Contractors, Illicit Discharges, & Best Management Practices

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What is an Illicit Discharge?

Georgetown County Stormwater Ordinance defines an Illicit Discharge as:

“Any activity which results in a discharge to the Georgetown County Storm Water System or receiving waters that is not composed entirely of storm water, except a discharge pursuant to an NPDES permit and other allowable discharges as defined in this Ordinance.”
Sources of Illicit Discharges

- Sanitary Wastewater
- Effluent from Septic Tanks
- Car Wash Wastewater
- Improper Oil Disposal
- Radiatorflushing
- Chlorinated swimming pool water

- Laundry Wastewaters
- Spills from roadway accidents
- Improper disposal of auto and household toxics
- Construction sites
- Industrial activities
Examples of an Illicit Discharge
Downstream pollution leads to upstream source
Allowable Discharges

- Unless a significant contributor of pollutants

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground water
- Uncontaminated ground water infiltration
- **Uncontaminated** pumped ground water

- Discharges from potable water sources
- Foundation drains
- Air conditioning condensation
- Irrigation water
- Springs
- Water from crawl space pumps
“Uncontaminated” is the key word!
Some EPA Facts

- Untreated discharges contribute high levels of pollutants, including heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria to receiving water bodies.

- Pollutant levels from these illicit discharges have been shown in EPA studies to be high enough to significantly degrade receiving water quality and threaten aquatic, wildlife and human health.
Why is this important to all of us?

- Stormwater pollution can kill plants and animals that live in the water
  - Sediment in water reduces light penetration and affects photosynthesis
  - Organic material uses up oxygen in the water, causing plants and animals to suffocate
  - Litter clogs waterways, causes toxicity as it breaks down and affects the health of birds, fish, and other animals that live in the waterways.

- Local shellfish can become contaminated
- Loss of habitat for marine life
- Algae blooms
  - Decay of algae after bloom depletes oxygen levels in water
  - Leads to fish kills
Uses of local waters

- Recreation: Swimming, Boating, Fishing,
- Food Production
- Drinking
  - Humans
  - Animals
Common Construction Site Pollutants

- Sediment, Solid and Sanitary Waste,
- Phosphorous (fertilizer), Nitrogen (fertilizer),
- Pesticides, Oil & Grease, Concrete Washouts
Good Housekeeping, your steps to prevent pollution...
For Contractors…

- Install erosion and sediment controls BEFORE work starts.
- Leave as much vegetation as possible.
- Establish a single stabilized construction entrance to prevent offsite transport of sediment.
- Use inlet protection on all curb inlets and drop inlets.
- Stabilize loose soil as soon as possible.
- Any sediment that is on the roads needs to be cleaned up the same day.
For Painters…

- Never wash brushes, rollers and trays by flushing them under running water, which ends up in the sewer, ditch, or natural waterways.
- Never empty paint wastewater into any stormwater drain or natural waterway or where it could reach a drain in the vicinity.
- Never dispose of used solvents by tipping them down a drain.
- Never throw solvent washings or solvent waste over soil – this could lead to groundwater contamination.
- Even heavily diluted water-based paints must not enter our stormwater systems.
For Concrete Workers…

- Use marked temporary concrete washout areas
- Never wash off boom into street or directly into a ditch, stormwater drain or natural waterway.
- Heavy metals and toxic chemicals in slurry will bind themselves to the sediments and are easily transported into our waterways.
Residential Home Builders…

- Follow Residential Requirements as set forth in the Georgetown County Design Manual
- Properly install silt fence around perimeter of disturbed area
- Prevent sediment from being tracked onto the street, clean up before end of work day if necessary.
For Everyone...

- Always use the proper Best Management Practices (BMPS)
- Follow the plans that were approved by the State and/or County
- Clean up any trash you or your fellow coworkers may have disposed of onsite before you end the day.
For Example…Site 1
No measures in place at all…
Sediment is transported offsite
Site 2

- When pumping water offsite, it must be free of all sediment and trash.
Runs under HWY 17 and to Marsh
Site 3

- Coquina/Slag parking lots in coastal areas a major concern
Drop inlet leads to ditch which runs directly to Inlet.

Perfect example of sediment that could be contaminated with heavy metals reaching shellfish beds.
Site 4

- Un-vegetated slope leads to sediment runoff.
- If no work will be happening onsite for 14 days, temporary stabilization (seed, matting, mulch) must be instituted on the 14th day.
Unstabilized site leads to discharge into estuary
3 Most Neglected BMPs

- Silt fence
  - Must have at least 12” of fabric trenched into the ground
  - Follow manufacturers details for installation
  - Posts must be on outside of fence
  - Sediment must be removed when it reaches 1/3 the height of fence
  - Should be removed within 30 days of final stabilization
Properly Installed
LOT SILT FENCE - PLAN

NOTE: SILT FENCE TO BE INSTALLED BY LOT OWNER PRIOR TO CONSTRUCTION AND TO BE MAINTAINED UNTIL LOT IS GRADED AND TURF IS ESTABLISHED.
2. Inlet Protection

- Sediment and debris should be removed from vicinity of inlets after each rain event.
- Many different options to use, most important thing is maintenance of the one you choose.
- Should not completely block curb inlets, engineered to slow the water and allow sediment to settle and be filtered.
Properly Installed
3. Stabilized Construction Entrance

- Construction Entrance
  - Temporary stone-stabilized pad at point of vehicular entry and exit on site to reduce amount of mud, dirt and rocks transported onto public roads by vehicles, equipment and runoff.
  - Should consist of 2” to 3” D50 aggregate with minimum thickness of 6”
  - Must have filter fabric underneath entrance
Properly Installed
EDGES SHALL BE TAPERED OUT TOWARDS ROAD TO PREVENT TRACKING OF MUD ON THE EDGES

PUBLIC ROAD

100-FT. MIN.

6-INCH MIN.

AVERAGE STONE DIAMETER OF 2 TO 3-INCHES WITH A 6-INCH MINIMUM DEPTH

UNDERLINING NON-WOVEN GEOTEXTILE FABRIC

INSTALL A CULVERT PIPE ACROSS THE ENTRANCE WHEN NEEDED TO PROVIDE POSITIVE DRAINAGE.

DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN OR OTHER SEDIMENT TRAPPING STRUCTURE.
Lack of Best Management Practices
Pond banks tracked wrong direction
Land disturbance without a permit
Un-maintained matting and washouts

- Weekly inspections will reduce situations like these.
Good housekeeping includes management of solid and sanitary wastes, hazardous materials, and other construction site materials that could contaminate runoff. Staff should be familiar with basic procedures for storing and managing site materials, and how to respond in the event of a spill or other event that might threaten water resources.
Poor Housekeeping

- Sloppy material storage and waste disposal practices are often indicative of inadequate stormwater management throughout the construction site.
-Inspectors often target sites like these for more detailed inspections.
We want to work **with** you, not against you.

- Contact our office if you have any concerns about a site you may be working on
- If you would like to set up a compliance inspection
  - There would be no cost to you
  - Used to confirm you have everything in order
  - Prevention is much more rewarding than an enforcement
- Stormwater office can be reached at:
  - (843) 545-3524
  - stormwater@georgetowncountysc.org
  - www.georgetowncountysc.org