

Limit Your NPDES Compliance Costs without Compromising Compliance

IECA member Tony Brighi, CPESC, discusses with Greg Northcutt ways that contractors can minimize compliance costs through proper analysis of Best Management Practices (BMPs), selection of the right partners, employee and partner education and sound planning.



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IECA member Tony Brighi, CPESC, is the president of Eros Environmental, based in Las Vegas, NV, USA.

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In the past several years, IECA member Tony Brighi, CPESC, president of Eros Environmental, Las Vegas, NV, USA, has seen a marked change in attitude among developers, builders and contractors toward meeting erosion and sediment control regulations.

“Two years ago, the main concern of most of them was the risk of not complying with stormwater management requirements,” he says. “With the enforcement of the EPA nationally, if compliance were a problem, they threw money at it to solve it. Now, with the downturn in the economy, their biggest concern is the cost of compliance.”

As a result, some are trying to cut spending on erosion and sediment control measures at the risk of not meeting National Pollutant Discharge Elimination System (NPDES) requirements, he notes. There’s a better way, says Brighi, whose company provides a wide variety of erosion and sediment control consulting services for project owners and contractors.



“Today’s economy requires a balanced approach,” he says. “This means walking a fine line between reducing costs and staying in compliance.”

He offers the following four-point plan on how to do this. “By following this plan,” Brighi says, “we’ve helped clients reduce their erosion and sediment control costs by as much as 30 to 50 percent without jeopardizing compliance.”

Analyze Your Costs

Examining the BMPs you’re using can help you identify possible cost-cutting measures. It’s more cost-effective to spend money on preventing a problem than dealing with the consequences, Brighi notes.

For example, limiting the amount of sediment at its sources by controlling trackout and erosion is much more cost-effective than cleaning it up further down the slope.

“Here in Las Vegas, sweeping sediment from streets represents a large part of the compliance costs,” he says. “But that’s just a bandage. It doesn’t address the cause of the problem—trackout from vehicles and equipment. Generally, controlling erosion is cheaper than controlling sediment.”

Select BMPs that fit the job site. This means taking into account site topography and climatic conditions. As Brighi points out, some builders who operate on a

regional or national basis try to use a one-size-fits-all approach in the practices they install to control erosion and sediment. However, what works in one area might not work nearly as well, if at all, at a location with different weather conditions.

Using a turf reinforcement mat to control slope erosion at an arid site wouldn’t be nearly as cost-effective as in a humid area subject to much more rainfall and erosion, he explains.

In Las Vegas, for example, with its very limited annual rainfall, cutting a V-ditch along the perimeter of the site with the end of a motorgrader blade is a common practice for containing runoff on-site. “Because of our low rainfall, most of the water that collects in a ditch drains into the ground or evaporates quickly,” Brighi says. “However, in areas with high rainfall, V-ditches may not be as effective in controlling runoff. In this case, a stronger BMP may be more effective and, in the long run, more economical for keeping sediment on-site.”

Another money-saving idea is to keep your construction materials and equipment stored in one area. This way, you only have one location where you have to control sediment tracked off-site by construction traffic, he explains. “Minimizing ingress and egress points of a project or storage area can significantly reduce your exposure and maintenance costs,” he says.

Analyze Your Compliance Partners

A good Storm Water Pollution Prevention Plan (SWPPP) preparer, BMP contractor or other compliance partner can help you save money by recommending the most cost-effective practices and materials and installing and maintaining them properly.

“It’s not realistic to expect someone who builds homes, apartment buildings and other structures for a living to be up on the latest BMPs,” Brighi says. “That’s why it’s important to hire compliance partners who attend conferences, workshops and other training to learn about the newest, most cost-effective erosion and sediment control products and techniques. Also, your partners should be explaining how various BMPs will fit your project and be of the most value to you.”

Brighi recommends hiring one partner to prepare the SWPPP and perform the site inspections and another to maintain the BMPs.



A V-ditch with a berm usually is used to retain run-off from a site. It can be a good alternative to silt fencing in low-rainfall areas. The berm is installed closest to the project. The V-ditch, used to collect any sediment from the berm, is dug on the perimeter side of the berm.

“It’s easier and more convenient to have one company handle all aspects of your erosion and sediment control project,” Brighi agrees. “But it opens up the potential for paying for products and services that you may not actually need.”

Brighi’s company specializes in preparing SWPPPs and performing required inspections for clients. However, the company refuses to offer any BMP maintenance services. “If we inspected a site and recommended replacing a failed BMP or installing a more effective but more costly alternative, the client might wonder if this actually was necessary to stay in compliance or if we were simply trying to make more money. Trust is an essential component of a partnership, and we would never want that to be questioned.”

Or consider a compliance partner that offers to do both your site inspections and BMP maintenance, Brighi suggests. “A company that charges for these services on a per-lot or per-month basis makes more profit by minimizing maintenance and replacement of BMPs,” he explains. “So its inspection report may indicate no need for maintenance when, in fact, maintenance is needed. Another example would be a company that charges for each BMP it installs. It can make more money by installing more of a particular BMP than is required or replacing BMPs that may not, in fact, need to be replaced. It’s not that there aren’t ethical BMP maintenance companies, but it is always beneficial to eliminate the biased potential that could occur.”





A cut-back curb is installed behind the curbline by cutting out a trench that measures about 10 to 15 cm (4 to 6 inches) deep and 0.6 to 1 m (2 to 3 ft.) wide. It is intended to collect the sediment that has eroded from the site, allowing it to settle out behind the curb instead of on the pavement.

Educate Your Employees and Trade Partners

If your employees are doing the erosion and sediment control work or manage contractors who do, make sure that they understand the purpose of the BMPs and how to install and maintain them properly. Individuals responsible for the compliance program must be “Qualified,” as required by the EPA. They also should be involved in tracking the installation and performance of the BMP, their consultants and maintenance providers, as well as their trade partners.

Similarly, make the time and effort to educate the various trade people working on

your construction site about the importance of BMPs and keeping them in good working order. This can help prevent damage to the BMPs, reducing your costs to repair or replace them. “In our experience, approximately 60 to 70 percent of BMPs installed on a site are damaged by various trades, requiring costly replacement. Education is the first step in preventing this; however, back-charging may need to be implemented as well.”

Value Engineer Your Project

This means ensuring that your erosion and sediment control plan is designed and executed in a way that minimizes spending on erosion and sediment control measures that are not necessary. This approach may require altering the plan as the project progresses to fit changing needs.

“Your SWPPP is a living contract between you and the regulators who can and should be changed as conditions that could affect the compliance of your project change,” he says. “For example, if the plan calls for a silt fence to be in place for several years rather than just one season, maybe you’d be money ahead to install it with a higher grade material and a wire backing for more durability, eliminating the cost of replacing it later. Or the plan may include the use of conventional rock-filled bags to control sediment. However, newer products may do the job better at a lower cost.”

Also, consider the quality of BMPs being used. Most products are available in several different grades of performance. In some cases, Brighi notes, the superior performance of a higher grade but more expensive product may be more cost-effective than the lower quality version.

More and more manufacturers are offering reusable erosion and sediment control products. They represent another value engineering possibility by reducing costs over time.

“Look beyond just the cost to purchase a product and include maintenance costs in your buying decision,” he suggests. “Spending a little more upfront may save you even more money on the back end of the project.”

You also may be able to value engineer your project by rescheduling certain activities. For example, moving your paving activities to a later time than usual might enable you to minimize costs of sweeping streets to remove sediment. On the other hand, landscaping the project as soon as possible can reduce the time that erosion and sediment control BMPs have to be in place and maintained.



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