual report.
- A plan to **detect and eliminate illicit discharges** to the storm water system (like chemical dumping and wastewater connections).

## Requirements of the MS4 General Permit

- **Construction-site runoff** controls: Inspections of construction sites, use of erosion control devices
- **Post-construction runoff** controls: Planning procedures, site based measures, stormwater retention/detention, infiltration BMP, vegetative BMP.
- Pollution prevention and municipal “**good housekeeping**” measures: Covering salt piles and street-sweeping.



## Do you know where it goes?

What goes into a storm drain is flushed with rainwater, or daily urban runoff...



...goes untreated into our rivers and lakes.

## Be aware of what causes pollution...

- **Used motor oil and grease:** Automotive maintenance, urban housekeeping, construction, spills and illegal dumping.
- **Antifreeze, cleaners and solvents:** Automotive maintenance, urban housekeeping and landscaping, building and grounds maintenance, spills and illegal dumping.
- **Sediment:** Erosion from construction, landscaping, building and ground maintenance.
- **Pet droppings, viruses, and bacteria:** Urban housekeeping, non-storm water connections to storm drains.
- **Grounds and building maintenance:** Trimmings from trees, landscaping, lawns, landscaping activities, tree and park maintenance, home and yard maintenance.

## ...and what effect it has on our water.

- Clogs storm drains and causes neighborhood **food conditions**.
- **Costs taxpayers** for local clean up.
- Reduces our **quality of life**
- Harms the **freshwater habitat** of our rivers and lakes.
- Contaminates and kills **fish and other wildlife**.



## Dumpster / Garbage Storage

- Properly labeled for disposal of materials.
- Place in convenient, easily observable areas.
- Provide properly labeled recycling bins.
- Where applicable install berms, curbing or vegetation strips around storage areas to control water entering/leaving storage areas.
- Store garbage containers beneath a covered structure or inside to prevent contact with stormwater.

## Landscaping BMPs

### **BMP's for use in open areas, parks, and landscaped areas around buildings:**

- **Control soil erosion;** use mulch if necessary.
- **Recycle** lawn clippings, trimming from trees and other landscapes.
- Employ **shutoff devices** to prevent irrigation after precipitation.
- **Don't over water** (excess water transports pollutants off into storm drains).
- **Avoid** applying fertilizers pesticides, or herbicides during rainy weather.
- Never apply fertilizers or pesticides **within 5 feet of pavement, 25 feet of storm inlet, or 50 feet of water body.**
- **Calibrate** fertilizers spreaders to avoid excessive application.
- **Don't blow leaves or grass clippings into the gutter.** If clippings or leaves are left in the gutter, call for the sweeper to follow up and clean up.
- Keep trash picked up and **covers/lids closed on trash cans.**
- Maintain **buffer around ponds** for geese deterrent.

## Plowing and Sweeping BMPs

### **BMP for city streets, city parking lots, and around buildings.**

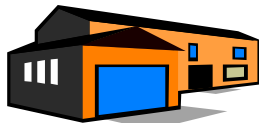
- **Pre-applying** salt makes snow removal easier.
- Use salt **sparingly** around buildings and on pavement.
- **Remove** snow per City plowing policy.
- **Sweep** paved areas per City sweeping policy.

## Concrete Work

- Store dry and wet materials under cover.
- Install **inlet protection** as needed.
- Avoid mixing excess concrete on site.
- Perform **washout** of concrete trucks and equipment in designated areas only.
- **Do not** washout trucks or equipment into stormdrains, open ditches, streets, or streams.
- Cement and concrete dust from sawing/grinding activities should be **swept up and removed from site**.
- **Remove** dirt or debris from street and gutter.

## BMPs for the Public Works Yard

- **Protect** stored materials from rainwater i.e. stockpiles, sand and salt.
- If possible, store materials **indoors and on pallets**.
- **Watch** for oil leaks in stored vehicles.
- Wash City vehicles **indoors**, if possible. **Sweep floor** and dispose of debris if needed.
- Keep soils, millings, **under cover** and away from stormwater.



## Street Repair and Maintenance

- **Prevent** paving materials and wastes from entering the storm drain.
- **Minimize** the area of soils left exposed.
- **Collect** loose sand/gravel as soon as possible after construction activities.
- **Coordinate** street-sweeping with removals.
- **Don't** use excessive water during saw cutting.
- Use **inlet protection** as necessary



## Waterline Flushing

- **Clean** flow path
- **Protect** inlet structures, if feasible.
- Use a diffuser to reduce volumes
- **Track** which fire hydrants have been flushed.



## Reporting spills and leaks



### **Duty to notify and avoid water pollution**

- **Spills that must be reported:** Report spills that may cause pollution, such as spills of toxic, flammable, corrosive and dangerous industrial chemicals. Also report spills of environmentally damaging materials, including millings, coal, animal parts, batteries, etc. Stop the source of the spill if you can do so safely.
- **Reportable quantities:** Minnesota has a reporting threshold of greater than five gallons for petroleum spills. Spills of any quantity of all other chemicals or material should be reported. If in doubt, report.

### **Anyone who spills is required to report**

Every person who has "any substance or material under its control" must report spills and leaks.

## Spill response procedure



- Observe the **safety precautions** associated with the spilled material.
- **Stop the source of the spill if you can do so safely.**
- **Call 911 if fire** or public safety hazards are created.
- **Contain the spilled material.** Dirt, sand or any semi-impermeable material may be used to create a containment structure to prevent the spilled material from flowing.
- **Report the spill to the Minnesota Duty Office (800) 422-0798, anytime day or night.**
- **Cleanup** the spill material and dispose of the wastes properly. With the exception of used oil, waste generated from petroleum spills that have been reported and cleaned up immediately are exempt from Minnesota's Hazardous Waste Rules.

## What you can do!

- **Don't ignore urban pollution.** If you see a clogged catch basin, a spill, or illegally discarded waste in City of Columbia Heights, call the Stormwater Specialist in the engineering department.
- **Be an example** for residents to follow.
- **Help residents** to understand the importance of preventing stormwater pollution.