

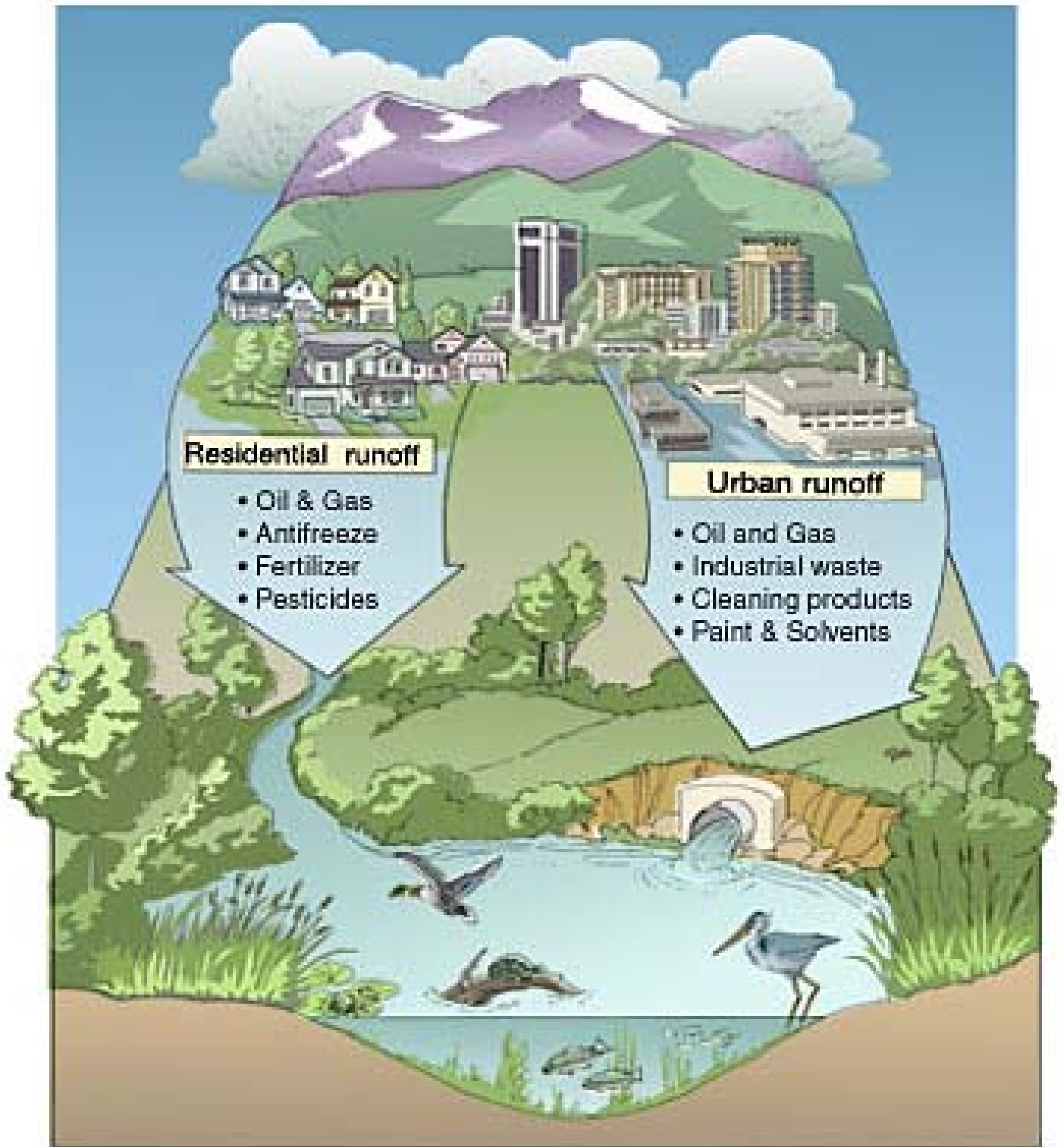
Stormwater Pollution Prevention for Commercial and Industrial Construction



Prepared by the City of Billings Public Works
Department



Stormwater Cycle



Be aware that stormwater runoff is not treated once it reaches the City storm drain system. All stormwater runoff ends up in the Yellowstone River.



