

## armed for control

Centering site plans around practical erosion control BMPs

By Jeffrey Askew

Operations managers for storm drain cleaning companies get to see a lot of construction sites. They also see a lot of manufactured devices that are impacted by the efficiency of the erosion and sedimentation controls on these sites. While most of the common types of best management practices (BMPs) are familiar to site contractors, they often see basic mistakes that make the maintenance of these BMPs more costly than necessary.

### Know the Difference

The first most important facet of any site plan should be to emphasize erosion control over sedimentation control. Controlling erosion means stopping sediment from washing away in the first place. Not only does this preserve the grading and surface preparation work already done, it also saves the expensive task of collecting and removing the sediment wherever it may end up.

Managing erosion will lessen the impact on every conveyance and control downstream. This means less “pressure” on silt fences, less sediment in pipes and less muck in siltation ponds. Every facet of sediment control, from street

cleaning to tire wash-down will be easier and less expensive if erosion control becomes the goal instead of sedimentation control.

Controlling the cost of maintaining BMPs starts in the planning stages. A set of plans can depict techniques, structures and other measures to limit erosion, but the reality of daily scheduling work and intermittent storm patterns means that the design work is an ongoing affair. Good site operators are aware of this, and they plan accordingly. Still, a well designed plan is only the first step.

### Accuracy Counts

The next step is to install the erosion and sedimentation BMPs properly and in a timely manner. Something as simple as clearing too much area for a hydroseeding contractor to cover may lead to the erosion of tons of sediment in a late-day storm. Improperly installing a silt fence by following the property line instead of holding a level grade can lead to a blowout where sediment is washed into a busy street.

One of the most common mistakes is to delay construction of a sedimentation pond when the drawings

clearly call for the pond to be the first construction activity on the site. Without the pond in place, clearing and grading is a gamble that can cost a contractor thousands of dollars if a storm interrupts the process. A good design is essential, but proper, timely installation is a must if the design is expected to function properly.

Even on a well designed site with good BMPs correctly installed, things can go wrong if those BMPs are not well maintained. This is the crux of the problem and one that needs to be understood. Contractors are acutely aware of the cost of removing sediment from behind silt fences, check dams and other barriers. It is even more costly to muck out sediment ponds, in which getting the material dry enough to handle may pose a challenge during any season.

This is why so many site operators tend to put off maintenance until it is absolutely necessary or a failure occurs. Often it takes an inspector with a citation pad to “encourage” good maintenance. In reality, once one takes the time to think about it, good housekeeping on a site—especially where erosion and



Left: Damage to this water quality device could have been prevented if the catch basins and inlets were protected with hay bales, silt fencing, etc. Right: Storm drain pipe leading to an underground BMP; it is full of debris and should have been jetted out after construction was complete.

sedimentation is concerned—can become a profitable habit.

### Maintenance Matters

There is no problem with erosion or sedimentation that will solve itself or improve over time. Little slope washouts just an inch across will become deep gashes in time. Every day these breaks in the surface deliver more sediment downstream. Depths of sediment become deeper behind silt fences, until finally they topple over. Inlet protection gradually becomes blocked, until it overflows and loads sediment into the pipes below.

In every case, it is less expensive to tackle the small problem immediately before it becomes a large, expensive problem. This means that a qualified person should be inspecting the BMPs on site after every storm—not because it is a rule, but because it is the smart thing to do. Every day someone should be thinking about the weather and how to time operations to be sure that rainfall will have a minimum effect on potential erosion. This will be time well spent, and while it will not put money in the pocket of the contractor, it will keep it from literally washing away in the form of increased sediment to deal with downstream.

The best advice is to base site plans first and foremost around controlling erosion. Armed with good design, be sure to install BMPs correctly and in a timely manner. Once things are in place, aggressively inspect and maintain sites to minimize the dollars spent controlling sediment. This area of the construction business is one where a contractor can increase profits while helping to improve our lakes, rivers and streams. **SWS**

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