# Erosion & Sediment Control for Construction Sites

## *Technical Note: Storm Drain Inlet Protection*

Storm drain inlet protection consists of a geotextile barrier supported around or across a storm drain inlet. It is used to slow down or prevent sediment-laden water from entering a storm drain system. As a result, this causes ponding and the sediment to settle out.

*A variety of methods and products are available that can be used to provide protection for street or curb inlets. One can use construction materials found onsite or purchase manufactured units. These temporary structures can be effective when properly constructed, installed, and maintained.*

*Surface flow inlet protection is necessary where these inlets drain areas of bare and unprotected soil surface(s). Geotextile wrapped around the frame and secured properly allows water to filter through. A structurally sound unit is needed to withstand the weight of sediment-laden water.*

The purpose of inlet protection is to increase the time it takes for sediment-laden water to enter the inlet. When functioning properly, water will only be ponded for a short period of time. Ponding is necessary to give sediment adequate time to settle out of suspension.

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# Specifications for Storm Drain Inlet Protection

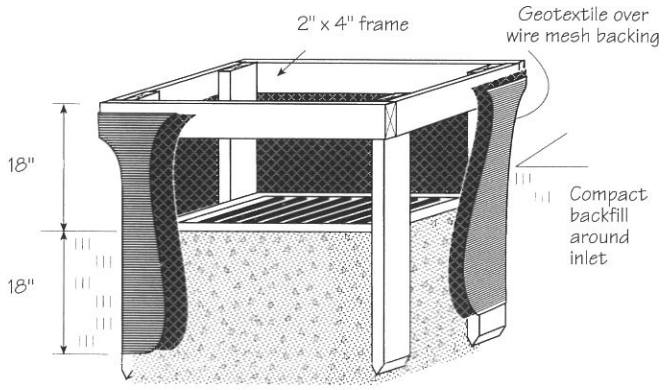
Storm water inlet protection is a sediment control practice. These are designed to provide temporary protection of storm sewer lines and natural streams from sediment laden water that flows off bare surfaces and along streets.

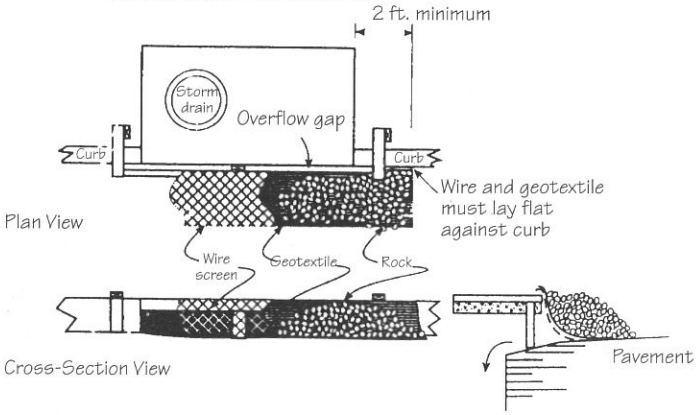
## Curb Drain Inlet Protection

Protection needs to be constructed before upslope disturbance begins.

Using a frame

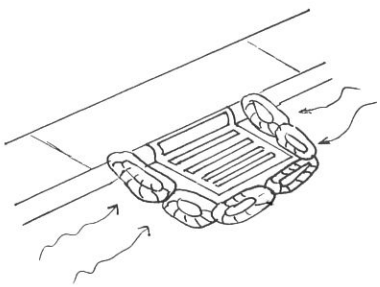
- *Install wooden frame with spacer at least one foot beyond the throat opening. Anchor to stakes on opposite side of curb.*
- *Place wire mesh over frame and extend two feet on either side of throat and over street grate.*
- *Place geotextile fabric with 20–40 sieve openings over wire mesh.*
- *Form wire mesh and geotextile firmly to inlet surface and fasten securely to frame.*
- *Place two inch stone over entire surface of fabric to prevent water from entering under or around the structure.*




Using bags as a dike

- *Fill geotextile bags about half full with two to three inch stone.*
- *Overlap bags onto curb and tightly place around the perimeter about six inches away from the inlet.*
- *Layer if needed until height is equal to or higher than elevation of curb.*



## Maintenance

Storm water surface inlet protection is a temporary installation and typically is not sturdy. They need to be inspected weekly and after every storm. The ability of this practice to temporarily pond sediment-laden surface water needs to be maintained.

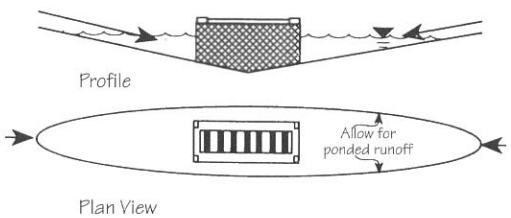
- *Remove accumulated sediment.*
- *Replace geotextile if ripped or torn.*
- *Re-fasten if pulled away from frame.*
- *Repair framing if collapsed.*

Safety Note:

- *Add safety barriers to protect the structure and as a warning to vehicles.*

## Inlet Protection in Swales, Ditch Lines or Yard Inlets

- *Excavate around the inlet to a depth of 18 inches.*
- *Install corner posts at least 18 inches below the top of structure, with 18 inches above surface of inlet. Use 2 x 4 inch lumber to frame the top, overlapping joints.*
- *Use 36 inch wire mesh, stretch tightly around the frame, overlapping the ends and fastening securely to a corner post. Fasten entire mesh to frame.*
- *Use 20–40 sieve opening geotextile. Fasten one end securely to a corner post. Stretch tightly around outside of frame and overlap to the next end post. Tack the fabric securely around the top of the frame and on corner posts.*
- *Fabric must extend from the top of the frame to 18 inches below the opening elevation of inlet.*
- *Backfill around the inlet, compacting in 6 inch layers until earth is level with inlet opening elevation.*
- *Develop a depression around the inlet one foot from the inlet to provide for ponding.*




**Rule of Thumb: If it doesn't pond water - it doesn't work.**