Stormwater Pollution Prevention for Commercial & Industrial Construction

Stormwater pollution occurs when water (including rain, snow melt, irrigation runoff) flows across surfaces and picks up pollutants, such as debris, chemicals, dirt, oil, and other pollutants, and discharges into surface and ground waters. The City's stormwater collection system is designed to prevent flooding and not designed to remove pollutants created from residential, commercial and industrial uses. Construction activities, such as grading, excavation, and stock piling on commercial and industrial sites can increase stormwater runoff causing erosion and sedimentation from the site onto adjoining properties and city rights-of-way. Sedimentation may cause silting of storm drains, streams, ditches, and the Yellowstone River. contractors and builders must incorporate Best Management Practices (BMPs) to control both erosion and sedimentation from construction sites.

National Pollutant Discharge Elimination System (NPDES)

Billings participates in a mandated program under the Environmental Protection Agency (EPA) Clean Water Act. This program is designed to reduce the discharge of pollutants to the maximum extent practicable in order to protect water quality in state waters. The City of Billings is a permitted Small Municipal Separate Storm Sewer System (MS4) under the State of Montana NPDES program. In order to discharge stormwater into the city system, even during construction, a stormwater discharge permit is required. This permit is available on the City's website.

Stormwater Pollution Prevention Plan (SWPPP)

For construction sites disturbing one acre or larger developers are required to submit a SWPPP to both the Montana Department of Environmental Quality and the City Public Works Department. A copy of the SWPPP should be on the job site or with the construction foreman. The SWPPP is a detailed plan that:

- Identifies potential sources of stormwater pollution
- Describes the practices that will be used to prevent stormwater pollution for pre construction, during construction and post construction phases. These practices should include, but not be limited to: erosion and sediment control, good housekeeping, conservation techniques, and infiltration practices (where appropriate)
- Identifies procedures the operator will implement to comply with all requirements in the State General Permit for Stormwater Discharges Associated with Construction Activity and the city's stormwater management manual.

GENERAL CONSTRUCTION:

- **Minimize site disturbance by staging construction activity to reduce disturbed soil exposure. Preserve natural landscaping as long as possible.**



Staged construction on a commercial subdivision. The sidewalk has been constructed and is kept clean during construction activities.

Example of stormwater detention area constructed while property is still under construction.



- **Reduce site access to a single entry point by installing silt fencing or construction fencing or tape. Minimize vehicular traffic on and off the site. Install vehicle tracking controls by constructing a track pad with 3" to 6" angular rock w/ a geotextile mat or vehicle tracking control pads if space permits.**

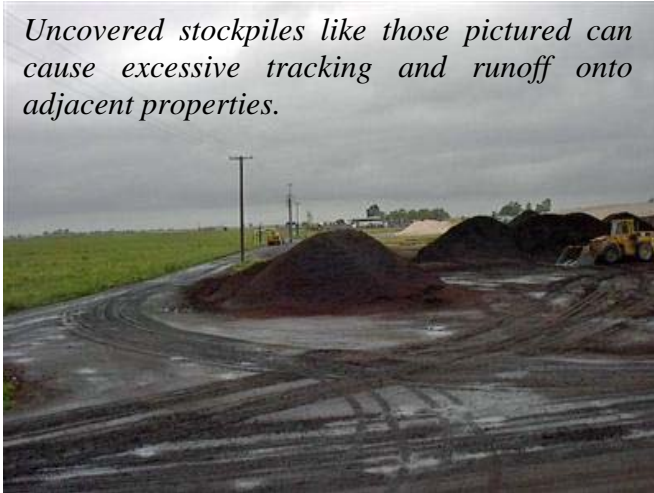


Examples of excessive tracking of mud onto local streets due to lack of access control during construction.



- **Maintain good housekeeping practices by removing and or containing debris and waste construction material. Locate or cover stock piles to minimize sediment runoff onto adjoining properties and City rights-of-way (curb, gutter, sidewalks, streets).**

Uncovered stockpiles like those pictured can cause excessive tracking and runoff onto adjacent properties.



