

Erosion/Sediment Control Information

When land disturbing work occurs in the City of Shoreview, erosion and sediment control practices must be implemented on any site, and be maintained until the soil on the site has been permanently stabilized. The property owner or his agent is responsible for specifying the erosion control procedures that will be installed and maintained on the site. This information sheet contains standard plans and procedures sufficient for typical residential projects. It is not intended to address all circumstances that can occur during construction.

For new construction, landscaping, additions or other work on lots that are part of a larger subdivision that has an NPDES Storm Water Permit, the permit holder must complete the MPCA Subdivision Registration form. A copy should be submitted to the City before any City permits are granted. The Surface Water Pollution Prevention Plan (SWPPP) that will be used on the site should also be submitted, and the erosion control plans for the lot must comply with the Subdivision NPDES Permit.

When there is no NPDES Storm Water Permit for the site, a City permit is required. If the work is not subject to a building permit, you will need a Grading Permit when moving more than 10 cubic yards of soil or disturbing an area more than 1,000 square feet. Note that lake lots are subject to lower permitting thresholds.

Best Management Practices:

Also known as BMPs, these include but are not limited to temporary construction entrances, silt fence, seeding, erosion control blankets, construction phasing or any other device or procedure that helps control and reduce erosion and sediment loss. BMPs must be used whenever soil is disturbed, even if a permit is not required.

Installation Sequence: The following is the order in which most BMPs should be utilized.

1. Grass Buffer Strips – Ensure that the existing grass buffer strip along the curb lines is not disturbed. If a grass buffer is not established, it should be completed immediately.
2. Inlet Protection – Ensure that all storm inlets that receive runoff from your lot have protection.
3. Perimeter Control – Devices such as silt fence, wattles, or straw bales must be installed on all areas where runoff leaves your site.
4. Temporary Construction Entrance – A stabilized entrance made of rock or gravel shall be installed for access to the property. The rock shall be installed over fabric. All vehicles entering the site shall use the construction entrance.
5. Grading/Excavating – All BMPs should be installed prior to any grading or excavation. Dewatering for any trenching or excavation must be done in such a manner as not to

deposit sediment downstream. Filter bags, sedimentation basins or some other means of removing sediment from dewatering water must be used prior to discharging water off site. Discharge water should be clear.

6. Stockpiles – Perimeter control should be installed around all stock piles. They should be stabilized with temporary vegetation if they are not actively being worked.

7. Backfill and rough grading – Care should be taken to avoid disturbing the grass buffer strips and other installed BMPs.

8. Maintenance – All BMPs should be maintained so the devices are functioning properly. All sediment should be removed from the streets, gutters and inlets within 24 hours of the rain event.

9. Final Grading – All BMPs should be left in place until the site has vegetation established.

10. Seeding or Sodding – The right of way along the curb (boulevard) must be sodded, seeded with erosion mat, seeded with sprayed fiber mulch or seeded with anchored straw mulch within 5 days of final grading completion. All other disturbed areas must be seeded within two weeks of completion.

Permit Holders Responsibility

1. If the lot is part of a subdivision, the permit holder must comply with NPDES permit and SWPPP for the subdivision.

2. An Erosion and Sediment Control Plan must be submitted with the Grading or Building Permit application. The plan is subject to the review and approval of the Public Works Director. The approved plan must be implemented and maintained on the site.

3. Ensure that adequate BMPs are in place and functioning until the project is complete.

4. Provide periodic inspection of BMPs (at least once a week) and after significant rainfalls (more than 2.5 inches in a 24-hour period). Record inspection dates, site conditions, rainfall events and maintenance work performed to document compliance with permit requirements.

5. Maintain all BMPs in working order. Remove sediment from inlet protection, perimeter control and other devices as needed.

6. Streets shall be inspected daily and cleaned at least once per week, or more often if needed.

7. Remove all sediment that is deposited on streets or adjacent lots within 24 hours of deposition.

Maintenance requirements:

1. Maintain the grass buffer behind the curb at all times.
2. All perimeter control that is collapsed, torn down, or ineffective shall be replaced or repaired within 24 hours.
3. Remove sediment from perimeter control devices when sediment reaches 1/3 the height of the device.
4. Remove sediment from inlet protection as it accumulates.

