

Affordable Construction Compliance

Smart cost-management strategies bring added value to projects

By Joel Jonker, CPESC

The construction industry has been dealing with storm water regulations for many years now, and for the most part, we have learned how to effectively protect the environment and achieve storm water compliance while keeping projects on track. The economic downturn, however, has been tough on budgets and margins, and project owners are insisting that every dollar be used as effectively as possible. In this business environment, many of us are asking how to achieve compliance affordably.

It is not just project owners who are looking for cost-effective compliance; engineers and designers want to deliver it as part of their value-added approach to projects. Best management practice (BMP) contractors need to find ways to lower costs so that they can win more bids, and project managers need to control costs to hit profitability targets.

To understand how to achieve affordable compliance, it will help to first examine three strategies that will not work. These are methods that actually increase risk when they cut

costs, so avoiding them can be the first step toward affordable compliance.

Costly Mistakes

1) Making “penny-wise and pound-foolish” decisions. The common theme in this category is a focus on short-term savings that leads to greater costs in the long run. Examples include:

- Using cheap materials;
- Skimping on the quality of the installation;
- Deferring maintenance; and
- Choosing an inadequate BMP.

These may look like rather obvious dead ends, but they are tried on countless job sites in an attempt to put a bandage on a compliance problem. Usually the cost of cleaning up after the messes that result is greater than the initial savings.

2) Choosing to be reactive rather than proactive. This mistake shows itself in different ways on site. Most commonly, it is seen in the timing of BMP installation. Seeding, for

instance, is often put off until the rest of a project is nearly complete. This leaves soil unprotected for a longer time frame and delays final stabilization. The result is more money spent on sediment control and permits left open for longer periods. Being more proactive can bring about the benefits of soil stabilization in a more timely fashion.

3) Relying on rule-of-thumb thinking. Everyone experiences information overload at times, and using a rule of thumb is a reasonable response in some situations. At times, though, it can cause people to jump to invalid conclusions. Each site is unique, so choosing BMPs based on what has worked on a previous job can limit creative thinking about how to manage storm water. Excluding a BMP from consideration because of a bad experience on an earlier project, too, may limit good options. Keeping an open mind and asking for ideas from other teammates and experts will counteract this problem.

These strategies create problems because they lower costs in ways that create more risk. The risk might be a failed BMP, an overlooked source of pollutants or an unprotected slope, but ultimately it is a risk of creating an environmental impact that could have been avoided.

The question at the heart of affordable compliance is really this: Is there a way to lower costs and risks at the same time? Yes, there are five ways.

Practical Tactics

1) Using planning and procedural BMPs wisely. Jobs that have had thoughtful planning will avoid the knee-jerk reaction of throwing BMPs at problems that arise on a site. Generally speaking, one will obtain the best pricing from a BMP contractor through a well-planned bid process. Whether through hard bidding or negotiated bids, allowing time for comments and ideas from BMP contractors will expose some problems before they cause unnecessary expense on a project.

Along with solid planning, procedural BMPs are often the most cost-effective solutions because they involve setting standard operating

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procedures and onsite policies. Procedural BMPs cost little to establish, but they can pay big dividends.

For example, identifying where and how potential pollutants are stored on site costs a project owner nothing; having pollutants inside, under cover or protected with secondary containment can reduce or eliminate cleanup costs after spills and accidents.

Another example of an effective procedural BMP is project phasing.

When done well, it will limit the amount of soil exposed at any given time. Additionally, it allows parts of the project to begin working toward final stabilization while limiting the potentially destructive traffic of subcontractors to a smaller portion of the site.

2) Implementing preventive maintenance. Even sites that have a good record of responding to storm water inspection reports can benefit

from changing to a more proactive maintenance cycle.

Most construction sites follow this sequence: damage occurs to a BMP, damage is noted on an inspection report and damage is corrected. The problem is that this sequence can lead to waiting for repairs to come up on a report before they are addressed. Even a 48-hour delay can lead to situations in which storms take place and a site is not protected with adequate BMPs. The damage may result in a need for regrading, cleaning out ponds, street sweeping or fines—all expenses that might have been prevented.

Keep in mind that proactive maintenance does not mean more maintenance, just maintenance that happens sooner and results in savings; that's hard to beat.

3) Eliminating installation problems. BMPs that are not installed properly do not function properly. Have you ever paid for a BMP installation, then paid the same contractor to repair the BMP or clean up sediment that made it past the BMP, rewarding a contractor's poor installation quality with more work? There are a few ways to overcome this challenge.

First, perform a quality check after each major BMP installation and require corrections immediately rather than after a failure caused by a storm event. Second, choose a BMP contractor with an internal quality-control program or one that guarantees its work. Third, clarify expectations that each installation be to the standards spelled out in the site's storm water pollution prevention plan (SWPPP). This puts everyone on the same page about what a high-quality installation looks like and allows enforcement of requirements.

4) Controlling damage to BMPs. Some projects experience little BMP damage because there is sufficient room for equipment, vehicles and material storage or because there are fewer subcontractors on site and they are responsible folks who do not drive over BMPs. On other projects, the cost of repairing or replacing damaged BMPs can easily account for 20 percent to 40 percent of a total BMP budget.



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Part of the solution to finding affordable compliance has to include ways to minimize damage to BMPs by equipment and vehicles. Some owners use charge-back systems, assigning penalties or actual repair costs to subcontractors who cause damage. Others take a more educational approach and reward their subcontractors with parties and continued work when damage costs are controlled.

Consider using more durable BMPs as well. There are many products for perimeter control and inlet protection that promise more durability than their competing solutions; give them a try.

5) Improving communication.

This advice relates to all the aforementioned affordable compliance strategies. Procedural BMPs that appear in a SWPPP but are not communicated to everyone on site are not going to be effective. Similarly, if a policy to discourage damage to BMPs is in place, you will need to repeat that

message clearly and frequently to have an impact.

There are a few key elements to communicating effectively that should be part of every storm water compliance program. One is a clearly written SWPPP—one that does not overwhelm site superintendents but rather becomes a daily resource for answering questions and implementing strategies.

Another element is the use of a living map. It should display current BMP activity, be posted in a highly visible place and easily accommodate updates.

A final suggestion is to make storm water roles and responsibilities crystal clear. Many people representing multiple firms and agendas can be involved in achieving compliance, but it is important to designate one contact who works for the site operator and has the final say in these matters. The appointment will reduce delays in decision making and eliminate the finger-pointing that sometimes happens when compliance problems arise.

Strategy Benefits

Compliance can be made more affordable without risking the environment, project schedules or budgets. Make managing costs one of your BMPs to bring more value to current and future projects. **[SWS]**

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