Erosion and sedimentation control practices are only as good as their installation and maintenance.

For detailed information on the selection,
installation and maintenance of
site specific BMPs
(Best Management Practices)

Visit

www.epa.gov./npdes/stormwater
Or
www.udfcd.org/downloads/
down_critmanual.htm

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ADAMS COUNTY

SMALL CONSTRUCTION SITE SEDIMENT AND EROSION CONTROL GUIDELINES

ADAMS COUNTY
COLORADO

Stormwater Quality Management Program
Public Works Department

SURFACE WATER QUALITY

Polluted stormwater runoff is the main cause of surface water pollution in the United States, and sediment is the main water pollutant. Construction activities can generate 400 times the amount of erosion compared to undisturbed land. The Federal Clean Water Act's National Pollutant Discharge Elimination System, (NPDES) stormwater regulations require that stormwater discharges be authorized under discharge permits issued by the State. The goal of the NPDES stormwater permit program is to reduce the amount of pollutants entering streams, lakes, and rivers as a result of stormwater runoff from disturbed sites, including residential, commercial and industrial areas.

Adams County is required by the State to oversee construction activities from ground breaking until final landscaping.

Adams County Regulations authorize the enforcement of NPDES regulations on construction sites when erosion control measures are not conducted. This guide explains the principles of erosion and sediment control and illustrates the best management practices (BMPs) used to minimize erosion and sedimentation.

APPLYING SEDIMENT CONTROL PRINCIPLES

Erosion control is different from *sediment control*. Both are needed to stabilize a construction site.

- Erosion controls make physical contact with the soil to keep the soil in place.

- Sediment controls are structures such as sediment ponds, check dams, silt fence, and straw wattles that are designed to keep eroded soil on the property.

APPLYING EROSION CONTROL PRINCIPLES

Prevent Erosion From Happening

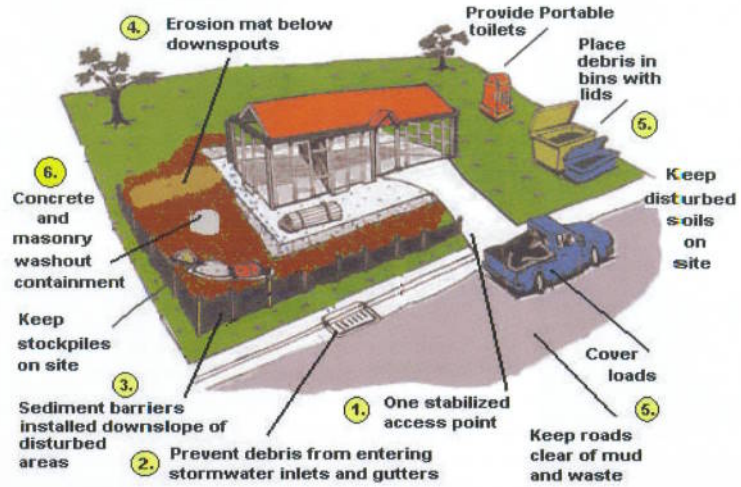
1. Retain existing vegetation whenever feasible.
2. Avoid clearing vegetation where construction will not be taking place.
3. Avoid disturbing vegetation on steep slopes or in other environmental sensitive areas such as drainage ways, wetlands and marshes, etc.
4. Always seed and mulch disturbed areas. Revegetate all disturbed areas that will not be covered with buildings, parking lots, roads, etc.
5. Establish temporary vegetation on areas that will be exposed for longer than 30 days.
6. Keep stormwater runoff velocities low. Construct channels with meanders, gentle gradients and rough surfaces, such as rock check dams or erosion control blankets.

APPLYING SEDIMENT CONTROL

Trap Sediment On Site

1. Divert stormwater runoff away from disturbed areas.
2. Construct a sediment barrier or swale all the way around a disturbed area to prevent clean runoff from entering and silt laden stormwater runoff from escaping.
3. The size of the drainage area determines which type of sediment barrier should be used.
4. Install silt fences or straw wattles below disturbed areas so that stormwater runoff will be detained long enough for sediment to settle.
5. Locate sediment barriers in relatively level areas or in natural depressions.
6. When the sediment depth reaches one-third of the structure height, remove accumulated sediment.
7. Immediately repair any structural damage, and look for evidence of water bypassing any structure.

EXAMPLES OF BMPS



1. Vehicle Tracking Pad - This is also called a gravel construction entrance and is designed to remove the mud that becomes caked on truck tires and to keep the mud on the project site.
2. Inlet Protection – Structures such as rock barriers are designed to keep sediment out of storm drains.
3. Sediment Barriers – Silt fence, straw wattles or straw bale dikes. All shall be staked into the ground firmly.
4. Erosion Control - Blanketing, temporary vegetation, retaining existing vegetation, mulching and crimped straw.
5. Waste Control - Sites must have waste containment facilities such as dumpsters, portable toilets and concrete washout facilities.
6. Concrete and Masonry Containment - A hole, pit or blocked area designed to contain concrete waste for future disposal.

A BMP is a method used to prevent or control stormwater runoff and the discharge of pollutants, including sediment, into local water bodies.

SILT FENCE

- Do not install silt fence in a flow path, swale or ditch.
- Install parallel to contours.
- Excavate a trench approximately 4 inches wide and 6 inches deep along the line of fencing and bury bottom of fabric.
- Stake every 8 feet with fabric on the uphill side of the stakes.
- Backfill the trench over the toe of the fabric and compact the soil.

STRAW WATTLES

- Mesh bags stuffed with straw may be useful as sediment barriers and can be furrowed into the ground 2 inches and staked along the slope.
- When using wattles along a sidewalk for sediment control, stake on top of dirt without trenching. Watch for bypassing water and repair.

CURB INLET PROTECTION

- Effective inlet protection keeps sediment out of storm drains.
- Install structures such as rock barriers and wattles around inlets.
- Boards and/or cinder blocks can be used to prevent bags or wattles from falling into the inlet.

STRAW BALE DIKES/CHECK DAMS

- Do not use where bales cannot be anchored into the ground.
- Trench 4 inches deep and position weed-seed free bales so ends are tightly abutting.
- Drive at least 2 wooden stakes through each bale to secure. 2" wide, 4' long stakes are best, driven at least 12" into the ground.
- Backfill and compact the soil around bales.

Other dikes can be made of rock checks or sand bags.

CONCRETE WASHOUT AREAS

- Located away from receiving waters
- Easily accessible.
- Designated with a sign informing site personnel of its location.
- Should be a pit with sufficient size to contain all the concrete waste.
- Maintained in good condition and cleaned out as necessary.

WASTE CONTROL

- Construction sites must have waste containment facilities.
- Cover dumpsters and empty as needed.
- Portable toilets should be 20' from any curb or inlet and stacked firmly into the ground.
- Spill prevention and containment BMPs for building material, waste and fuel.

VEHICLE TRACKING PADS

Gravel placed at construction entrance/exit.

- Required at all construction site exits.
- Required at concrete washout entrances.
- Use 3 inch or larger angular rock or recycled concrete.
- Keep rock and debris out of gutters.

DROP INLET PROTECTION

- Straw bales should be trenched 4 inches deep and be placed tightly together.
- Two wooden stakes for each hay bale to hold bales in place, driven 12 inches into the ground.
- Silt fence for this application requires trenching and proper stake placement.