Inspections – City

The City will conduct erosion and sediment control inspections to ensure that the appropriate erosion and sediment control measures are in place and properly secured. If the property is under an MPCA NPDES Permit (Subdivision Registration), the Ramsey County Conservation District, working in conjunction with the MPCA, may also inspect the site for compliance. If the project is subject to the permitting requirements of the Rice Creek Watershed District (RCWD), District inspectors will also periodically inspect the site.

The first inspection by the City will occur during the footing inspection. It is expected that the grass buffer strip be installed and maintained, inlet protection and perimeter control be installed, stockpiles protected, and construction entrance installed. Required BMPs that are not installed or installed improperly will result in the footing inspection to be denied. If sediment is found to be eroding off the construction site, a stop work order may be issued until the sediments are removed and the proper BMPs have been established.

At all subsequent inspections, the BMPs will be subject to inspection to make sure they are working properly. BMPs that are not installed or installed improperly will result in the inspection to be denied. If sediment is found to be eroding off the construction site, a stop work order may be issued until the sediments are removed and the proper BMPs have been established.

Upon final completion of the project, the entire site must be stabilized with permanent vegetation. This can be done through sodding or seeding the site, installing planting beds, etc. Only when vegetation is established on the entire site can the sediment control devices be removed.

CONSTRUCTION BMPs

The following examples are BMPs that are commonly used. Additional BMPs may be required depending on the site, its topography, location, layout, etc. For additional information on BMPs, please refer to the Minnesota Stormwater Manual, available on the MPCA website at:

<http://www.pca.state.mn.us/water/stormwater/stormwater-manual.html#manual>

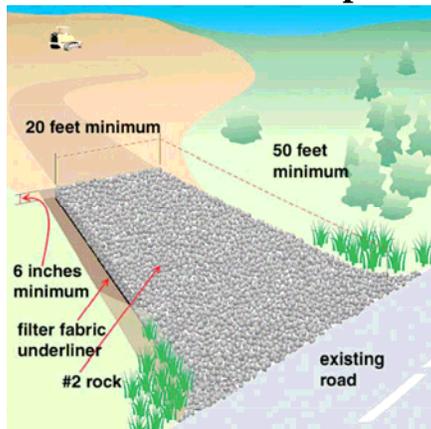
Boulevard Vegetation

The City requires that during construction, the boulevard area (the right of way behind the curb to the beginning of the lot line) be vegetated or stabilized during construction. If the lot has already been graded and has turf established, then all that is required during construction is to leave a 10' grass strip behind the curb when the excavation begins. If this area has not been seeded or if work is required in the boulevard, then this area should be seeded and covered with erosion mat, fiber mulch, anchored straw, or with sod within 5 days of finishing work in the boulevard. This boulevard vegetation acts as a buffer strip and helps prevent sediment from being discharged into the streets and storm sewer. The following methods can be used to maintain or develop the boulevard vegetation and can also be used to develop permanent vegetation on the entire site.

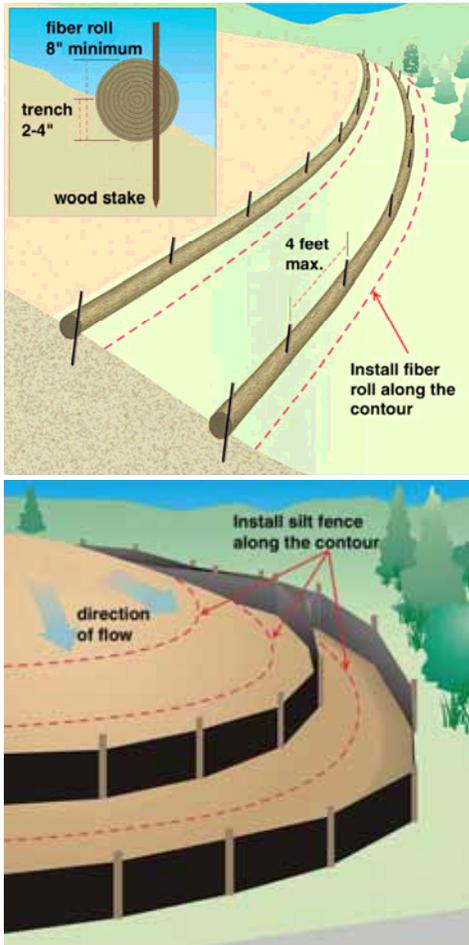
The following examples meet the requirements of temporary cover on the site:

- **Seed with Erosion Mat.** Erosion mats are typically 6 or 8 feet wide and 90 feet long. They are made of wood or straw fibers and are covered with a photodegradable net. The mat is held down by staples. The mat provides cover and erosion control until grass is established.
- **Seed with Anchored Straw.** The straw helps stabilize the soil until grass begins to grow. The straw must be disked anchored to prevent the wind from blowing the straw off site.
- **Seed with Fiber Mulch.** The mulch provides cover to the soil until the grass grows.
- **Seed with Sod.** This method provides instant cover to disturbed areas and is the best method for establishing permanent vegetation.

