

Mapping your site

Creating a map for your facility allows site personnel to identify runoff patterns, locations of storm infrastructure, and potential pollutant sources on your site. This information gives you an understanding of where pollution could enter stormwater on your site and allows you to institute best management practices (BMPs) to reduce the risk of this happening.

Here are some helpful steps to develop a site map for the purpose of planning and implementing stormwater pollution prevention best practices.

Example site map sketch

Use this **City of Calgary** template to draw your site. Please include as many of the following items in the list below on your map/site drawing.

For an example drawing, please see the reverse side of this sheet.

Site map checklist:

- North arrow
- Property line
- Building and structure footprints
- Site cover type (gravel, asphalt etc.)
- Entry and exits to site
- Locations of overland stormwater drainage on and offsite
- Any adjacent waterbodies (ponds, rivers, streams etc.)
- Locations of access to underground stormwater drainage
- Sources of stormwater pollutants:
 - Loading and unloading areas
 - Outdoor storage areas
 - Outdoor work/maintenance areas
- Best management practices or controls

This example is for a facility that processes and recycles material containing plastic and metal. Each site / facility is unique, so this information is simply intended to help you get started on mapping your own site.

Step 1: Identify buildings and structures

Develop a map of your site that includes the footprint of all buildings, structures, paved areas, and parking lots. You may already have a map of the general layout of your site, or you can develop a first draft of your site map based on the information you gather during your site assessment. We have a downloadable template to get you started.

Step 2: Identify how stormwater moves through your site

Add locations of overland and underground storm drainage and other storm infrastructure. At this stage it may also be worthwhile to check with The City of Calgary's Stormwater Pollution Prevention (StmPP) Team if you are unsure of if, how and/or where storm drainage from your site ties into the off-site, public stormwater system.

Step 3: Identify potential stormwater pollutant sources

The checklist below can help you in identifying potential sources of stormwater pollution. There are five common categories of outdoor activities that can be major sources of stormwater pollution:

- **Loading and Unloading:** Transfer of materials to a facility (e.g. by pump, conveyor, forklift transfer of containers) can result in spillage. Accumulated materials can be washed away in runoff.
- **Outdoor Storage:** Materials such as fuel, raw materials, process residuals, and waste are often stored in containers, on platforms or pads, or stockpiled. Some materials are carried or dissolved in stormwater runoff.
- **Outdoor Work:** Activities such as outdoor vehicle and equipment maintenance, equipment washing, and concrete mixing can result in material spills which run directly into the stormwater system or are transported in runoff.
- **Dust Generating Work and Facilities:** Dust generated during industrial processes (e.g. concrete work), as well as process residuals and exposed soil at the facility can become wind-borne. Stormwater runoff can erode and transport sediment, dust, and other fine material.
- **Cross connections to the stormwater system:** Sometimes facilities have known or unknown connections to the stormwater system which allow liquid waste or other process material to be discharged directly or indirectly into to stormwater system. These discharges often contain materials that are prohibited under The City of Calgary's *Stormwater Bylaw (37M2005)*.

Step 4: Select best management practices (BMPs) and controls

Selecting the most appropriate BMPs and/or controls will reduce the chance of pollutants getting into stormwater. BMPs and controls can generally be broken up into the following functional categories: minimizing exposure, keeping a tidy site, managing stormwater runoff, erosion and sediment control, preventing and preparing for spills, and inspection and maintenance.

Find out more information about best management practices, spill prevention and response and access downloadable resources including a site map template and checklist at calgary.ca/stmpp