



Derek M. Berg

## Raising the Bar on BMPs

Sound storm water policy should encourage innovation

Innovation has become synonymous with the U.S., serving as a catalyst for economic growth and continuous improvement of our standard of living. Economics aside, if not for innovative scientific and technological breakthroughs, we would be without countless apparatuses, methodologies and other discoveries that now serve as solutions to once-daunting scientific and societal challenges.

Faced with a growing list of water quality and other environmental quandaries, our ability to collectively innovate viable solutions perhaps has never been more crucial. To that effect, while deploying the best practices available to us today, we must avoid erecting regulatory barriers that discourage future innovation.

Our continuing effort to address the negative impacts of impervious surfaces and the pollutant-laden runoff they produce is spawning a new generation of storm water regulations. Encouraged by the U.S. Environmental Protection Agency, states and municipalities from coast to coast are updating their storm water policies to incorporate the principles of low-impact development (LID) and runoff volume reduction.

This paradigm shift is certainly warranted given that the end-of-pipe treatment strategy we have relied on heavily to date is not sufficiently addressing the impairments caused by storm water runoff. A disturbing trend, however, can be spotted among new LID-centric standards.

Rather than establishing treatment criteria for pollutants of concern and subsequently identifying best management practices (BMPs) capable of achieving those criteria, many new storm water policies rigidly prescribe which BMPs may be utilized and offer no avenue to consider new solutions. From a water quality perspective, this approach raises the bar over the status quo, but it also discourages future innovation and leaves few options when site conditions are not favorable for infiltration.

Storm water is a complex problem, and a narrow suite of solutions will not be viable in all situations. We would

be better served by developing storm water policies that encourage infiltration and other LID concepts whenever possible, identify effective alternatives for instances when this approach is not feasible and provide an avenue to assess new innovative technologies.

There is no question that infiltration and rainwater harvesting should serve as the foundation of our storm water strategy, but infiltration is not feasible on many sites and rainwater harvesting will not always make up the difference. Additional treatment strategies with proven performance, such as filtration, also need to be incorporated into our policies. Furthermore, BMPs dismissed as end-of-pipe solutions can be readily downsized for inclusion in a decentralized LID site design in instances where “green” infrastructure is not viable. Other end-of-pipe converts are likely to play a vital role as pretreatment systems upstream of other BMPs.

Preventing runoff from occurring by minimizing impervious cover and keeping what does occur on site (i.e., infiltration, rainwater harvesting) whenever feasible is sound policy. But assuming these tools alone will address storm water runoff is overly optimistic. We also need guidance on appropriate deployment of pretreatment, filtration and other BMPs that best complement LID designs and provide appropriate levels of water quality treatment when an end-of-pipe solution is the best—or only—option.

Finally, policies that do not provide an avenue for the evaluation of new solutions for inclusion in storm water toolboxes discourage innovation and should be avoided to ensure we continue to raise the bar on what constitutes a “best management practice.” **[SWS]**

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