Temporary Construction Entrance



Each site must have a designated construction entrance. The entrance shall be constructed of clean rock laid over a construction fabric. All vehicles that access the site must use the construction entrance. A rock or graveled entrance prevents sediment from being tracked off site from vehicles. Any sediment that is tracked off site must be removed within 24 hours. The entrance should be maintained by adding rock or gravel if large volumes of sediment accumulate.



Perimeter Control

Perimeter control is required on all downstream areas on the site where runoff could leave the site. Items that can be used for perimeter control include silt fence, wattle (biorolls), seeded top soil berm, wood chips or straw bales.

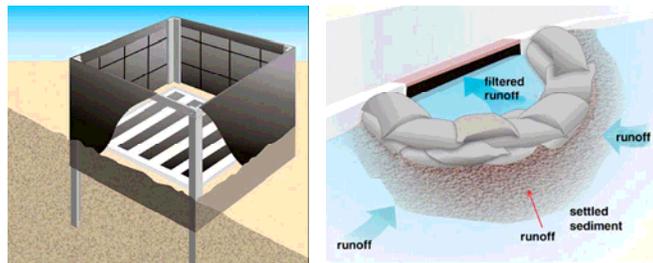
Silt fence is the most common type of perimeter control used. To be effective the silt fence must be installed properly, with the bottom of the fence placed in a 6-inch deep trench and anchored with soil.

Wattles, also known as biorolls or sediment logs, are made of straw or wood fiber bound by a net to form a shape of a tube. They are typically 6 to 12 inches in diameter and are usually 8 to 10 feet long. The wattles are held in place with stakes. The wattles are easy to install and work well for providing perimeter control next to sidewalks or curb and gutter.

Straw bales and wood chip berms work as excellent perimeter control to prevent sediment from running into wetlands or low areas.

Inlet Protection

Inlet protection is required on all storm sewer inlets located downstream of the construction site where runoff from the site may enter. The inlet protection must be installed prior to disturbing the ground, and only removed when vegetation on the lot is established.



Miscellaneous Items

Other pollution control items that need to be addressed during construction include site waste control, concrete washout, and dewatering.

During construction, all construction waste on the site should be put in an approved container. Care should be taken to prevent debris and garbage from being blown off site. Hazardous materials such as gas, oils, paints and solvents should be stored in proper containers to prevent leaks and should be disposed of properly.

All liquid and solid waste generated by concrete washout operations must be contained in a leakproof containment facility or impermeable layer. The liquid and solid waste must not contact the ground, and there must not be runoff from the concrete washout operation or wash out facility. Liquid and solid concrete waste shall be disposed of in compliance with the regulations of the Minnesota Pollution Control Agency (MPCA).

Dewatering and basin draining is another item that needs to be addressed. All water from dewatering practices must be clear before it is discharged off site. If the water is turbid or sediment laden it must be treated with appropriate BMP's before discharging offsite. This may include using a filter bag, dewatering into a sedimentation basin or into a grass swale where the water can infiltrate into the ground. Sediment laden water that is discharged off site is an illegal discharge.