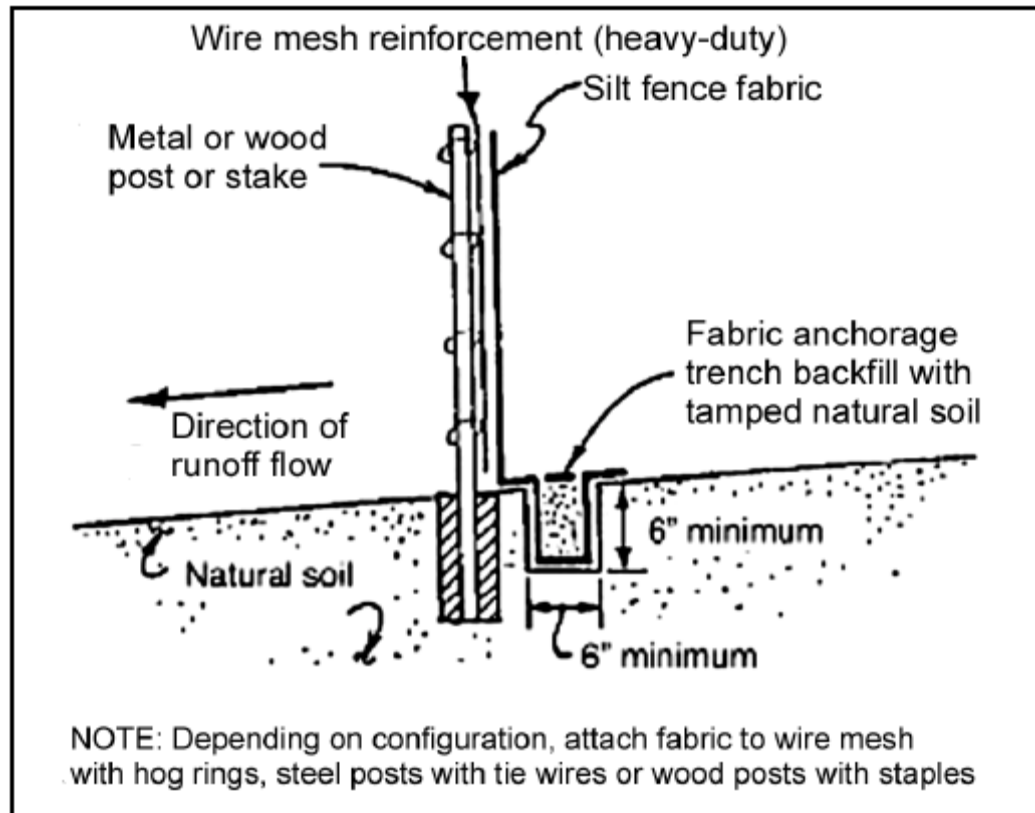
Covered stockpiles reduce tracking and stormwater pollution.

- **Routinely sweep and shovel tracked sediment from city streets. Do not clean these areas with water.**

Street rights-of-way within a developing commercial subdivision recently cleaned



- Install sediment controls such as straw wattles or filter fabrics at stormwater inlets downstream of the construction site.



Properly installed silt fencing.



Straw wattle installed at stormwater inlet



Improperly installed and unmaintained silt fencing.



Additional General Construction Techniques

- Construct a liquid waste wash facility to minimize runoff from the site.
- Inspect erosion and sediment controls within 24 hours of a storm event.
- Monitor subcontractors and employees to ensure they are practicing good housekeeping techniques and are aware of spill prevention, control, and cleanup procedures and proper waste disposal methods.
- For more information on storm water system operation and maintenance, refer to the Billings Stormwater Management Manual.

PAINTING:

- Clean latex (water-based) paint brushes and equipment with water in a sink that is connected to the sanitary sewer.
- Clean oil-based paint brushes and equipment where waste paint and solvents can be collected and disposed as hazardous waste.
- Segregate wastes for recycling and/or disposal.
- When removing lead-based paint, use a drop cloth under scraping and during sandblasting activities. For proper disposal mechanisms contact the Solid Waste Division at 657-8260.



RECOMMENDED CONSTRUCTION PRACTICES:

- Inventory hazardous materials used, stored on site, or contained in equipment. Seek out ways to remove or replace non-essential hazardous materials wherever possible.

- Store materials under cover or in areas with secondary containment.
- Provide a gravel pad on-site for materials and equipment delivery.
- Establish an operation and maintenance schedule and track maintenance activities.
- List the contact person responsible for inspection and maintenance.

CITY INSPECTIONS

To ensure that BMP's are incorporated with any land disturbing or construction activity, the City may conduct inspections and provide enforcement of violations pursuant to Section 28-100, Billing Municipal City Code, the Federal Clean Water Act of 1972, and Phase II Stormwater Regulations.

To report stormwater pollution or obtain additional information, please contact:

Environmental Affairs Division at (406) 657-8305
Engineering Division at (406) 657-8231

For building code questions and to apply for a Building Permit, please contact:

Building Division at 657-8270

Information is also available on the Environmental Affairs web page of the City of Billings Website at:

<http://ci.billings.mt.us>