Questions:

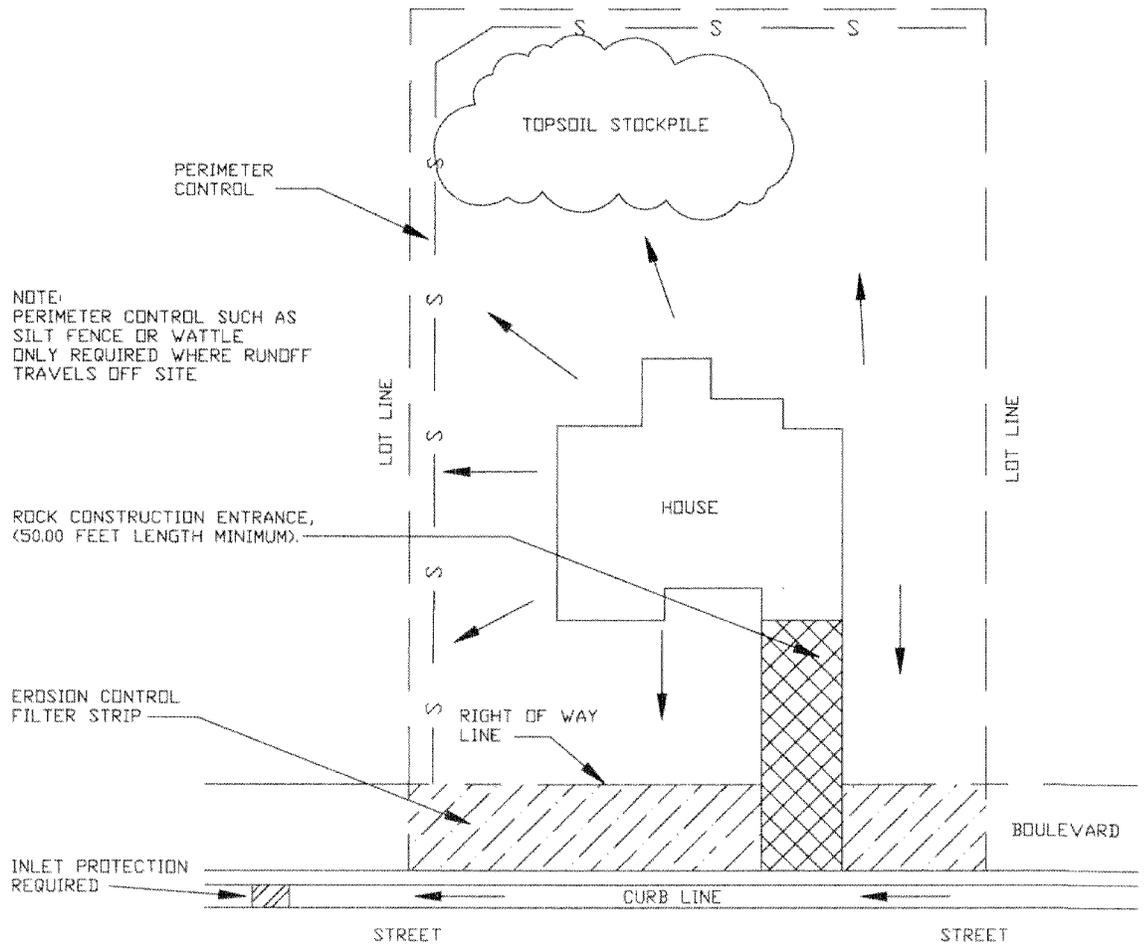
If you have any question regarding erosion and sediment control on you site or on the City's requirements please contact the Engineering Department at 651-490-4657.

TYPICAL SINGLE FAMILY LOT EROSION CONTROL PLAN

THIS IS A TYPICAL LAYOUT OF B.M.P.'S, THAT ARE TO BE UTILIZED ON SINGLE FAMILY HOME CONSTRUCTION. ADDITIONAL B.M.P.'S MAY BE REQUIRED TO MEET STATE AND LOCAL REQUIREMENTS.

ANY SEDIMENT DEPOSITED OFFSITE OR IN THE STREET SHOULD BE REMOVED WITHIN 24 HOURS.

ROCK ENTRANCE, INLET PROTECTION AND PERIMETER CONTROL SHOULD BE INSTALLED PRIOR TO DISTURBING ANY SOIL.



TEMPORARY, OR PERMANENT COVER SHOULD BE ESTABLISHED WITHIN THE FOLLOWING TIME LIMITS.

- SLOPES STEEPER THAN 3:1 (WITHIN 3 DAYS).
- SLOPES FROM 3:1 TO 10:1 (WITHIN 14 DAYS).
- SLOPES LESS THAN 10:1 (WITHIN 21 DAYS).

- SILT FENCE/WATTLE
- GRAVEL/ROCK ENTRANCE
- DIRECTION OF SURFACE RUNOFF
- GRASS BARRIER STRIP
- LOT LINE